



18425 - Jets, Mergers, and Feedback at Cosmic Dawn: HST-JWST Imaging of $z >$

4.4 Radio Galaxies

Cycle: 34, Proposal Category: GO

(Availability Mode: SUPPORTED)

INVESTIGATORS

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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) 6C-0140+326	ACS/WFC	1	17-Aug-2026 14:01:19.0	yes
02	(1) 6C-0140+326	ACS/WFC	3	17-Aug-2026 14:01:20.0	yes
03	(1) 6C-0140+326	WFC3/IR	1	17-Aug-2026 14:01:20.0	yes
04	(2) RC-J0311+0507	ACS/WFC	1	17-Aug-2026 14:01:21.0	yes
05	(2) RC-J0311+0507	ACS/WFC	3	17-Aug-2026 14:01:21.0	yes
06	(2) RC-J0311+0507	WFC3/IR	1	17-Aug-2026 14:01:22.0	yes
07	(4) NVSS-J163912+405237	ACS/WFC	1	17-Aug-2026 14:01:22.0	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>
08	(4) NVSS-J163912+405237	ACS/WFC	3	17-Aug-2026 14:01:23.0	yes
09	(4) NVSS-J163912+405237	WFC3/IR	1	17-Aug-2026 14:01:23.0	yes
10	(3) TN-J0924-2201	ACS/WFC	3	17-Aug-2026 14:01:24.0	yes
11	(4) NVSS-J163912+405237	WFC3/IR	2	17-Aug-2026 14:01:24.0	yes

20 Total Orbits Used

ABSTRACT

We propose a joint HST-JWST imaging program targeting the four highest-redshift ($z > 4.4$) classical radio galaxies known (i.e. the complete accessible population) observed when the Universe was < 1.4 Gyr old. HzRGs pinpoint the most massive galaxies in the early Universe, are associated with protoclusters, and their powerful jets indicate rapidly spinning SMBHs. They provide unique laboratories for studying massive galaxy formation, SMBH growth, and jet-driven feedback at early epochs. Our program addresses four key questions: (1) How do jets drive feedback? HST maps rest-UV continuum and Ly alpha emission relative to the radio structure; JWST provides Balmer-break colors to distinguish jet-induced star formation from the older stellar body. (2) What triggers the jets? JWST rest-frame optical morphologies will reveal whether the merger-jet connection established at $z=1-2.5$ persists to $z > 4.4$, or whether coherent accretion dominates SMBH spin-up. (3) What is the AGN geometry? Anomalously high blazar counts at $z > 4$ suggest near- 4π obscuration; HST narrow-band Ly alpha imaging will test this by constraining ionization cone opening angles. (4) What is the large-scale environment? HST wide-field imaging covers 1 sqMpc, enabling a proto-cluster census. We compare radio-loud targets against matched radio-quiet Type 2 QSOs to isolate the effects of jets on their hosts and test whether mergers preferentially trigger radio-loud activity. This program provides the first rest-frame optical and UV morphologies of $z > 4.4$ steep-spectrum radio galaxies, constraining how jets, mergers, and feedback shaped the most massive galaxies in the early Universe.

OBSERVING DESCRIPTION

Each of the four targets will be observed with two HST broad-band filters (one optical, one near-IR) and one ACS narrow-band ramp filter centered on redshifted Lyalpha (Tabs. 2 and 3, Fig 3 in the proposal).

ACS/WFC F775W (1 orbit each) will be obtained for 6C0140+326, RCJ0311+0507, and J1639+4052, sampling rest-frame $\sim 1300-1400$ Å redward of Lyalpha. For TN J0924-2201 ($z = 5.197$), deep archival ACS F850LP imaging (5 orbits) provides equivalent coverage. WFC3/IR F140W (1 orbit each) will be obtained for 6C0140+326, RCJ0311+0507, and J1639+4052; TN J0924-2201 requires 2 orbits (F160W) to reach equivalent S/N.

Lyalpha will be imaged with ACS ramp filters: FR656N at 6577Å (6C0140+326, $z = 4.41$), FR656N at 6703Å (RCJ0311+0507, $z = 4.51$), FR716N

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at 7148A (J1639+4052, $z = 4.88$), and FR782N at 7530A (TN J0924-2201, $z = 5.197$)", 3 orbit per source. The targets have total Ly α fluxes of the order of 10^{-17} erg cm $^{-2}$ s $^{-1}$; the faintest is TN J0924-2201 at 2.1×10^{-17} erg cm $^{-2}$ s $^{-1}$ (Venemans et al. 2004), which our 3-orbit ramp images will detect at $S/N \sim 8-9$ in total. At HST resolution this emission will be resolved into discrete knots and filaments, providing morphological information on the ionization structure unattainable from the ground. ETC simulations with 5x5 pixel rebinning confirm $S/N \sim 3$ at 8×10^{-18} erg cm $^{-2}$ s $^{-1}$ for sources compact on scales $\leq 0.25''$ (≤ 1.6 kpc at $z \sim 4.5$), sufficient to detect compact companion Ly α emitters comparable to those spectroscopically confirmed in the field of TN J0924-2201 by Venemans et al. (2004).

The ETC for the broad-band filters confirm $S/N > 5$ for $K(\text{Vega}) = 23.3$ mag arcsec $^{-2}$ (~ 2 mag fainter than the targets) and $K(\text{Vega}) = 24.3$ for point sources. ACS observations use a 4-point dither pattern with exposure times set to ensure adequate sky background for pixel-based CTE correction. Post-flash will be used for the ramp filter.

Proposal 18425 - 6C-ACS-F775W (01) - Jets, Mergers, and Feedback at Cosmic Dawn: HST-JWST Imaging of $z > 4.4$ Radio Galaxies

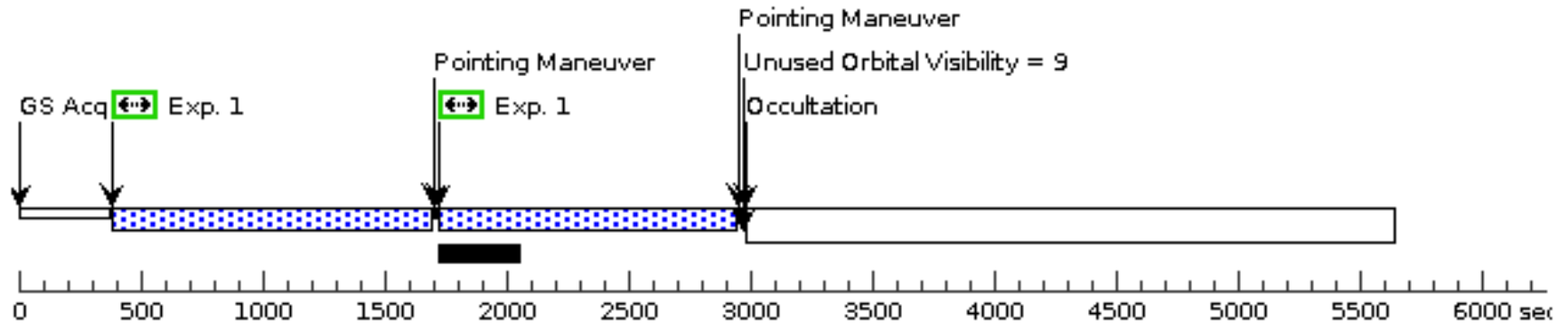
Visit	Proposal 18425, 6C-ACS-F775W (01)										Mon Aug 17 18:01:25 GMT 2026
	Diagnostic Status: No Diagnostics										
	Scientific Instruments: ACS/WFC										
	Special Requirements: (none)										
Patterns	#	Primary Pattern					Secondary Pattern				Exposures
	(4)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=4 Point Spacing=3.034 Line Spacing= Coordinate Frame=POS-TARG Pattern Orientation=85.29 Angle Between Sides= Center Pattern=false									(1)
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(1)	6C-0140+326	RA: 01 43 43.8528 (25.9327200d) Dec: +32 53 49.70 (32.89714d) Equinox: J2000				V=(?) K=19.9		Reference Frame: ICRS		
	Comments: This object was generated by the targetselector and retrieved from the NED database.										
	Category=GALAXY Description=[RADIO GALAXY]										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
	1		(1) 6C-0140+326	ACS/WFC, ACCUM, WFC-FIX	F775W			Pattern 4, Exps 1-1 in 6C-ACS-F775W (01) (4)	490 Secs (1960 Secs) [==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)] [==>(Pattern 4)]	[1]	
Orbit Structure	Orbit 1 Server Version: 20260618 GS Acq Pointing Maneuver Pointing Maneuver Pointing Maneuver Pointing Maneuver Unused Orbital Visibility = 20 Exp. 1 Exp. 1 Exp. 1 Exp. 1 Occultation 0 500 1000 1500 2000 2500 3000 3500 4000 4500 5000 5500 6000 sec										

Proposal 18425 - 6C-ACS-ramp (02) - Jets, Mergers, and Feedback at Cosmic Dawn: HST-JWST Imaging of $z > 4.4$ Radio Galaxies

Visit	Proposal 18425, 6C-ACS-ramp (02)										Mon Aug 17 18:01:25 GMT 2026	
	Diagnostic Status: Warning											
	Scientific Instruments: ACS/WFC											
	Special Requirements: (none)											
Diagnostics	(Exposure 1 (Pattern 2, Exps 1-1 in 6C-ACS-ramp (02))) Warning (Form): POS TARG & PATTERN should be used carefully with ACS ramp filters as central wavelengths & transmission efficiencies vary within the apertures.											
Patterns	#	Primary Pattern				Secondary Pattern				Exposures		
	(2)	Pattern Type=SPIRAL		Coordinate Frame=POS-TARG						(1)		
		Purpose=DITHER		Pattern Orientation=20.7								
		Number Of Points=6		Angle Between Sides=								
		Point Spacing=0.2637		Center Pattern=false								
		Line Spacing=										
Fixed Targets	#	Name		Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(1)	6C-0140+326		RA: 01 43 43.8528 (25.9327200d)				V=(?)		Reference Frame: ICRS		
				Dec: +32 53 49.70 (32.89714d)				K=19.9				
				Equinox: J2000								
		Comments: This object was generated by the targetselector and retrieved from the NED database.										
	Category=GALAXY											
	Description=[RADIO GALAXY]											
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit	
	1		(1) 6C-0140+326	ACS/WFC, ACCUM, WFC1-MRAMP	FR656N			Pattern 2, Exps 1-1 i n 6C-ACS-ramp (02)	1100 Secs (6600 Secs)			
					6577 A			(2)	[==>(Pattern 1)]		[1]	
									[==>(Pattern 2)]			
									[==>(Pattern 3)]		[2]	
									[==>(Pattern 4)]			
									[==>(Pattern 5)]		[3]	
									[==>(Pattern 6)]			

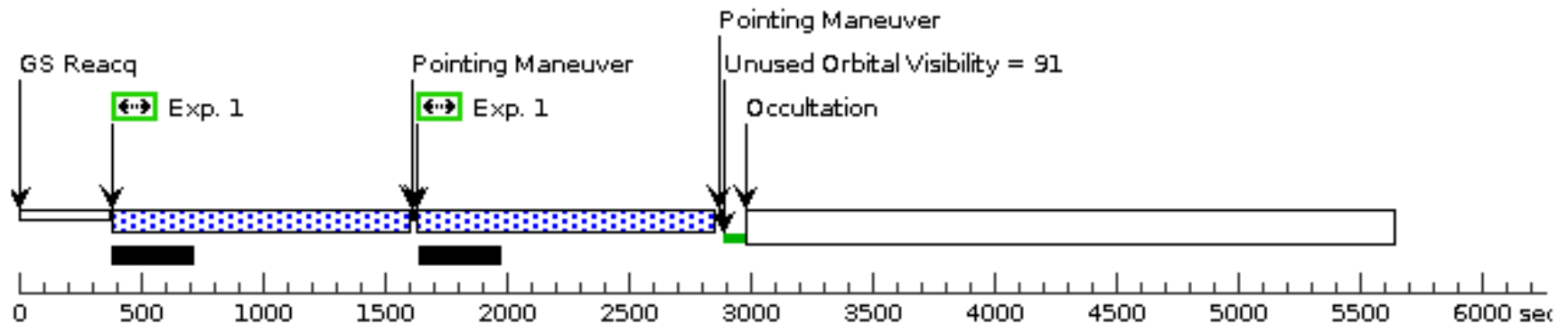
Orbit 1

Server Version: 20260618



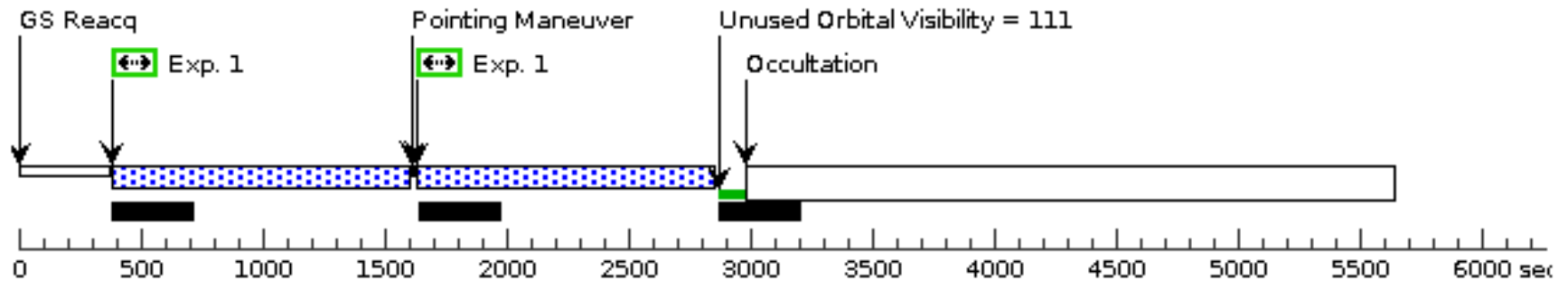
Orbit 2

Server Version: 20260618



Orbit 3

Server Version: 20260618



Proposal 18425 - 6C-WFC3 (03) - Jets, Mergers, and Feedback at Cosmic Dawn: HST-JWST Imaging of $z > 4.4$ Radio Galaxies

Visit	Proposal 18425, 6C-WFC3 (03)										Mon Aug 17 18:01:25 GMT 2026	
	Diagnostic Status: No Diagnostics											
	Scientific Instruments: WFC3/IR											
	Special Requirements: (none)											
Patterns	#	Primary Pattern				Secondary Pattern				Exposures		
	(3)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=0.572 Line Spacing=0.365				Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false				(1)		
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous			
	(1)	6C-0140+326	RA: 01 43 43.8528 (25.9327200d) Dec: +32 53 49.70 (32.89714d) Equinox: J2000				V=(?) K=19.9		Reference Frame: ICRS			
	Comments: This object was generated by the targetselector and retrieved from the NED database.											
	Category=GALAXY Description=[RADIO GALAXY]											
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit	
	1		(1) 6C-0140+326	WFC3/IR, MULTIACCUM, IR-FIX	F140W	SAMP-SEQ=STEP100; NSAMP=12		Pattern 3, Exps 1-1 in 6C-WFC3 (03) (3)	599.232292 Secs (2396.929 Secs) [==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)] [==>(Pattern 4)]		[1]	
Orbit Structure	Orbit 1											
	Server Version: 20260618											

Proposal 18425 - RC-ACS-F775W (04) - Jets, Mergers, and Feedback at Cosmic Dawn: HST-JWST Imaging of $z > 4.4$ Radio Galaxies

Visit	Proposal 18425, RC-ACS-F775W (04)										Mon Aug 17 18:01:25 GMT 2026	
	Diagnostic Status: No Diagnostics											
	Scientific Instruments: ACS/WFC											
	Special Requirements: (none)											
Patterns	#	Primary Pattern				Secondary Pattern				Exposures		
	(4)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=4 Point Spacing=3.034 Line Spacing=				Coordinate Frame=POS-TARG Pattern Orientation=85.29 Angle Between Sides= Center Pattern=false				(1)		
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous			
	(2)	RC-J0311+0507	RA: 03 11 48.0044 (47.9500183d) Dec: +05 08 2.54 (5.13404d) Equinox: J2000				V=24.8 K=21.1		Reference Frame: ICRS			
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.											
	Category=GALAXY Description=[RADIO GALAXY]											
Exposures	#	Label	Target	Config,Mode,Aperture		Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit
	1		(2) RC-J0311+0507	ACS/WFC, ACCUM, WFC-FIX		F775W				Pattern 4, Exps 1-1 in RC-ACS-F775W (04) (4)	490 Secs (1960 Secs) [==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)] [==>(Pattern 4)]	[1]
Orbit Structure	Orbit 1											
	Server Version: 20260618											
The diagram illustrates the timeline of Orbit 1, spanning from 0 to 6000 seconds. Key events include: GS Acq: Green Signal Acquisition at approximately 250 seconds. Exp. 1: Four exposures, each lasting 490 seconds, occurring at approximately 350, 1050, 1750, and 2450 seconds. Each exposure is marked with a green box containing a double-headed arrow. Pointing Maneuver: Three maneuvers, each lasting 10 seconds, occurring at approximately 1000, 1700, and 2400 seconds. Occultation: A period of 10 seconds starting at approximately 3000 seconds. Unused Orbital Visibility: A period of 10 seconds starting at approximately 3000 seconds. The timeline is marked with a scale from 0 to 6000 seconds, with major ticks every 500 seconds and minor ticks every 100 seconds.												

Proposal 18425 - RC-ACS-ramp (05) - Jets, Mergers, and Feedback at Cosmic Dawn: HST-JWST Imaging of $z > 4.4$ Radio Galaxies

Visit	Proposal 18425, RC-ACS-ramp (05)										Mon Aug 17 18:01:25 GMT 2026	
	Diagnostic Status: Warning											
	Scientific Instruments: ACS/WFC											
	Special Requirements: (none)											
Diagnostics	(Exposure 1 (Pattern 2, Exps 1-1 in RC-ACS-ramp (05))) Warning (Form): POS TARG & PATTERN should be used carefully with ACS ramp filters as central wavelengths & transmission efficiencies vary within the apertures.											
Patterns	#	Primary Pattern				Secondary Pattern				Exposures		
	(2)	Pattern Type=SPIRAL Purpose=DITHER Number Of Points=6 Point Spacing=0.2637 Line Spacing=		Coordinate Frame=POS-TARG Pattern Orientation=20.7 Angle Between Sides= Center Pattern=false						(1)		
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous			
	(2)	RC-J0311+0507	RA: 03 11 48.0044 (47.9500183d) Dec: +05 08 2.54 (5.13404d) Equinox: J2000				V=24.8 K=21.1		Reference Frame: ICRS			
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.											
	Category=GALAXY Description=[RADIO GALAXY]											
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit	
	1		(2) RC-J0311+0507	ACS/WFC, ACCUM, WFC1-MRAMP	FR656N 6703 A			Pattern 2, Exps 1-1 i n RC-ACS-ramp (05)) (2)	1100 Secs (6600 Secs)			
									[==>(Pattern 1)]		[1]	
									[==>(Pattern 2)]			
									[==>(Pattern 3)]		[2]	
									[==>(Pattern 4)]			
									[==>(Pattern 5)]		[3]	
								[==>(Pattern 6)]				



Proposal 18425 - RC-WFC3 (06) - Jets, Mergers, and Feedback at Cosmic Dawn: HST-JWST Imaging of $z > 4.4$ Radio Galaxies

Visit	Proposal 18425, RC-WFC3 (06)										Mon Aug 17 18:01:25 GMT 2026	
	Diagnostic Status: No Diagnostics											
	Scientific Instruments: WFC3/IR											
	Special Requirements: (none)											
Patterns	#	Primary Pattern				Secondary Pattern				Exposures		
	(3)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=0.572 Line Spacing=0.365				Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false				(1)		
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous			
	(2)	RC-J0311+0507	RA: 03 11 48.0044 (47.9500183d) Dec: +05 08 2.54 (5.13404d) Equinox: J2000				V=24.8 K=21.1		Reference Frame: ICRS			
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.											
	Category=GALAXY Description=[RADIO GALAXY]											
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit	
	1		(2) RC-J0311+0507	WFC3/IR, MULTIACCUM, IR-FIX	F140W	SAMP-SEQ=STEP100; NSAMP=12		Pattern 3, Exps 1-1 in RC-WFC3 (06) (3)	599.232292 Secs (2396.929 Secs) [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)] [=>(Pattern 4)]		[1]	
Orbit Structure	Orbit 1											Server Version: 20260618
	The diagram illustrates the mission timeline for Orbit 1, spanning from 0 to 6000 seconds. Key events include: GS Acq at ~100s, four exposures (Exp. 1) at ~300s, ~900s, ~1600s, and ~2300s, three pointing maneuvers at ~1000s, ~1600s, and ~2300s, a reconfig at ~2900s, and an occultation at ~2900s. A blue checkered bar highlights the active observation period from approximately 300s to 3000s. A black bar indicates the unused orbital visibility period from approximately 3000s to 5500s. The timeline ends at 6000 seconds.											

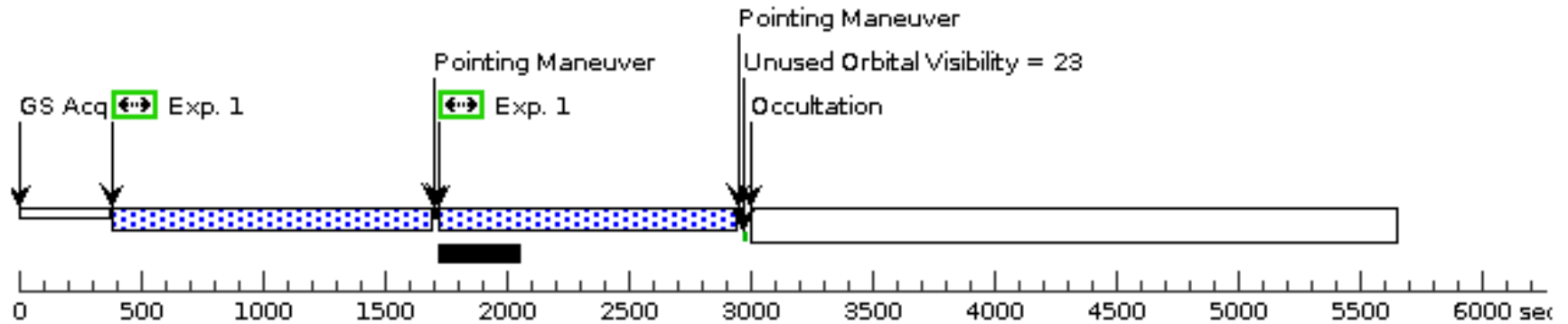
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	Diagnostic Status: No Diagnostics														
	Scientific Instruments: ACS/WFC														
	Special Requirements: (none)														
Patterns	#	Primary Pattern					Secondary Pattern					Exposures			
	(4)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=4 Point Spacing=3.034 Line Spacing= Coordinate Frame=POS-TARG Pattern Orientation=85.29 Angle Between Sides= Center Pattern=false										(1)			
Fixed Targets	#	Name		Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous					
	(4)	NVSS-J163912+405237		RA: 16 39 12.1287 (249.8005362d) Dec: +40 52 36.59 (40.87683d) Equinox: J2000				V=(?) F775W = 25.8 AB		Reference Frame: ICRS					
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.														
	Category=GALAXY Description=[RADIO GALAXY]														
Exposures	#	Label	Target	Config,Mode,Aperture		Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit			
	1		(4) NVSS-J163912+405237	ACS/WFC, ACCUM, WFC-FIX		F775W			Pattern 4, Exps 1-1 in J1639-ACS-F775W (07) (4)	490 Secs (1960 Secs) [==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)] [==>(Pattern 4)]		[1]			
Orbit Structure	Orbit 1													Server Version: 20260618	

Proposal 18425 - J1639-ACS-ramp (08) - Jets, Mergers, and Feedback at Cosmic Dawn: HST-JWST Imaging of $z > 4.4$ Radio Galaxies

Visit	Proposal 18425, J1639-ACS-ramp (08)										Mon Aug 17 18:01:25 GMT 2026			
	Diagnostic Status: Warning													
	Scientific Instruments: ACS/WFC													
	Special Requirements: (none)													
Diagnostics	(Exposure 1 (Pattern 2, Exps 1-1 in J1639-ACS-ramp (08))) Warning (Form): POS TARG & PATTERN should be used carefully with ACS ramp filters as central wavelengths & transmission efficiencies vary within the apertures.													
Patterns	#	Primary Pattern					Secondary Pattern					Exposures		
	(2)	Pattern Type=SPIRAL		Coordinate Frame=POS-TARG								(1)		
Purpose=DITHER		Pattern Orientation=20.7												
Number Of Points=6		Angle Between Sides=												
Point Spacing=0.2637		Center Pattern=false												
Line Spacing=														
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous					
	(4)	NVSS-J163912+405237	RA: 16 39 12.1287 (249.8005362d)				V=(?)		Reference Frame: ICRS					
			Dec: +40 52 36.59 (40.87683d)				F775W = 25.8 AB							
			Equinox: J2000											
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.														
Category=GALAXY														
Description=[RADIO GALAXY]														
Exposures	#	Label	Target	Config,Mode,Aperture		Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit		
	1		(4) NVSS-J163912+405237	ACS/WFC, ACCUM, WFC1-IRAMP		FR716N 7148 A			Pattern 2, Exps 1-1 in J1639-ACS-ramp (08) (2)	1100 Secs (6600 Secs)				
										[==>(Pattern 1)]		[1]		
										[==>(Pattern 2)]				
										[==>(Pattern 3)]		[2]		
										[==>(Pattern 4)]				
										[==>(Pattern 5)]		[3]		
[==>(Pattern 6)]														

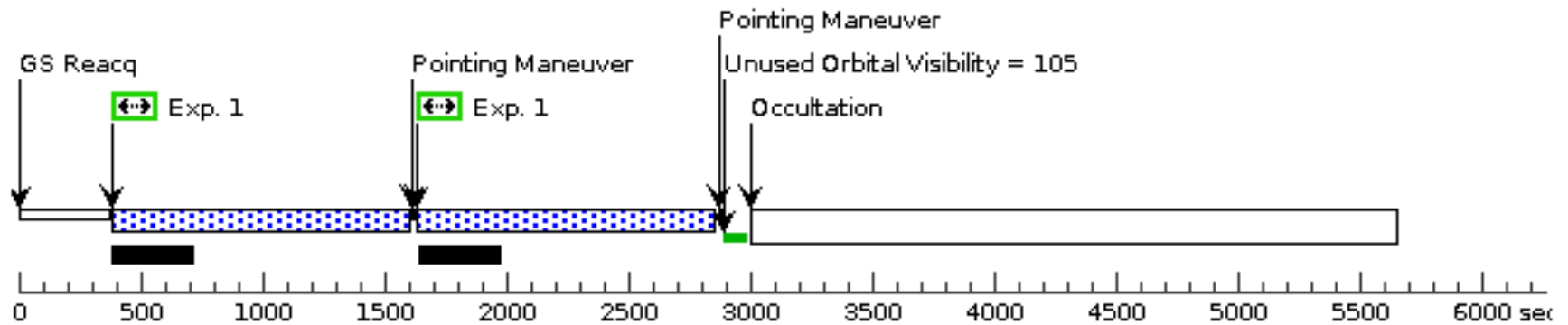
Orbit 1

Server Version: 20260618



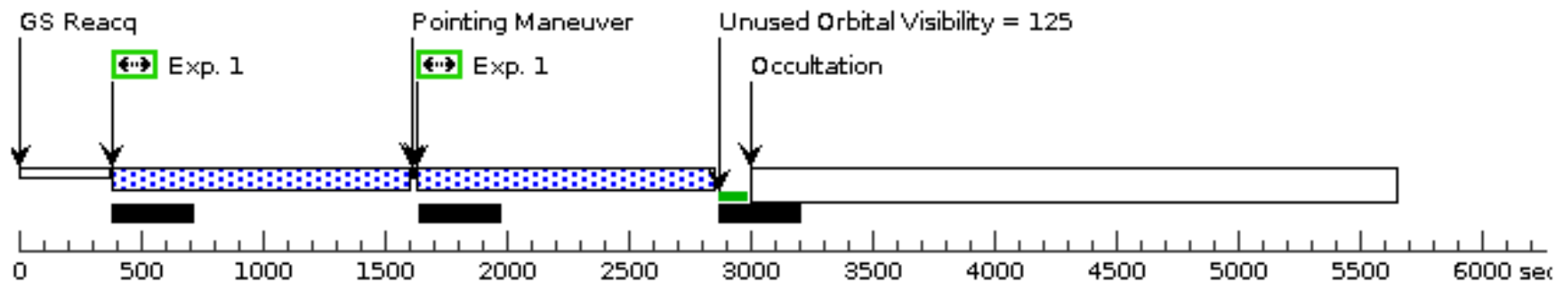
Orbit 2

Server Version: 20260618



Orbit 3

Server Version: 20260618

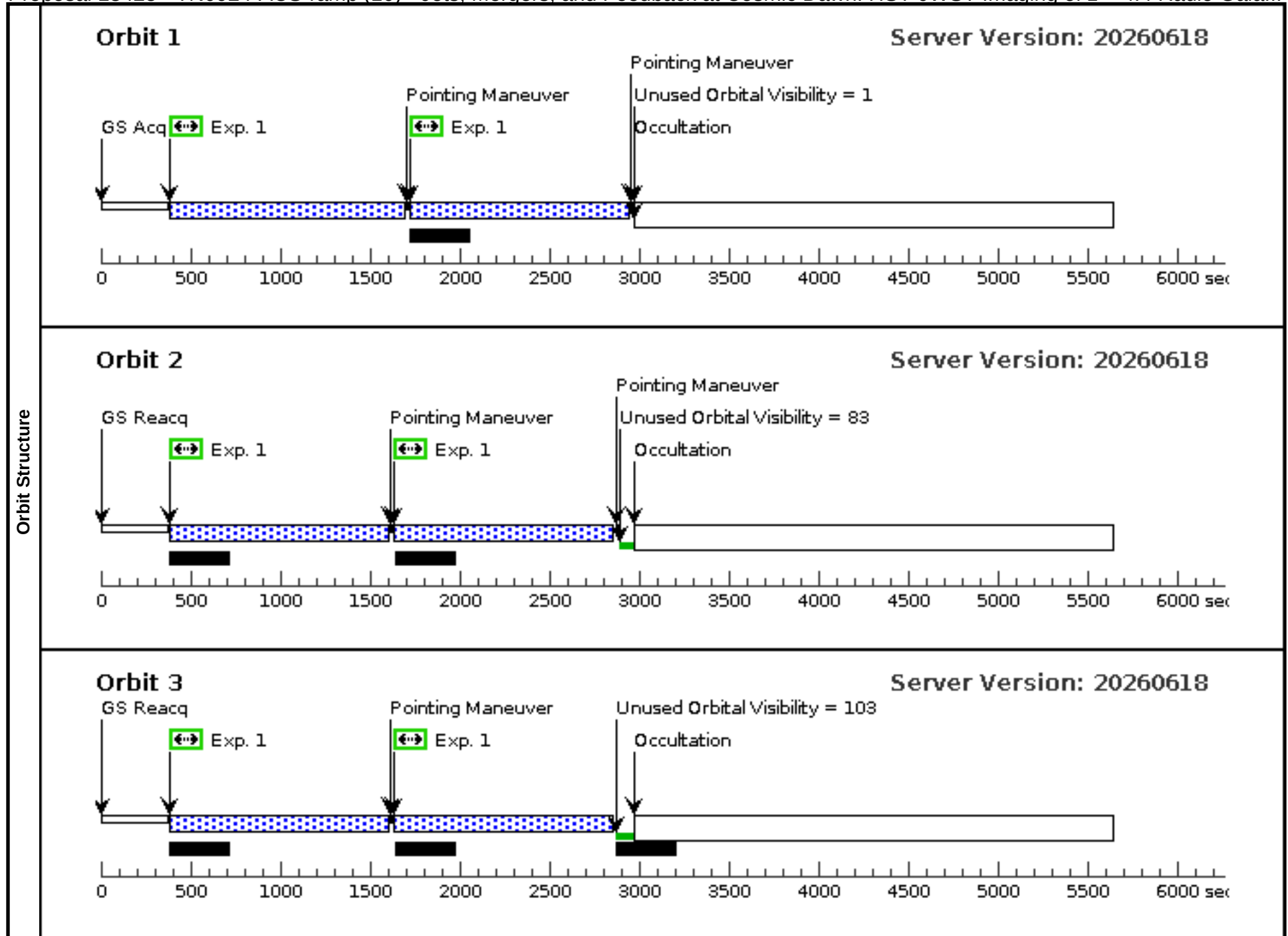


Proposal 18425 - J1639-WFC3 (09) - Jets, Mergers, and Feedback at Cosmic Dawn: HST-JWST Imaging of $z > 4.4$ Radio Galaxies

Visit	Proposal 18425, J1639-WFC3 (09) Mon Aug 17 18:01:25 GMT 2026				
	Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: (none)				
Patterns	#	Primary Pattern		Secondary Pattern	Exposures
	(3)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=0.572 Line Spacing=0.365		Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false	(1)
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes
	(4)	NVSS-J163912+405237	RA: 16 39 12.1287 (249.8005362d) Dec: +40 52 36.59 (40.87683d) Equinox: J2000		V=(?) F775W = 25.8 AB
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Category=GALAXY Description=[RADIO GALAXY]				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.
	1		(4) NVSS-J163912+405237	WFC3/IR, MULTIACCUM, IR-FIX	F140W
					SAMP-SEQ=STEP100; NSAMP=12
					Special Reqs. Groups: Pattern 3, Exps 1-1 in J1639-WFC3 (09) (3)
					Exp. Time (Total)/[Actual Dur.] 599.232292 Secs (2396.929 Secs) [= > (Pattern 1)] [= > (Pattern 2)] [= > (Pattern 3)] [= > (Pattern 4)]
					Orbit [1]
Orbit Structure	Orbit 1 Server Version: 20260618				
	Timeline labels: GS Acq, Exp. 1, Exp. 1, Exp. 1, Exp. 1, Reconfig, Occultation, Unused Orbital Visibility = 76, Pointing Maneuver. Timeline scale: 0 to 6000 sec.				

Proposal 18425 - TN0924-ACS-ramp (10) - Jets, Mergers, and Feedback at Cosmic Dawn: HST-JWST Imaging of $z > 4.4$ Radio Gala...

Visit	Proposal 18425, TN0924-ACS-ramp (10)										Mon Aug 17 18:01:25 GMT 2026	
	Diagnostic Status: Warning											
	Scientific Instruments: ACS/WFC											
	Special Requirements: (none)											
Diagnostics	(Exposure 1 (Pattern 2, Exps 1-1 in TN0924-ACS-ramp (10))) Warning (Form): POS TARG & PATTERN should be used carefully with ACS ramp filters as central wavelengths & transmission efficiencies vary within the apertures.											
Patterns	#	Primary Pattern				Secondary Pattern				Exposures		
	(2)	Pattern Type=SPIRAL Purpose=DITHER Number Of Points=6 Point Spacing=0.2637 Line Spacing=		Coordinate Frame=POS-TARG Pattern Orientation=20.7 Angle Between Sides= Center Pattern=false						(1)		
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous			
	(3)	TN-J0924-2201	RA: 09 24 19.9200 (141.0830000d) Dec: -22 01 41.48 (-22.02819d) Equinox: J2000				V=(?) K=21.7		Reference Frame: ICRS			
	Comments: This object was generated by the targetselector and retrieved from the NED database.											
	Category=GALAXY Description=[RADIO GALAXY]											
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit	
	1		(3) TN-J0924-2201	ACS/WFC, ACCUM, WFC2-ORAMP	FR782N 7530 A			Pattern 2, Exps 1-1 i n TN0924-ACS-ram p (10) (2)	1100 Secs (6600 Secs)			
									[==>(Pattern 1)]		[1]	
									[==>(Pattern 2)]			
									[==>(Pattern 3)]		[2]	
									[==>(Pattern 4)]			
									[==>(Pattern 5)]		[3]	
									[==>(Pattern 6)]			



Proposal 18425 - TN0924-WFC3 (11) - Jets, Mergers, and Feedback at Cosmic Dawn: HST-JWST Imaging of $z > 4.4$ Radio Galaxies

Visit	Proposal 18425, TN0924-WFC3 (11)										Mon Aug 17 18:01:25 GMT 2026		
	Diagnostic Status: No Diagnostics												
	Scientific Instruments: WFC3/IR												
	Special Requirements: (none)												
Patterns	#	Primary Pattern					Secondary Pattern					Exposures	
	(3)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=0.572 Line Spacing=0.365			Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false							(1)	
Fixed Targets	#	Name		Target Coordinates		Targ. Coord. Corrections			Fluxes		Miscellaneous		
	(4)	NVSS-J163912+405237		RA: 16 39 12.1287 (249.8005362d) Dec: +40 52 36.59 (40.87683d) Equinox: J2000					V=(?) F775W = 25.8 AB		Reference Frame: ICRS		
	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.												
	Category=GALAXY Description=[RADIO GALAXY]												
Exposures	#	Label	Target	Config,Mode,Aperture		Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit	
	1		(4) NVSS-J163912+405237	WFC3/IR, MULTIACCUM, IR-FIX		F160W	SAMP-SEQ=STEP100; NSAMP=12		Pattern 3, Exps 1-1 in TN0924-WFC3 (11) (3)	599.232292 Secs X 2 (4793.858 Secs)			
										[==>(Pattern 1, Copy 1)] [==>(Pattern 1, Copy 2)] [==>(Pattern 2, Copy 1)] [==>(Pattern 2, Copy 2)]		[1]	
										[==>(Pattern 3, Copy 1)] [==>(Pattern 3, Copy 2)] [==>(Pattern 4, Copy 1)] [==>(Pattern 4, Copy 2)]		[2]	

Orbit 1

Server Version: 20260618

