



18038 - Unravel the Puzzles of Little Red Dots: HST View on Local Analogs

Cycle: 33, Proposal Category: GO

(UV Initiative)

(Availability Mode: SUPPORTED)

INVESTIGATORS

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Dr. Zheng Cai (CoI)	Tsinghua University
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Dr. Fuyan Bian (CoI) (ESA Member)	European Southern Observatory - Chile
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Dr. Jinyi Yang (CoI)	University of Michigan
Dr. Michael A. Strauss (CoI)	Princeton University

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) J1025+1402	WFC3/UVIS	3	11-Nov-2025 11:00:14.0	yes
02	(1) J1025+1402	WFC3/UVIS	2	11-Nov-2025 11:00:15.0	yes
03	(1) J1025+1402	STIS/CCD STIS/FUV-MAMA	3	11-Nov-2025 11:00:15.0	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	(2) J1047+0739	WFC3/UVIS	3	11-Nov-2025 11:00:16.0	yes
05	(2) J1047+0739	WFC3/UVIS	2	11-Nov-2025 11:00:17.0	yes
06	(2) J1047+0739	STIS/CCD STIS/FUV-MAMA	3	11-Nov-2025 11:00:17.0	yes
07	(3) J1022+0841	WFC3/UVIS	3	11-Nov-2025 11:00:18.0	yes
08	(3) J1022+0841	WFC3/UVIS	2	11-Nov-2025 11:00:19.0	yes
09	(3) J1022+0841	STIS/CCD STIS/FUV-MAMA	2	11-Nov-2025 11:00:19.0	yes
10	(3) J1022+0841	STIS/CCD STIS/FUV-MAMA	2	11-Nov-2025 11:00:20.0	yes

25 Total Orbits Used

ABSTRACT

One of the most impactful early discoveries from JWST is the ubiquity of "little red dots" (LRDs) at $z=2-10$. LRDs are characterized by broad hydrogen emission lines and v-shaped SEDs (blue UV and red optical continua), interpreted as low-luminosity AGNs. A significant fraction of LRDs also exhibit Balmer absorption and Balmer breaks, which could be produced by a shell of dense gas surrounding the black hole. However, these models leave many degeneracies, particularly regarding the origin of the UV light. Spatially decomposing AGN and stellar light, as well as Ly α observations, is the most direct way to test these LRD models. Yet at high redshift, LRDs are too faint and compact for such decomposition, even with JWST. Local analogs of LRDs provide the best opportunities to unravel the physical nature of this population.

We propose HST UVIS imaging and STIS spectroscopy on three LRD analogs at $z=0.1-0.3$. These analogs, selected from SDSS, exhibit emission line profiles, UV-to-optical SEDs and Balmer absorptions that most closely resemble those of high-redshift LRDs. They establish an effective testbed and benchmark for LRD studies at $z>2$. By spatially resolving their UV-to-optical continua and mapping their Ly α profile, we aim to: (1) unravel the origin of UV light, separate AGN and galaxy contributions and obtain a resolved view of host galaxies, (2) reveal the existence and measure the density and size of the hydrogen gas envelopes surrounding the center BH. Fully leveraging the unique UV capabilities of HST in both imaging and spectroscopy, this program will directly test theoretical hypotheses of LRDs and address one of the most debated questions since the launch of JWST.

OBSERVING DESCRIPTION

Imaging: We propose WFC3 UVIS imaging with F225W+F336W for all three targets, and medium-band filters tailored to each: F467M+F621M for J1025+1402; F467M+F689M for J1047+0739; and F547M+F689M for J1022+0841. These medium bands are selected to map the continuum in line-free windows between the Balmer break, [O III]4960,5008, and Ha, tracing the Balmer break strength when combined with UV filters.

Spectroscopy: STIS G140L with 52x0.5 slit. It offers high sensitivity in the FUV range and provides adequate spectral resolution ($R \sim 1000$) to measure their Ly α properties.

Exposure Time (using HST ETC v33.1):

(1) Imaging: We estimate the UV surface brightness from GALEX and SDSS-u photometry to be approximately $3e-18$ to $5e-18$ erg/s/cm²/Å/arcsec², and derive the optical surface brightness from SDSS photometry. We aim to achieve a signal-to-noise ratio (S/N) of at least 3 per 5x5 pixel region.

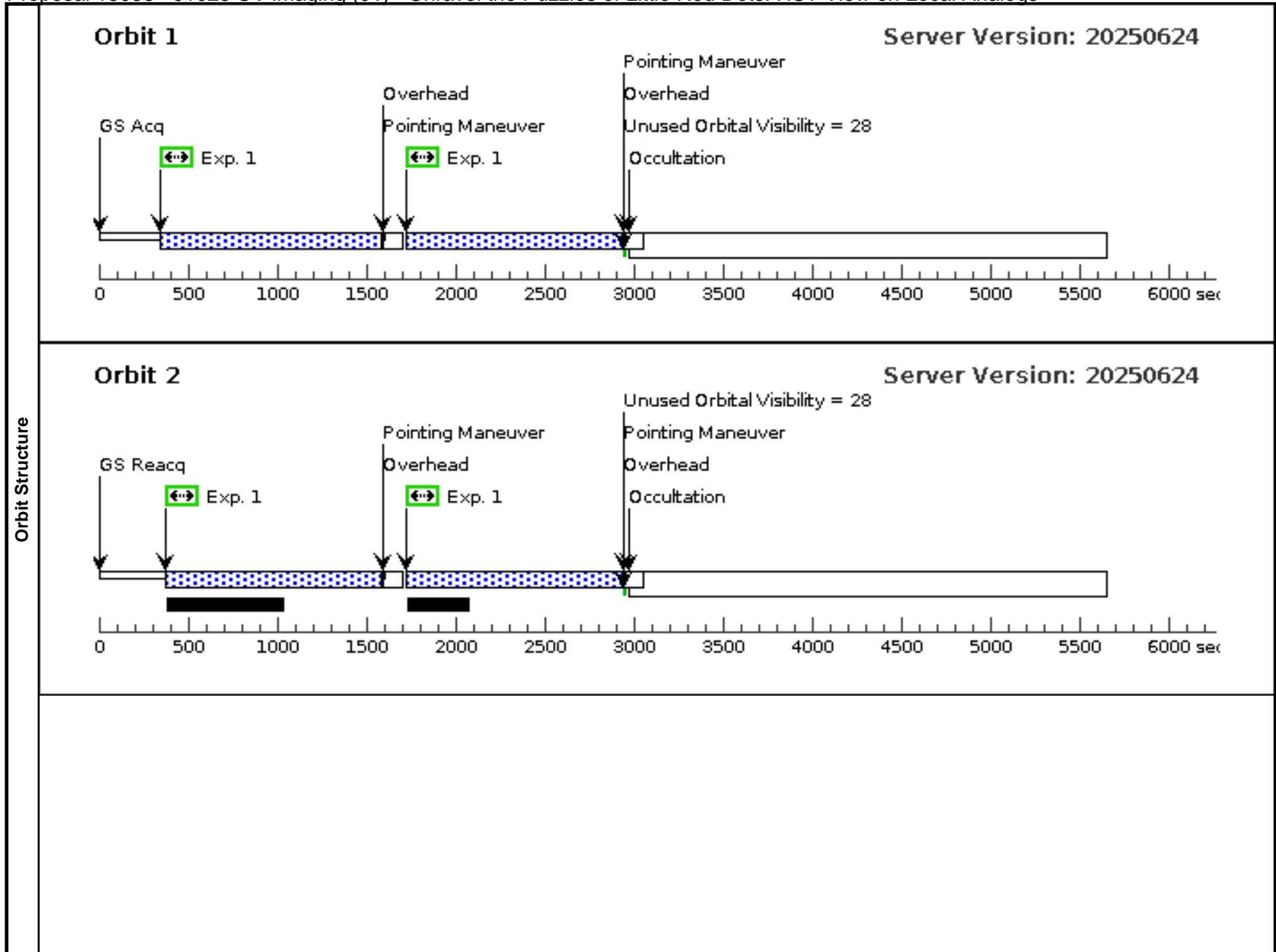
For each target, we request 2 orbits for the F225W filter, 1 orbit for F336W, and 2 orbits for the medium-band filters. This results in 5 UVIS imaging orbits per object, or a total of 15 orbits for all three targets.

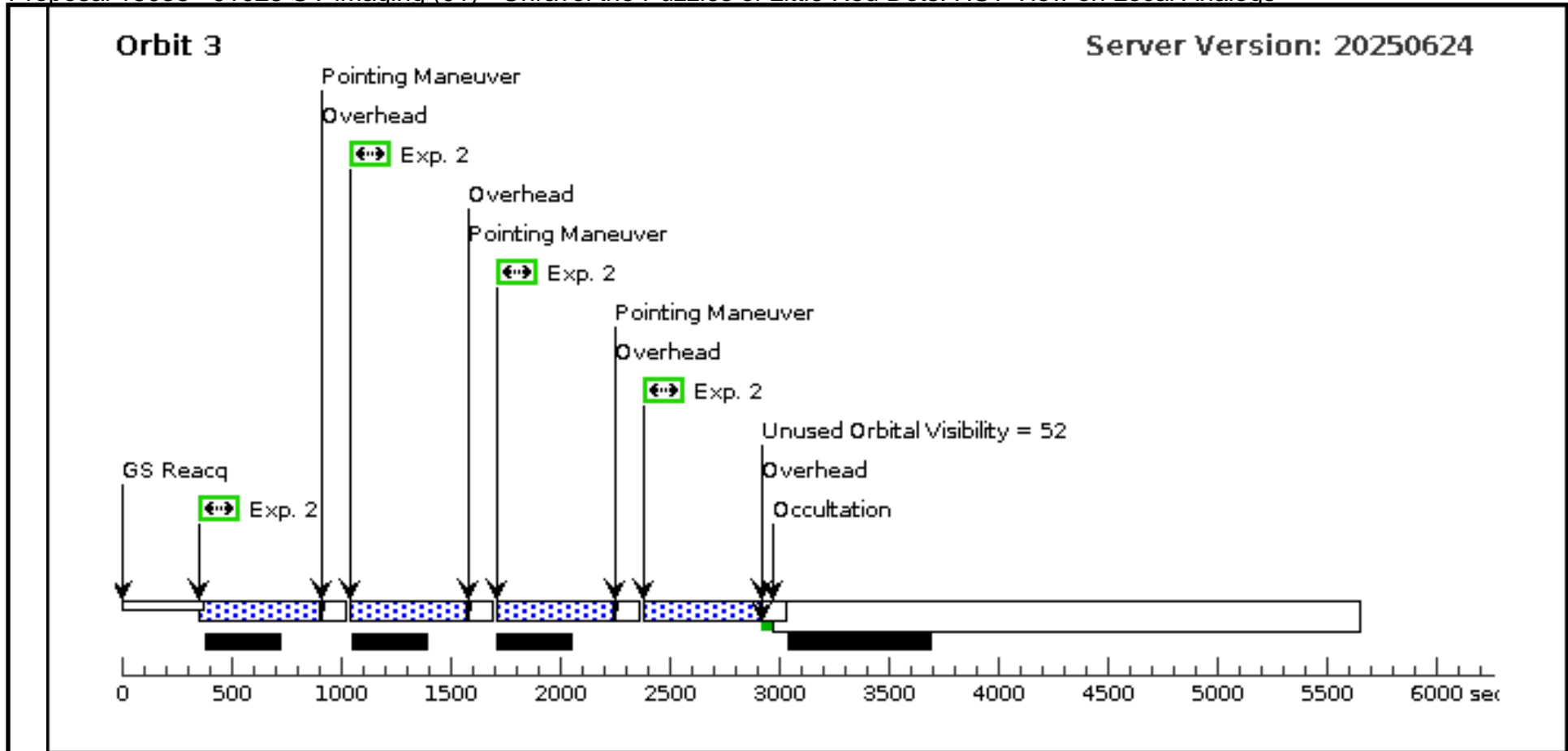
(2) STIS spectroscopy: Based on the spectra of the most similar high-z LRDs to the proposed targets, we estimate their underlying continua around the Ly α line to be in the range of $1e-16$ to $5e-17$ erg/s/cm²/Å. We aim to achieve $S/N > 3$ per resolution element to resolve Ly α profiles. We therefore propose 3 orbits of STIS G140L observations for each of the two targets at $z = 0.1$, and 4 orbits for J1022+0841 due to its fainter flux.

Proposal 18038 - J1025 UV imaging (01) - Unravel the Puzzles of Little Red Dots: HST View on Local Analogs

Tue Nov 11 16:00:20 GMT 2025

Visit	Proposal 18038, J1025 UV imaging (01), implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: (none)									
	Patterns	#	Primary Pattern	Secondary Pattern	Exposures					
	(1)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false		(1), (2)					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(1)	J1025+1402	RA: 10 25 30.2924 (156.3762183d) Dec: +14 02 7.44 (14.03540d) Equinox: J2000	Proper Motion RA: 0 Proper Motion Dec: 0 Redshift: 0.1007	V=19.45+/-0.01 g=20.07, r=19.00, i=18.22, z=18.16	Reference Frame: ICRS				
	<i>Comments:</i> Category=GALAXY Description=[NUCLEUS, OSO, OUASAR]									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	F225W (WFC3UVI S.im.202569 7)	(1) J1025+1402	WFC3/UVIS, ACCUM, UVIS2-C512C-CTE	F225W	FLASH=18		Pattern 1, Exps 1-1 in J1025 UV imaging (01) (1)	1200 Secs (4840 Secs) [==>1210.0 Secs (Pattern 1)] [==>1210.0 Secs (Pattern 2)] [==>1210.0 Secs (Pattern 3)] [==>1210.0 Secs (Pattern 4)]	[1] [2]
2	F336W (WFC3UVI S.im.202570 2)	(1) J1025+1402	WFC3/UVIS, ACCUM, UVIS2-C512C-CTE	F336W	FLASH=18		Pattern 1, Exps 2-2 in J1025 UV imaging (01) (1)	450 Secs (2120 Secs) [==>530.0 Secs (Pattern 1)] [==>530.0 Secs (Pattern 2)] [==>530.0 Secs (Pattern 3)] [==>530.0 Secs (Pattern 4)]	[3]	

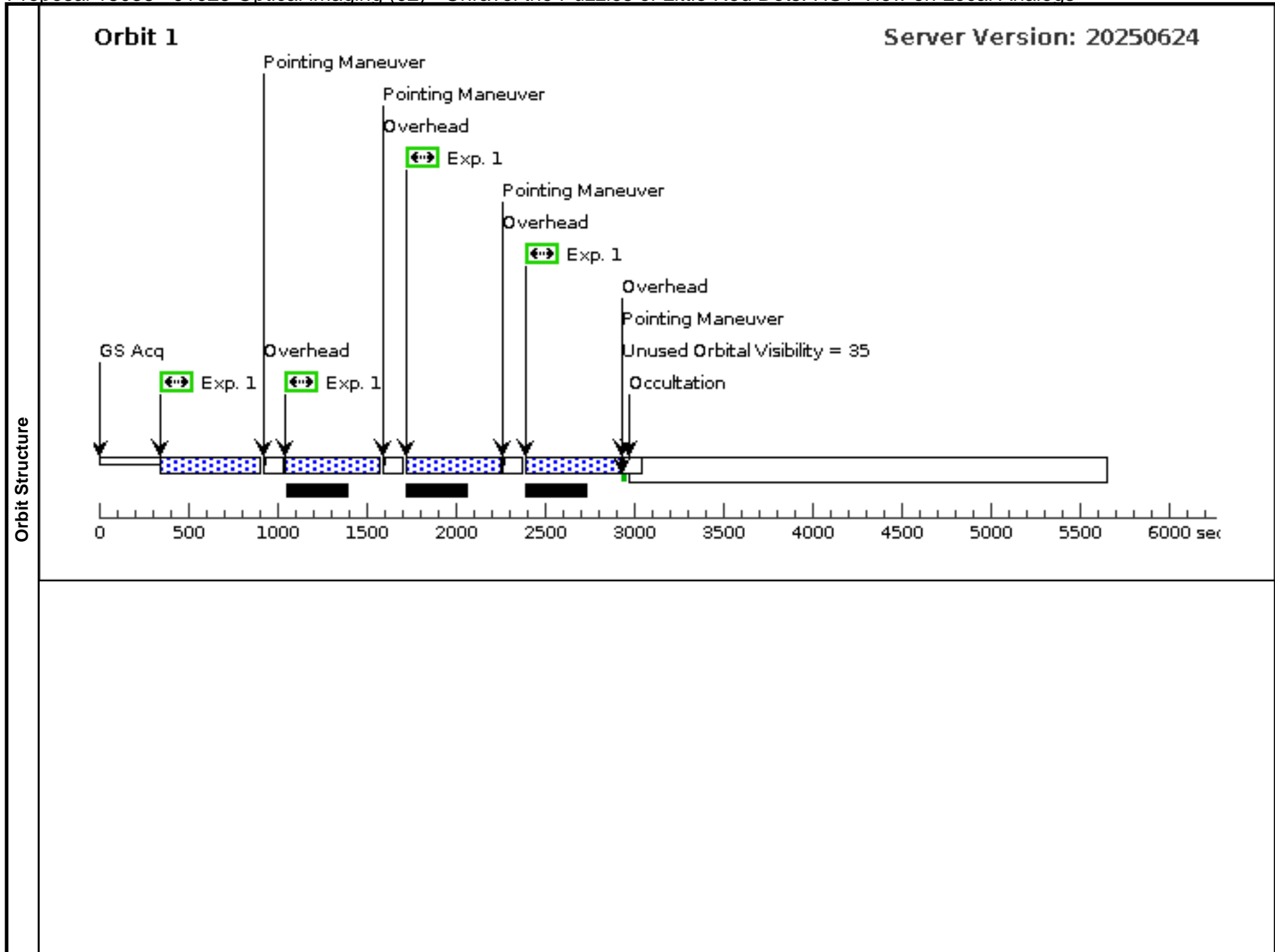


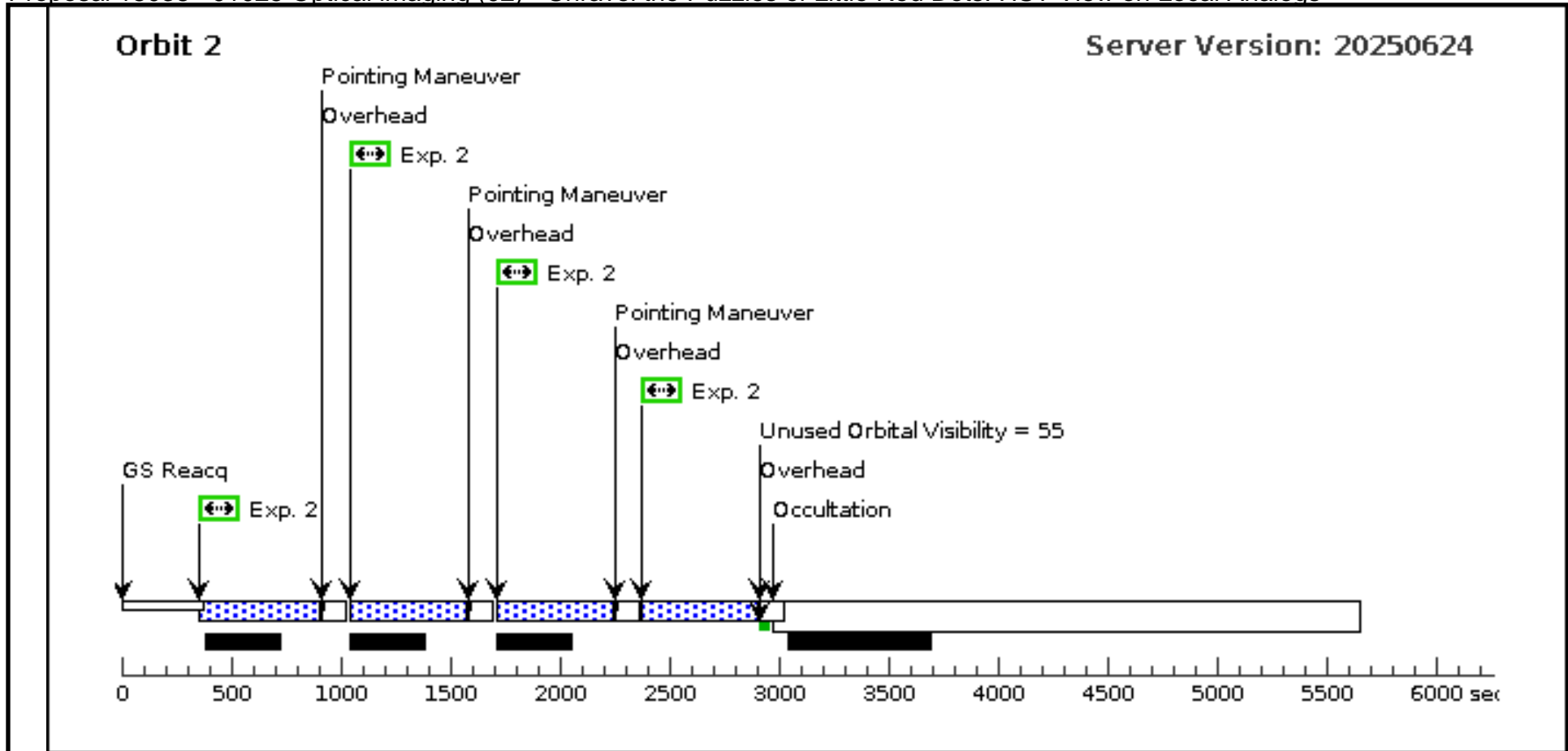


Proposal 18038 - J1025 Optical imaging (02) - Unravel the Puzzles of Little Red Dots: HST View on Local Analogs

Tue Nov 11 16:00:20 GMT 2025

Visit	Proposal 18038, J1025 Optical imaging (02), implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: (none)									
	Patterns	#	Primary Pattern	Secondary Pattern	Exposures					
	(1)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false		(1), (2)					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(1)	J1025+1402	RA: 10 25 30.2924 (156.3762183d) Dec: +14 02 7.44 (14.03540d) Equinox: J2000	Proper Motion RA: 0 Proper Motion Dec: 0 Redshift: 0.1007	V=19.45+/-0.01 g=20.07, r=19.00, i=18.22, z=18.16	Reference Frame: ICRS				
	<i>Comments:</i> Category=GALAXY Description=[NUCLEUS, OSO, OUASAR]									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	F467M (WFC3UVI S.im.202570 5)	(1) J1025+1402	WFC3/UVIS, ACCUM, UVIS2-C512C-CTE	F467M	FLASH=16		Pattern 1, Exps 1-1 in J1025 Optical imaging (02) (1)	500 Secs (2140 Secs) [==>535.0 Secs (Pattern 1)] [==>535.0 Secs (Pattern 2)] [==>535.0 Secs (Pattern 3)] [==>535.0 Secs (Pattern 4)]	[1]
	2	F621M (WFC3UVI S.im.202571 1)	(1) J1025+1402	WFC3/UVIS, ACCUM, UVIS2-C512C-CTE	F621M	FLASH=16		Pattern 1, Exps 2-2 in J1025 Optical imaging (02) (1)	500 Secs (2120 Secs) [==>530.0 Secs (Pattern 1)] [==>530.0 Secs (Pattern 2)] [==>530.0 Secs (Pattern 3)] [==>530.0 Secs (Pattern 4)]	[2]

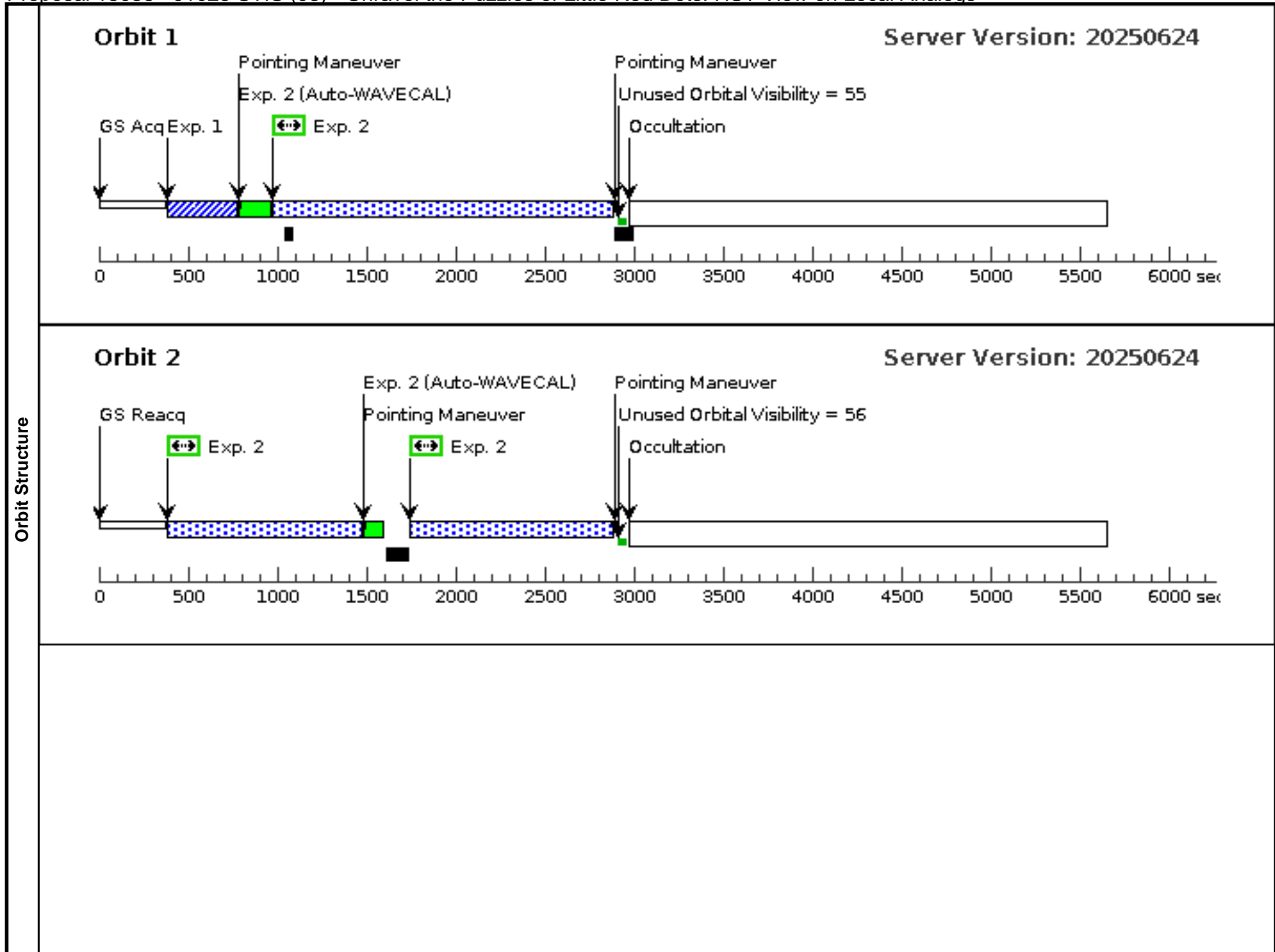


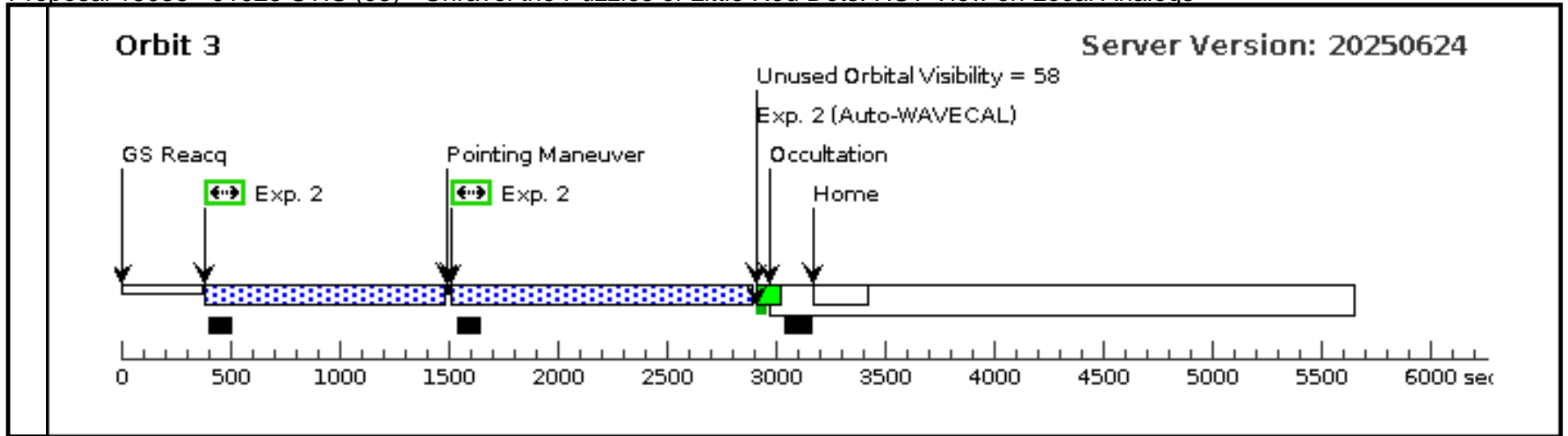


Proposal 18038 - J1025 STIS (03) - Unravel the Puzzles of Little Red Dots: HST View on Local Analogs

Tue Nov 11 16:00:20 GMT 2025

Visit	Proposal 18038, J1025 STIS (03), implementation Diagnostic Status: No Diagnostics Scientific Instruments: STIS/CCD, STIS/FUV-MAMA Special Requirements: (none)									
	Patterns	#	Primary Pattern				Secondary Pattern			Exposures
(2)		Pattern Type=STIS-ALONG-SLIT	Coordinate Frame=POS-TARG							(2)
		Purpose=DITHER	Pattern Orientation=90.0							
		Number Of Points=5	Angle Between Sides=							
		Point Spacing=0.235	Center Pattern=false							
		Line Spacing=								
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections		Fluxes	Miscellaneous			
	(1)	J1025+1402	RA: 10 25 30.2924 (156.3762183d) Dec: +14 02 7.44 (14.03540d) Equinox: J2000	Proper Motion RA: 0 Proper Motion Dec: 0 Redshift: 0.1007		V=19.45+/-0.01 g=20.07, r=19.00, i=18.22, z=18.16	Reference Frame: ICRS			
	Comments: Category=GALAXY Description=[NUCLEUS, OSO, QUASAR]									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(1) J1025+1402	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT			40 Secs (40 Secs)	
									[==>]	[1]
	2	STIS (STIS.sp.20 23237)	(1) J1025+1402	STIS/FUV-MAMA, ACCUM, 52X0.5D1	G140L 1425 A		POS TARG 0.0,3	Pattern 2, Exps 2-2 in J1025 STIS (03) (2)	1100 Secs (6470 Secs)	
									[==>1850.0 Secs (Pattern 1)]	[1]
									[==>1080.0 Secs (Pattern 2)]	[2]
								[==>1080.0 Secs (Pattern 3)]		
								[==>1090.0 Secs (Pattern 4)]		
								[==>1370.0 Secs (Pattern 5)]	[3]	

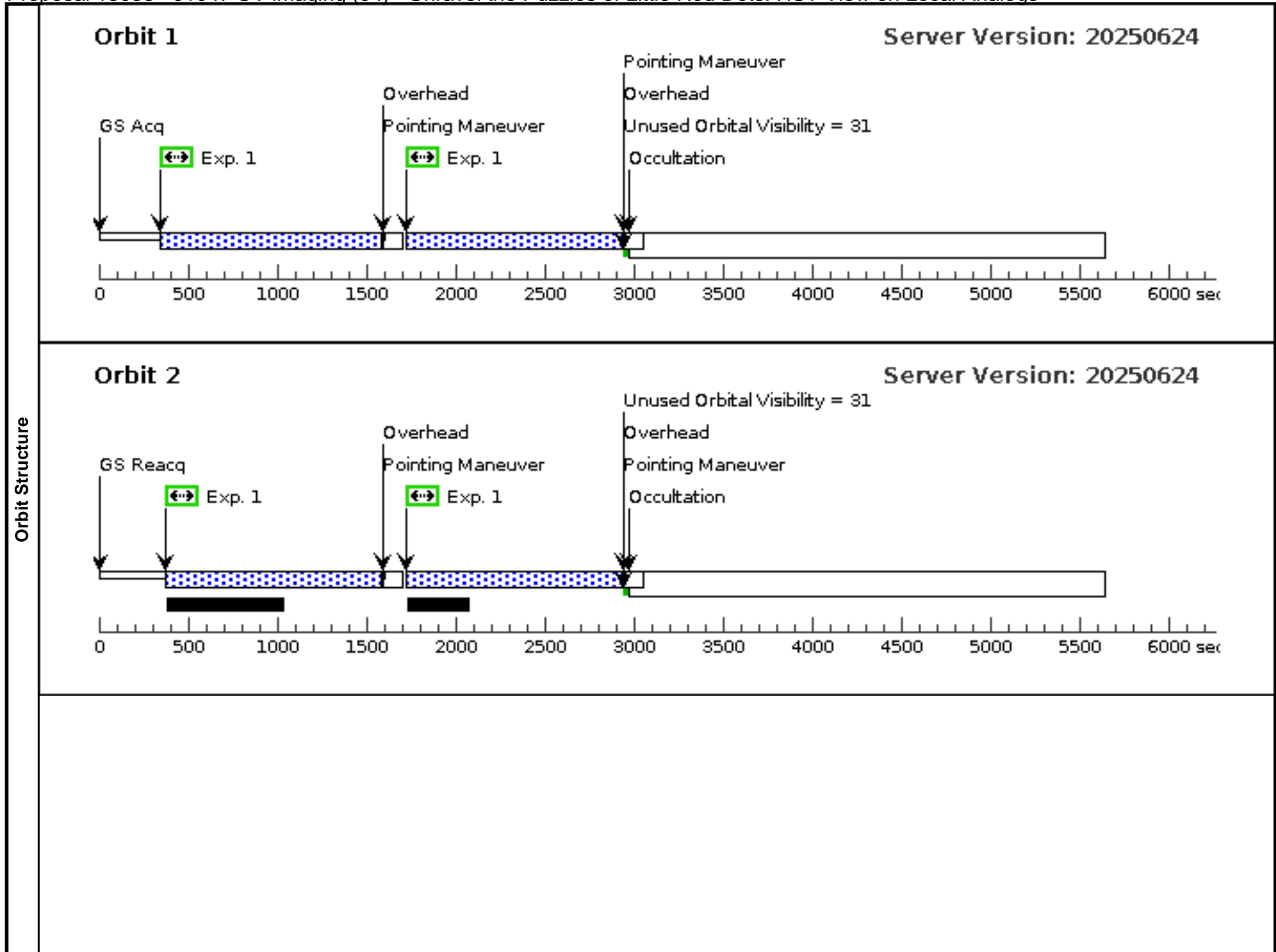


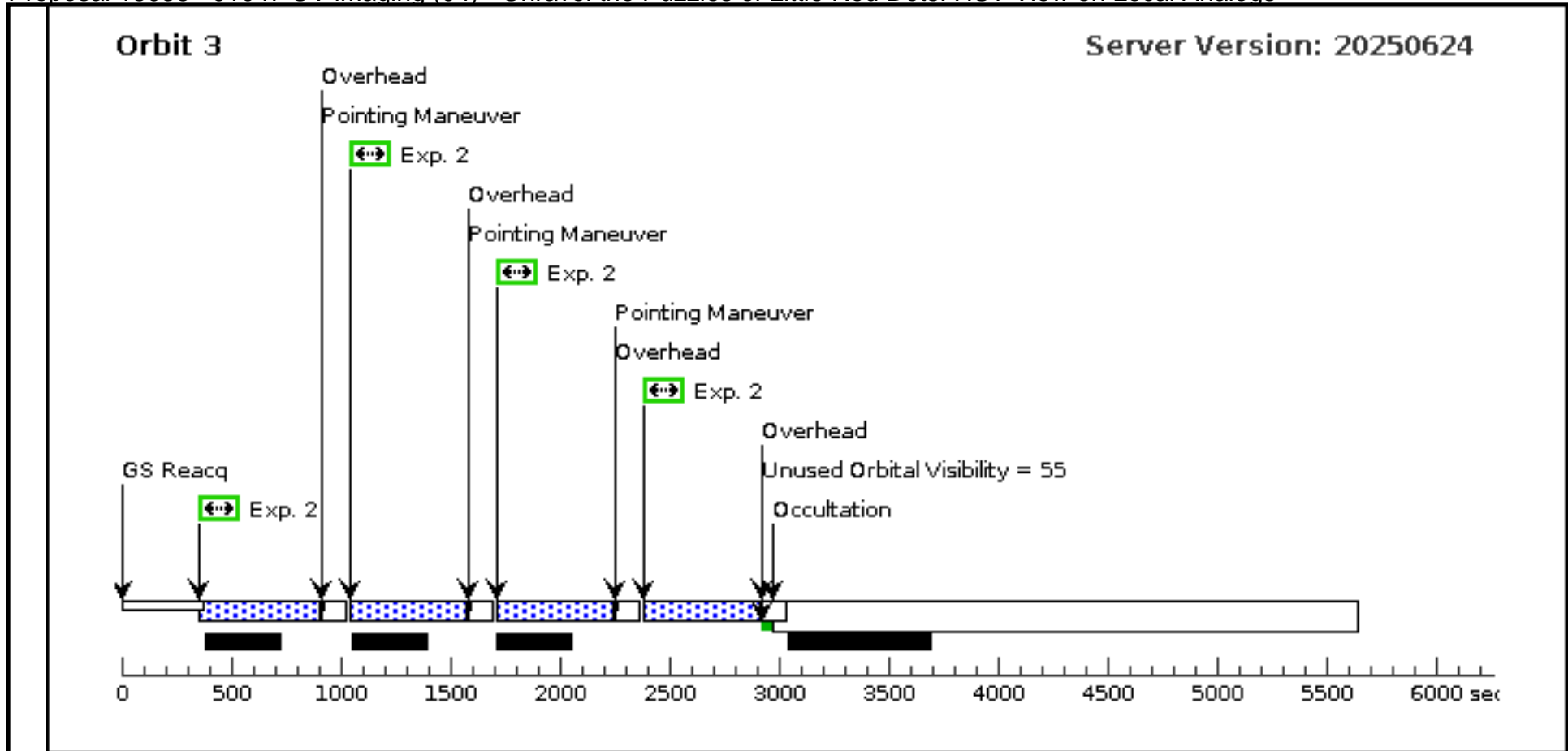


Proposal 18038 - J1047 UV imaging (04) - Unravel the Puzzles of Little Red Dots: HST View on Local Analogs

Tue Nov 11 16:00:20 GMT 2025

Visit	Proposal 18038, J1047 UV imaging (04), implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: (none)									
	Patterns	#	Primary Pattern	Secondary Pattern	Exposures					
	(1)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false		(1), (2)					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(2)	J1047+0739	RA: 10 47 55.9200 (161.9830000d) Dec: +07 39 51.12 (7.66420d) Equinox: J2000	Proper Motion RA: 0 Proper Motion Dec: 0 Redshift: 0.16828	V=19.31 g=19.95, r=18.85, i=18.33, z=18.69	Reference Frame: ICRS				
	<i>Comments:</i> Category=GALAXY Description=[NUCLEUS, OSO, OUASAR]									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	F225W (WFC3UVI S.im.202569 7)	(2) J1047+0739	WFC3/UVIS, ACCUM, UVIS2-C512C-CTE	F225W	FLASH=18		Pattern 1, Exps 1-1 in J1047 UV imaging (04) (1)	1200 Secs (4840 Secs) [==>1210.0 Secs (Pattern 1)] [==>1210.0 Secs (Pattern 2)] [==>1210.0 Secs (Pattern 3)] [==>1210.0 Secs (Pattern 4)]	[1] [2]
2	F336W (WFC3UVI S.im.202570 2)	(2) J1047+0739	WFC3/UVIS, ACCUM, UVIS2-C512C-CTE	F336W	FLASH=18		Pattern 1, Exps 2-2 in J1047 UV imaging (04) (1)	450 Secs (2120 Secs) [==>530.0 Secs (Pattern 1)] [==>530.0 Secs (Pattern 2)] [==>530.0 Secs (Pattern 3)] [==>530.0 Secs (Pattern 4)]	[3]	

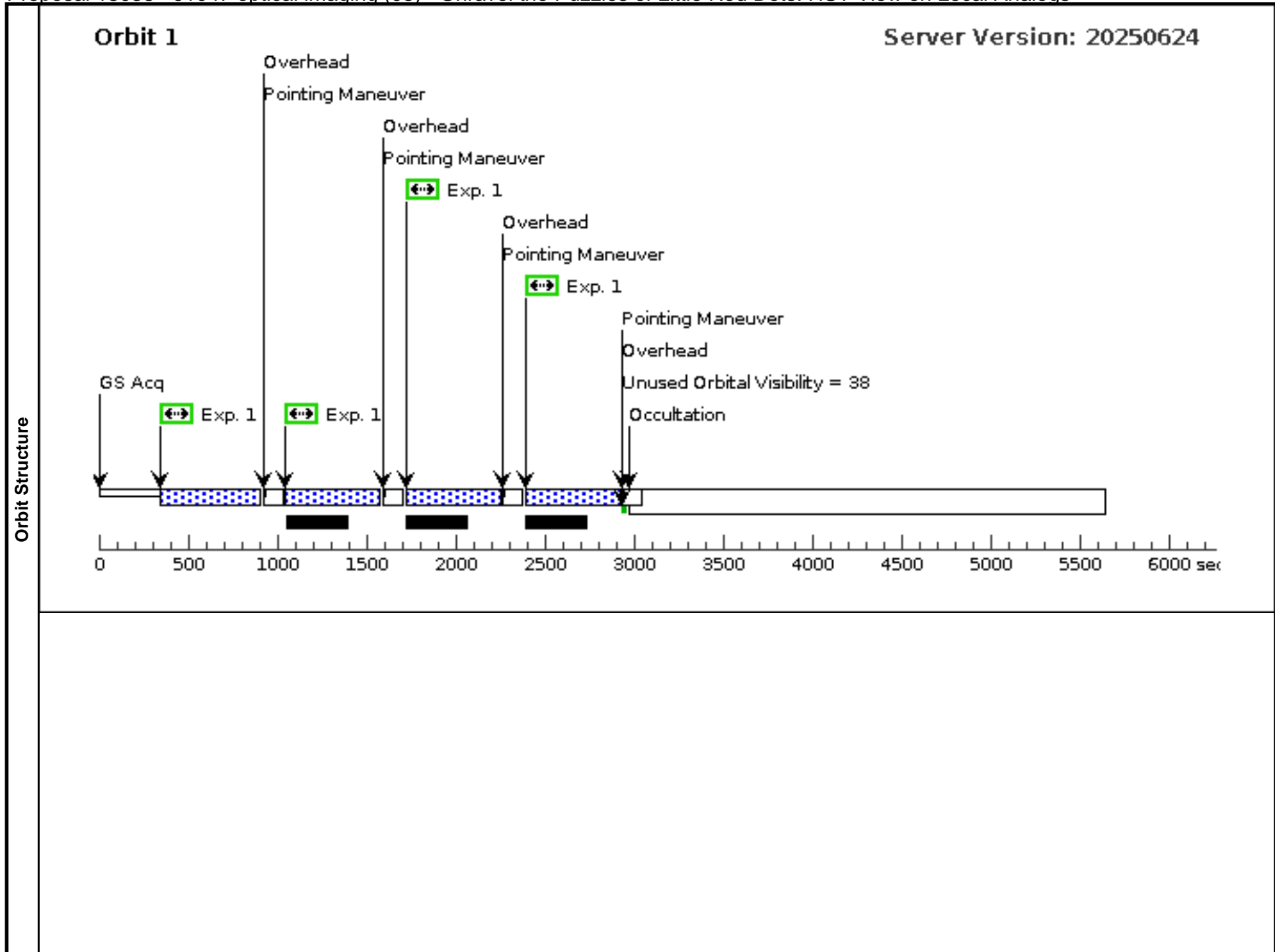


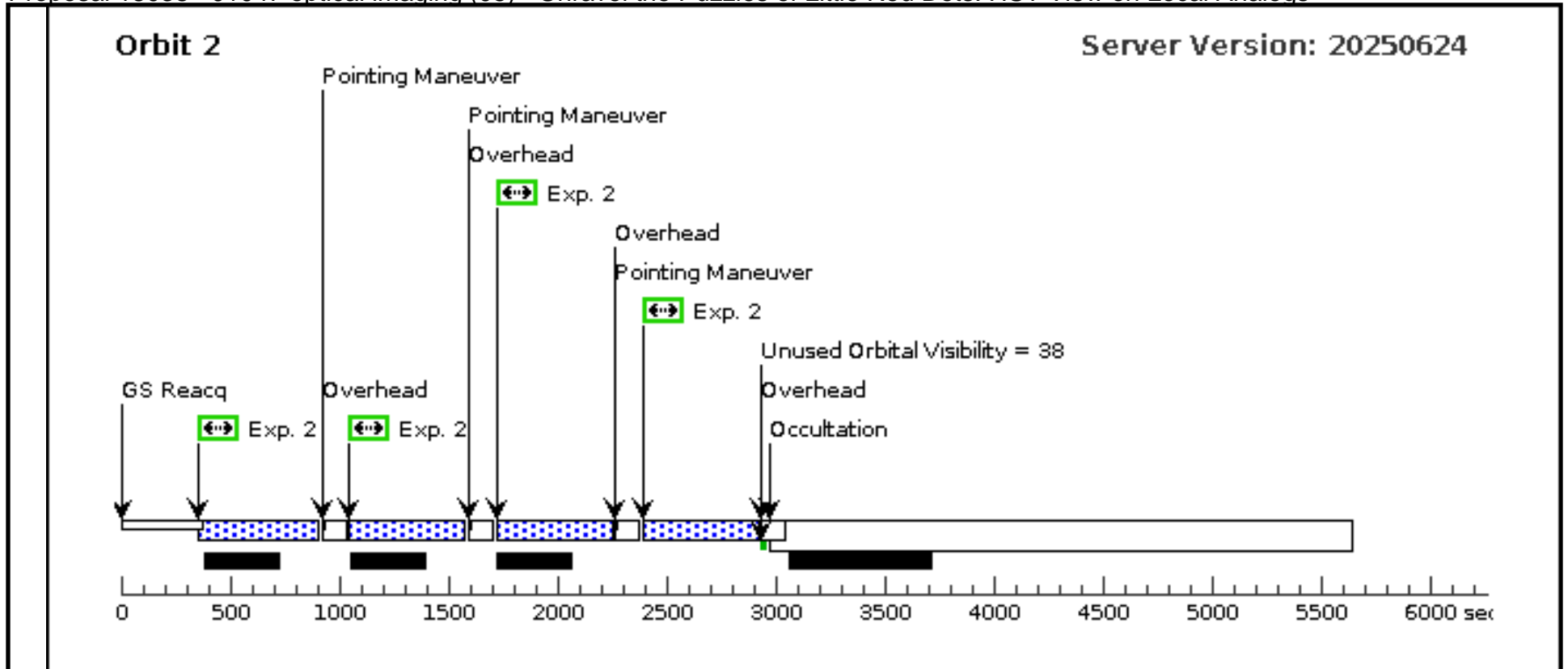


Proposal 18038 - J1047 optical imaging (05) - Unravel the Puzzles of Little Red Dots: HST View on Local Analogs

Tue Nov 11 16:00:21 GMT 2025

Visit	Proposal 18038, J1047 optical imaging (05), implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: (none)									
	Patterns	#	Primary Pattern	Secondary Pattern	Exposures					
	(1)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false		(1), (2)					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(2)	J1047+0739	RA: 10 47 55.9200 (161.9830000d) Dec: +07 39 51.12 (7.66420d) Equinox: J2000	Proper Motion RA: 0 Proper Motion Dec: 0 Redshift: 0.16828	V=19.31 g=19.95, r=18.85, i=18.33, z=18.69	Reference Frame: ICRS				
	<i>Comments:</i> Category=GALAXY Description=[NUCLEUS, OSO, OUASAR]									
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	F467M	(2) J1047+0739	WFC3/UVIS, ACCUM, UVIS2-C512C-CTE	F467M	FLASH=16		Pattern 1, Exps 1-1 in J1047 optical imaging (05) (1)	500 Secs (2140 Secs) [==>535 Secs (Pattern 1)] [==>535 Secs (Pattern 2)] [==>535 Secs (Pattern 3)] [==>535 Secs (Pattern 4)]	[1]
2	F689M	(2) J1047+0739	WFC3/UVIS, ACCUM, UVIS2-C512C-CTE	F689M	FLASH=16		Pattern 1, Exps 2-2 in J1047 optical imaging (05) (1)	500 Secs (2140 Secs) [==>535.0 Secs (Pattern 1)] [==>535.0 Secs (Pattern 2)] [==>535.0 Secs (Pattern 3)] [==>535.0 Secs (Pattern 4)]	[2]	

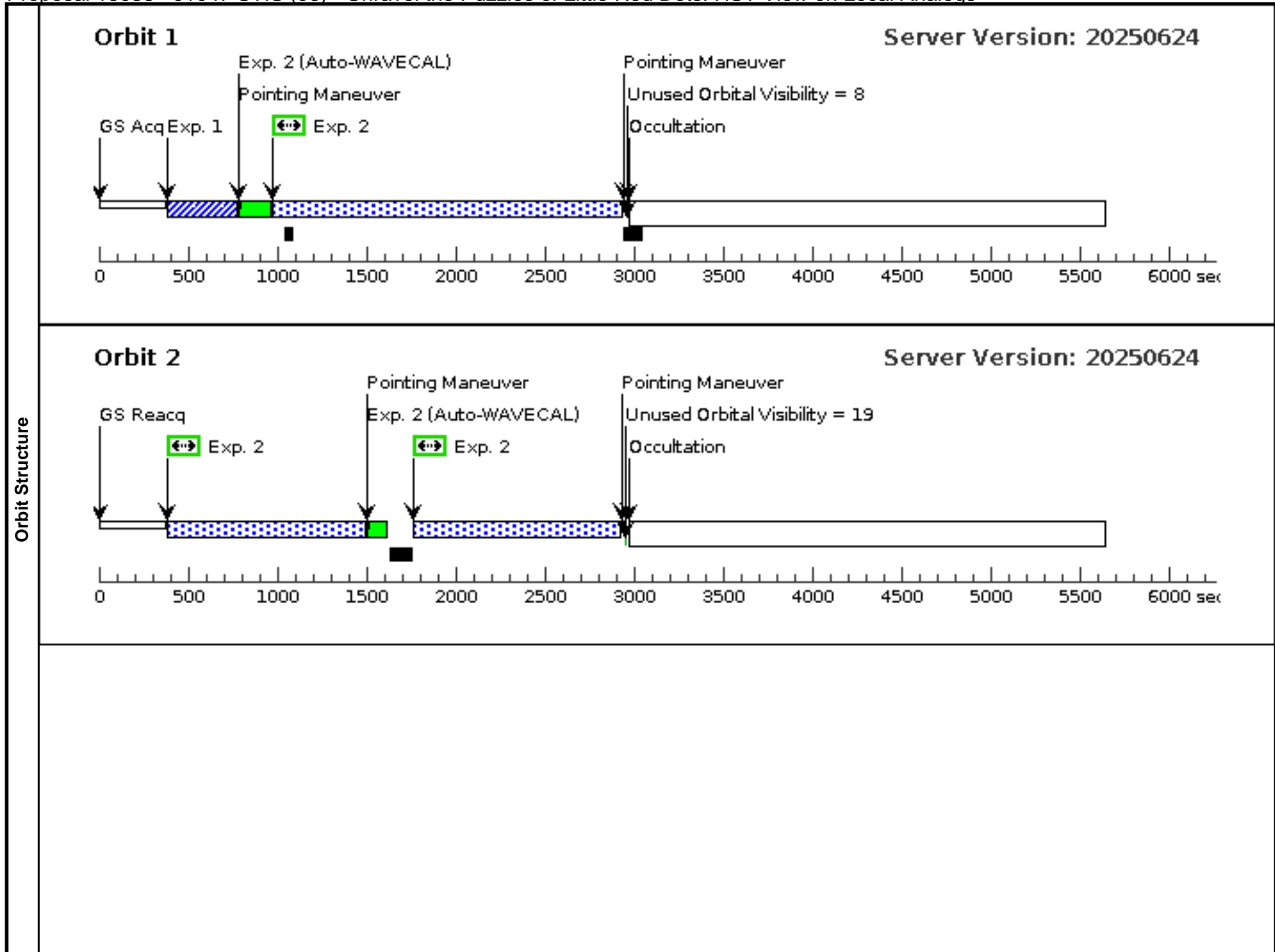


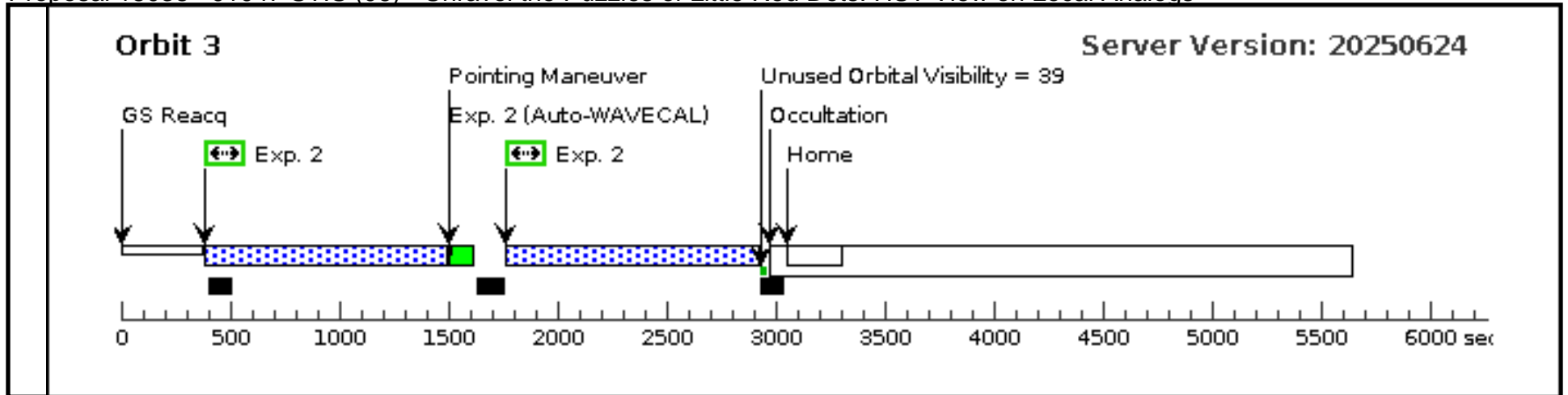


Proposal 18038 - J1047 STIS (06) - Unravel the Puzzles of Little Red Dots: HST View on Local Analogs

Tue Nov 11 16:00:21 GMT 2025

Visit	Proposal 18038, J1047 STIS (06), implementation Diagnostic Status: No Diagnostics Scientific Instruments: STIS/CCD, STIS/FUV-MAMA Special Requirements: (none)									
	Patterns	#	Primary Pattern			Secondary Pattern			Exposures	
		(2)	Pattern Type=STIS-ALONG-SLIT	Coordinate Frame=POS-TARG						
		Purpose=DITHER	Pattern Orientation=90.0							
		Number Of Points=5	Angle Between Sides=							
		Point Spacing=0.235	Center Pattern=false							
		Line Spacing=								
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(2)	J1047+0739	RA: 10 47 55.9200 (161.9830000d) Dec: +07 39 51.12 (7.66420d) Equinox: J2000	Proper Motion RA: 0 Proper Motion Dec: 0 Redshift: 0.16828		V=19.31 g=19.95, r=18.85, i=18.33, z=18.69	Reference Frame: ICRS			
	<i>Comments:</i> Category=GALAXY Description=[NUCLEUS, QSO, QUASAR]									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(2) J1047+0739	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT			40 Secs (40 Secs) [==>]	[1]
	2	STIS (STIS.sp.20 23237)	(2) J1047+0739	STIS/FUV-MAMA, ACCUM, 52X0.5D1	G140L 1425 A		POS TARG 0,3	Pattern 2, Exps 2-2 in J1047 STIS (06) (2)	1100 Secs (6300 Secs) [==>1900.0 Secs (Pattern 1)] [==>1100 Secs (Pattern 2)] [==>1100 Secs (Pattern 3)] [==>1100 Secs (Pattern 4)] [==>1100 Secs (Pattern 5)]	[1] [2] [3]

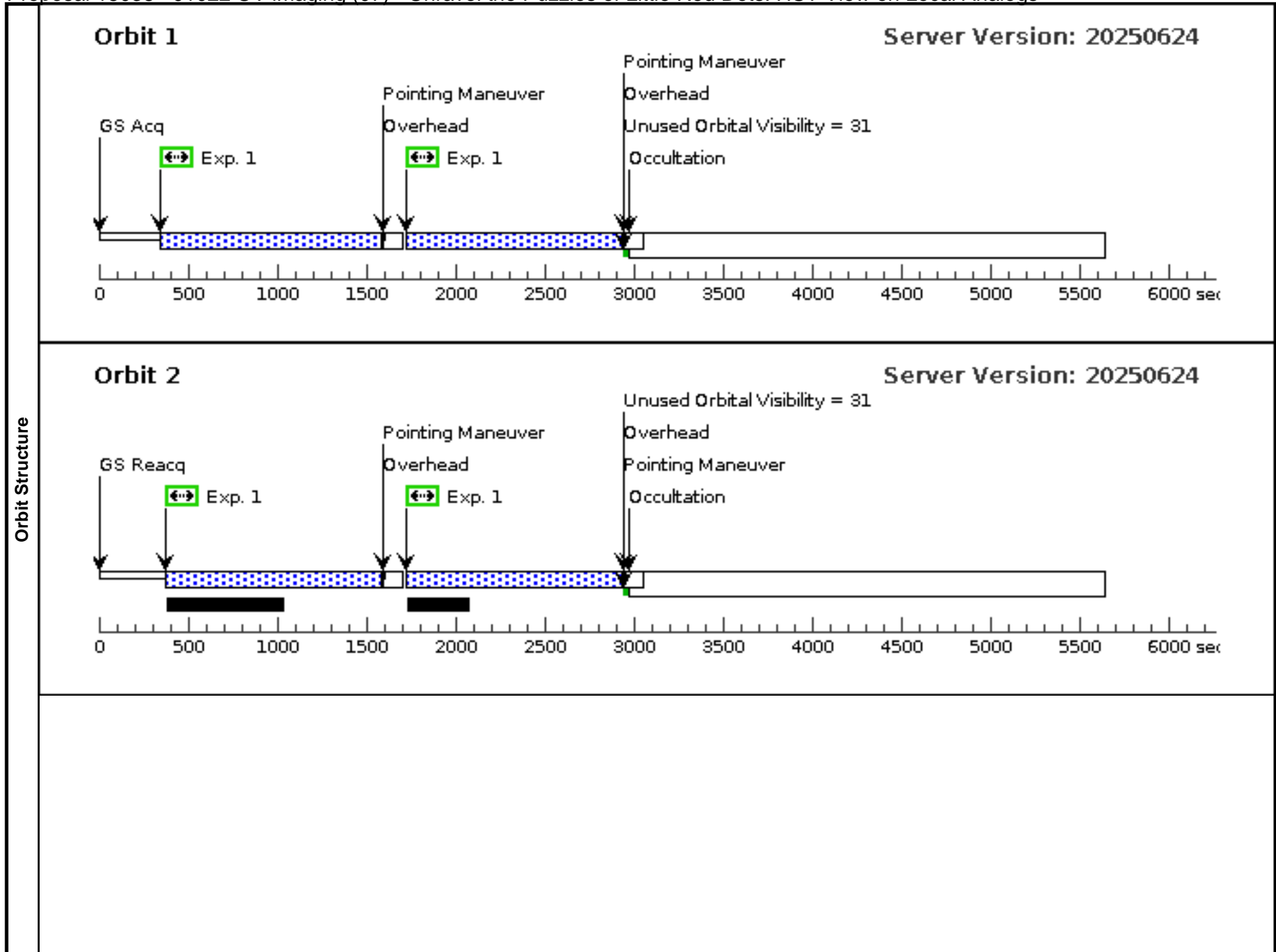


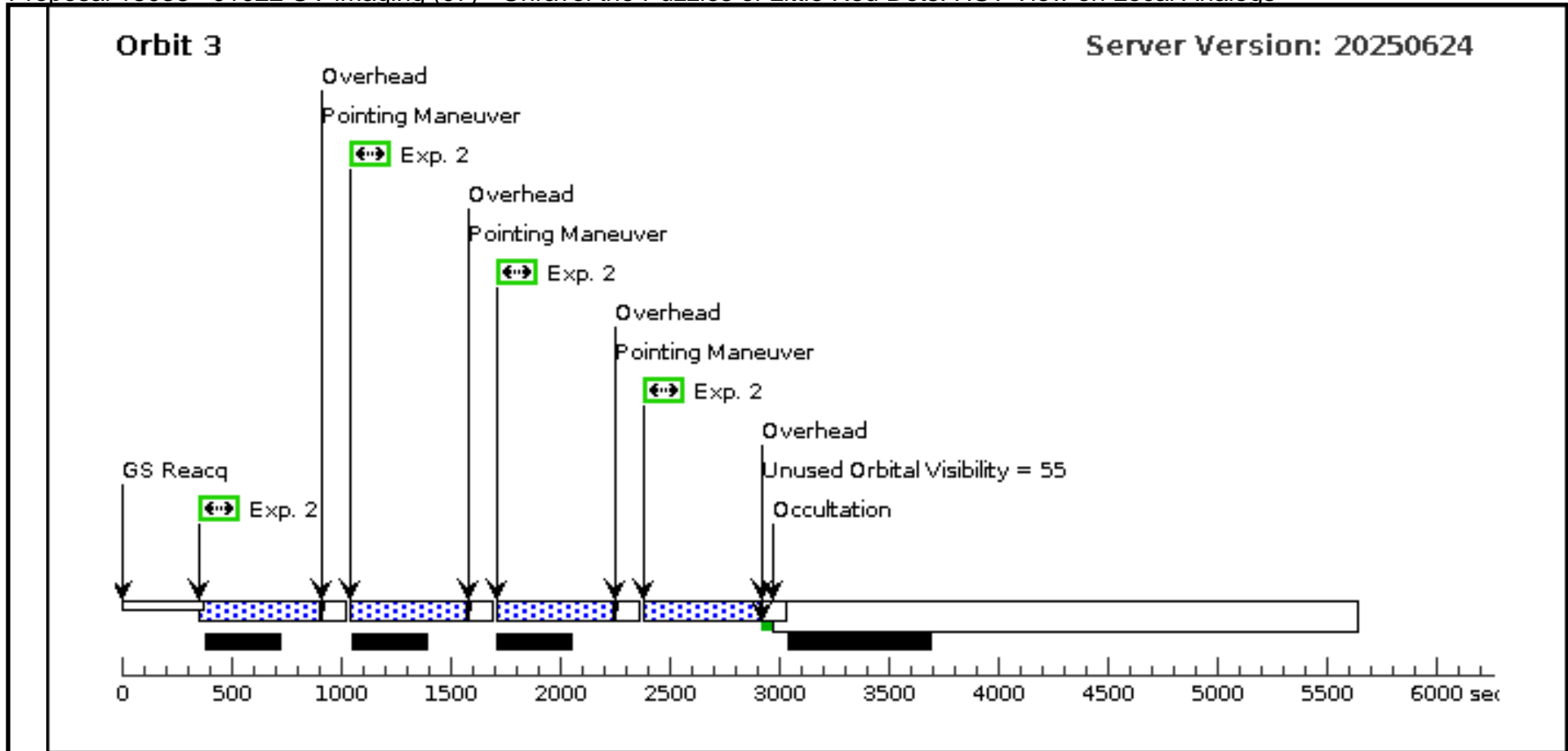


Proposal 18038 - J1022 UV imaging (07) - Unravel the Puzzles of Little Red Dots: HST View on Local Analogs

Tue Nov 11 16:00:21 GMT 2025

Visit	Proposal 18038, J1022 UV imaging (07), implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: (none)									
	Patterns	#	Primary Pattern	Secondary Pattern	Exposures					
	(1)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false		(1), (2)					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(3)	J1022+0841	RA: 10 22 8.5260 (155.5355250d) Dec: +08 41 56.12 (8.69892d) Equinox: J2000	Proper Motion RA: 0 Proper Motion Dec: 0 Redshift: 0.2226958	V=20.58 g=21.38, r=20.01, i=18.89, z=19.23	Reference Frame: ICRS				
	<i>Comments:</i> Category=GALAXY Description=[NUCLEUS, OSO, OUASAR]									
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	F225W	(3) J1022+0841	WFC3/UVIS, ACCUM, UVIS2-C512C-CTE	F225W	FLASH=18		Pattern 1, Exps 1-1 in J1022 UV imaging (07) (1)	1200 Secs (4840 Secs) [==>1210 Secs (Pattern 1)] [==>1210 Secs (Pattern 2)] [==>1210 Secs (Pattern 3)] [==>1210 Secs (Pattern 4)]	[1] [2]
2	F336W	(3) J1022+0841	WFC3/UVIS, ACCUM, UVIS2-C512C-CTE	F336W	FLASH=18		Pattern 1, Exps 2-2 in J1022 UV imaging (07) (1)	450 Secs (2120 Secs) [==>530 Secs (Pattern 1)] [==>530 Secs (Pattern 2)] [==>530 Secs (Pattern 3)] [==>530 Secs (Pattern 4)]	[3]	





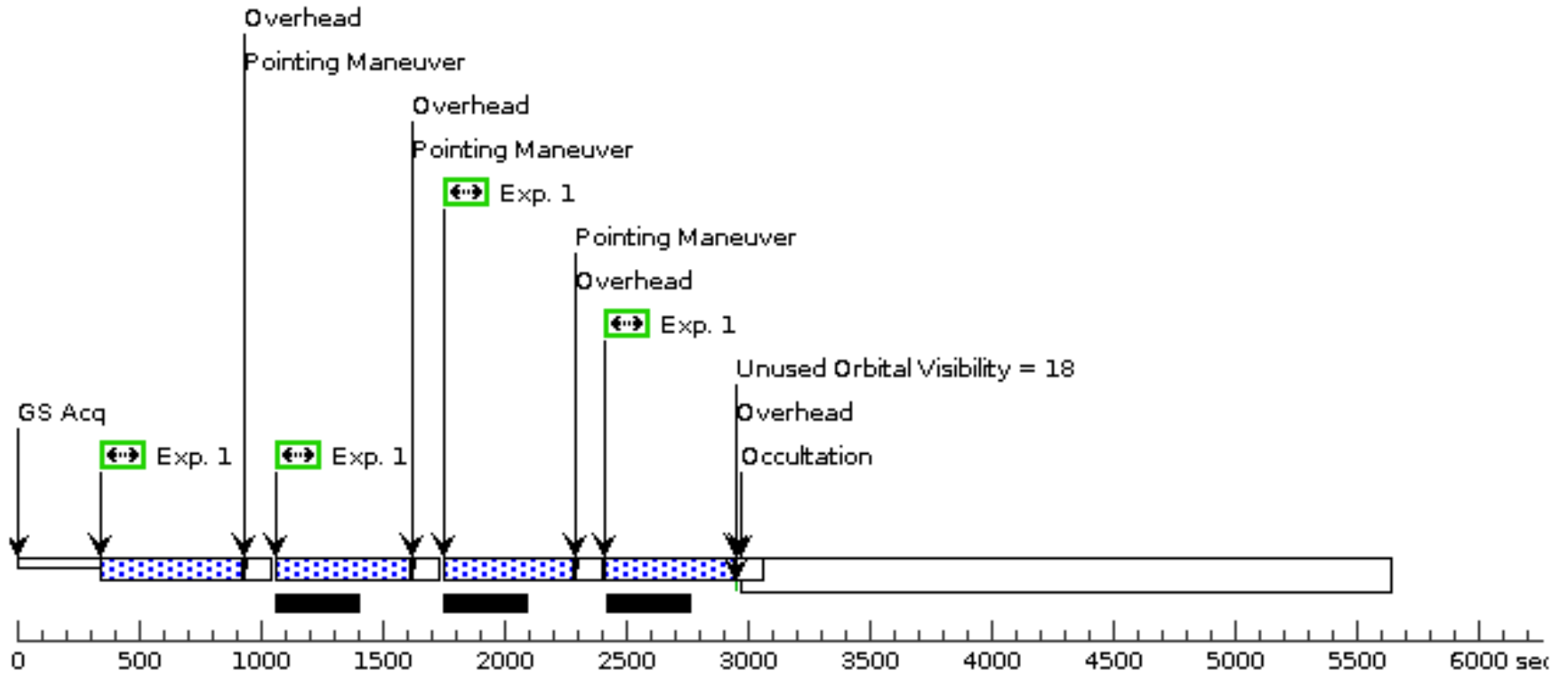
Proposal 18038 - J1022 imaging (08) - Unravel the Puzzles of Little Red Dots: HST View on Local Analogs

Tue Nov 11 16:00:21 GMT 2025

Visit	Proposal 18038, J1022 imaging (08), implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: (none)									
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Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(3)	J1022+0841	RA: 10 22 8.5260 (155.5355250d) Dec: +08 41 56.12 (8.69892d) Equinox: J2000	Proper Motion RA: 0 Proper Motion Dec: 0 Redshift: 0.2226958	V=20.58 g=21.38, r=20.01, i=18.89, z=19.23	Reference Frame: ICRS				
	<i>Comments:</i> Category=GALAXY Description=[NUCLEUS, OSO, OUASAR]									
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	F547M	(3) J1022+0841	WFC3/UVIS, ACCUM, UVIS2-C512C-CTE	F547M	FLASH=16		Pattern 1, Exps 1-1 in J1022 imaging (08) (1)	500 Secs (2160 Secs) [==>550 Secs (Pattern 1)] [==>550 Secs (Pattern 2)] [==>530 Secs (Pattern 3)] [==>530 Secs (Pattern 4)]	[1]
2	F689M	(3) J1022+0841	WFC3/UVIS, ACCUM, UVIS2-C512C-CTE	F689M	FLASH=16		Pattern 1, Exps 2-2 in J1022 imaging (08) (1)	500 Secs (2120 Secs) [==>530 Secs (Pattern 1)] [==>530 Secs (Pattern 2)] [==>530 Secs (Pattern 3)] [==>530 Secs (Pattern 4)]	[2]	

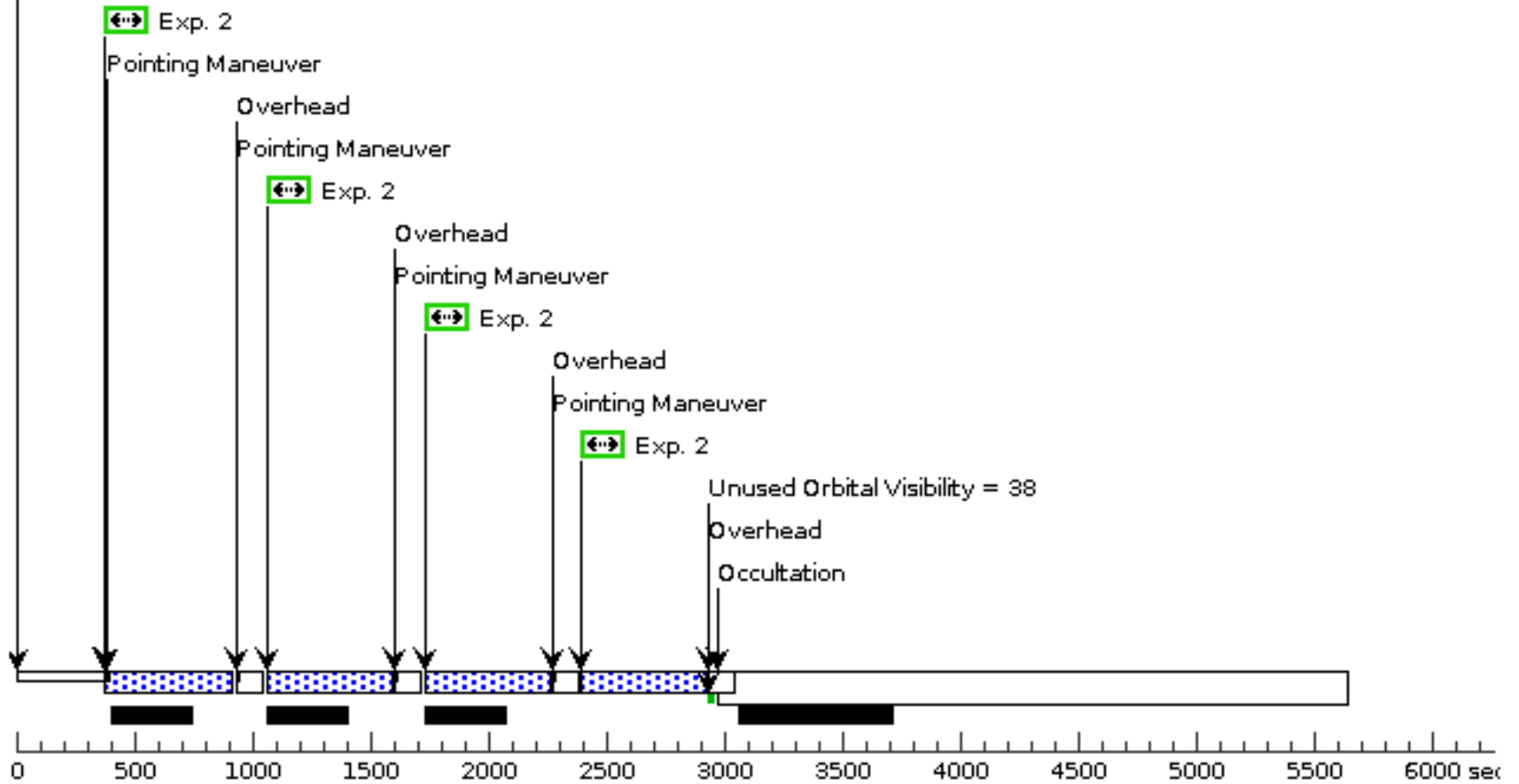
Orbit 1

Orbit Structure



Orbit 2

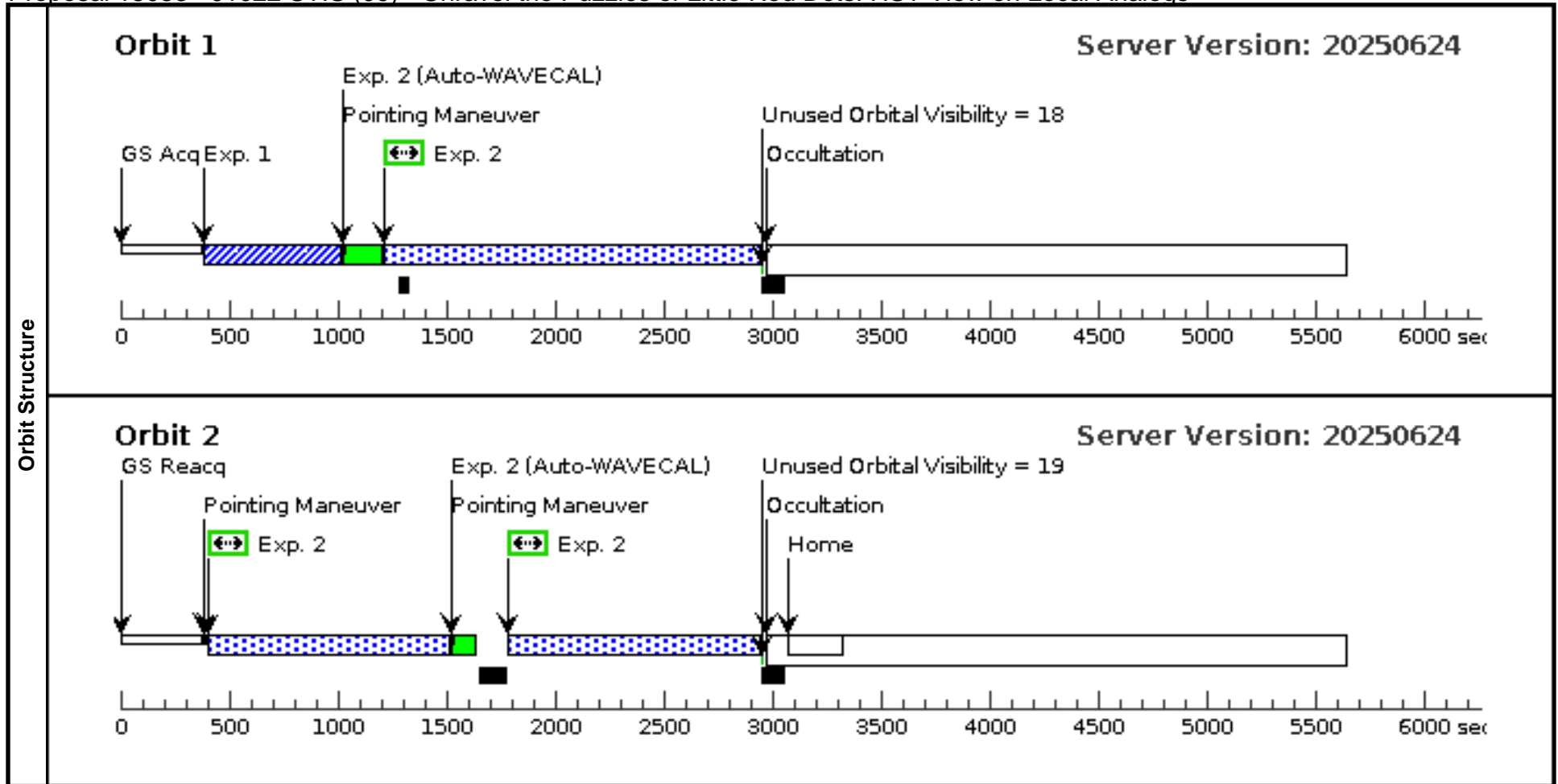
GS Reacq



Proposal 18038 - J1022 STIS (09) - Unravel the Puzzles of Little Red Dots: HST View on Local Analogs

Tue Nov 11 16:00:21 GMT 2025

Visit	Proposal 18038, J1022 STIS (09), implementation Diagnostic Status: No Diagnostics Scientific Instruments: STIS/CCD, STIS/FUV-MAMA Special Requirements: (none)									
	Patterns	#	Primary Pattern			Secondary Pattern			Exposures	
		(3)	Pattern Type=STIS-ALONG-SLIT	Coordinate Frame=POS-TARG						
		Purpose=DITHER	Pattern Orientation=90.0							
		Number Of Points=3	Angle Between Sides=							
		Point Spacing=0.235	Center Pattern=false							
		Line Spacing=								
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(3)	J1022+0841	RA: 10 22 8.5260 (155.5355250d) Dec: +08 41 56.12 (8.69892d) Equinox: J2000	Proper Motion RA: 0 Proper Motion Dec: 0 Redshift: 0.2226958		V=20.58 g=21.38, r=20.01, i=18.89, z=19.23	Reference Frame: ICRS			
	<i>Comments:</i> Category=GALAXY Description=[NUCLEUS, OSO, QUASAR]									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(3) J1022+0841	STIS/CCD, ACQ, F28X50LP	MIRROR				100 Secs (100 Secs) [==>]	[1]
	2	STIS (STIS.sp.20 25678)	(3) J1022+0841	STIS/FUV-MAMA, ACCUM, 52X0.5D1	G140L 1425 A		POS TARG 0,3	Pattern 3, Exps 2-2 in J1022 STIS (09) (3)	1100 Secs (3870 Secs) [==>1670.0 Secs (Pattern 1)] [==>1100 Secs (Pattern 2)] [==>1100 Secs (Pattern 3)]	[1] [2]



Proposal 18038 - J1022 STIS (10) - Unravel the Puzzles of Little Red Dots: HST View on Local Analogs

Tue Nov 11 16:00:21 GMT 2025

Visit	Proposal 18038, J1022 STIS (10), implementation Diagnostic Status: No Diagnostics Scientific Instruments: STIS/CCD, STIS/FUV-MAMA Special Requirements: (none)									
	Patterns	#	Primary Pattern			Secondary Pattern			Exposures	
		(3)	Pattern Type=STIS-ALONG-SLIT	Coordinate Frame=POS-TARG						
		Purpose=DITHER	Pattern Orientation=90.0							
		Number Of Points=3	Angle Between Sides=							
		Point Spacing=0.235	Center Pattern=false							
		Line Spacing=								
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(3)	J1022+0841	RA: 10 22 8.5260 (155.5355250d) Dec: +08 41 56.12 (8.69892d) Equinox: J2000	Proper Motion RA: 0 Proper Motion Dec: 0 Redshift: 0.2226958		V=20.58 g=21.38, r=20.01, i=18.89, z=19.23	Reference Frame: ICRS			
	<i>Comments:</i> Category=GALAXY Description=[NUCLEUS, OSO, QUASAR]									
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(3) J1022+0841	STIS/CCD, ACQ, F28X50LP	MIRROR				100 Secs (100 Secs) [==>]	[1]
	2	STIS (STIS.sp.20 25678)	(3) J1022+0841	STIS/FUV-MAMA, ACCUM, 52X0.5D1	G140L 1425 A		POS TARG 0,3	Pattern 3, Exps 2-2 in J1022 STIS (10) (3)	1100 Secs (3870 Secs) [==>1670 Secs (Pattern 1)] [==>1100.0 Secs (Pattern 2)] [==>1100 Secs (Pattern 3)]	[1] [2]

