



# 17269 - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at $z > 1.5$

Cycle: 30, Proposal Category: GO

(Availability Mode: SUPPORTED)

## INVESTIGATORS

<i>Name</i>	<i>Institution</i>
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Prof. Yue Shen (CoI)	University of Illinois at Urbana - Champaign
Dr. Yu-Ching Chen (CoI)	The Johns Hopkins 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) J0032-1053	WFC3/IR WFC3/UVIS	1	27-Jan-2025 15:00:14.0	yes
02	(2) J0911+2405	WFC3/IR WFC3/UVIS	1	27-Jan-2025 15:00:15.0	yes
03	(3) J0938+4216	WFC3/IR WFC3/UVIS	1	27-Jan-2025 15:00:16.0	yes
04	(4) J0956+6900	WFC3/IR WFC3/UVIS	1	27-Jan-2025 15:00:18.0	yes
05	(5) J1002+4449	WFC3/IR WFC3/UVIS	1	27-Jan-2025 15:00:19.0	yes
57	(5) J1002+4449	WFC3/IR WFC3/UVIS	1	27-Jan-2025 15:00:20.0	yes

Proposal 17269 (STScI Edit Number: 14, Created: Monday, January 27, 2025, 3:00:40PM Eastern Standard Time) - Overview

<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>
06	(6) J1015+1230	WFC3/IR WFC3/UVIS	1	27-Jan-2025 15:00:22.0	yes
56	(6) J1015+1230	WFC3/IR WFC3/UVIS	1	27-Jan-2025 15:00:23.0	yes
59	(6) J1015+1230	WFC3/IR WFC3/UVIS	1	27-Jan-2025 15:00:24.0	yes
60	(6) J1015+1230	WFC3/IR WFC3/UVIS	1	27-Jan-2025 15:00:26.0	yes
61	(6) J1015+1230	WFC3/IR WFC3/UVIS	1	27-Jan-2025 15:00:27.0	yes
07	(7) J1059+0622	WFC3/IR	1	27-Jan-2025 15:00:28.0	yes
08	(8) J1118+0749	WFC3/IR WFC3/UVIS	1	27-Jan-2025 15:00:29.0	yes
12	(8) J1118+0749	WFC3/IR WFC3/UVIS	1	27-Jan-2025 15:00:30.0	yes
58	(8) J1118+0749	WFC3/IR WFC3/UVIS	1	27-Jan-2025 15:00:32.0	yes
09	(9) J1613+1708	WFC3/IR WFC3/UVIS	1	27-Jan-2025 15:00:33.0	yes
14	(9) J1613+1708	WFC3/IR WFC3/UVIS	1	27-Jan-2025 15:00:34.0	yes
15	(9) J1613+1708	WFC3/IR WFC3/UVIS	1	27-Jan-2025 15:00:35.0	yes
10	(10) J1625+4309	WFC3/IR WFC3/UVIS	1	27-Jan-2025 15:00:37.0	yes
13	(10) J1625+4309	WFC3/IR WFC3/UVIS	1	27-Jan-2025 15:00:38.0	yes
11	(11) J2122-0026	WFC3/IR	1	27-Jan-2025 15:00:39.0	yes

21 Total Orbits Used

## **ABSTRACT**

The galactic-scale ( $< \sim 30$  kpc) environment of quasars is of critical importance to understanding the formation and dynamical inspiral of supermassive black hole pairs, the impact of mergers on quasar fueling, and the population of small-scale gravitationally lensed quasars. Here we propose VLA A-config Ku- and C-band imaging of 11 newly discovered sub-arcsec candidate double quasars (physical pairs or lenses) at  $z > 1.5$ . These targets are a subset of a complete sample of high-fidelity double quasars at  $z > 1.5$  selected using resolved pairs in Gaia DR3 around spectroscopically confirmed SDSS quasars. The VLA imaging will confirm the double quasar nature and measure radio spectral indices for both components. The joint HST IR imaging will conclusively differentiate the dual quasar and lensed quasar scenarios. Combined with literature results and additional follow-ups (pairs with separations  $> 1$  arcsec), the proposed observations will deliver the first complete census of galactic-scale quasar pairs (and lenses) at cosmic noon, critical to the understanding of SMBH binary formation, merger-induced quasar fueling, and the abundance of lensed quasars over these scales.

## **OBSERVING DESCRIPTION**

This program will conduct WFC3/IR F160W, WFC3/UVIS F475W, and F625W imaging of 11 candidate  $z > 1.5$  kpc-scale dual/lensed quasars. The targets are a subset of a complete sample of high-fidelity double quasars at  $z > 1.5$  selected using resolved pairs in Gaia DR3 around spectroscopically confirmed SDSS quasars. Deep HST IR F160W imaging will conclusively differentiate the dual quasar and strongly lensed quasar scenarios. The additional UVIS imaging will be used to fill the unused time in an orbit, which will help rule out stellar interlopers (in addition to the joint VLA radio imaging) based on the (g-r) vs (r-H) color-color diagram.

In dual quasars, the unresolved quasars will be carefully modeled (by PSFs) and subtracted in order to robustly reveal the (much fainter) extended host galaxies underlying each quasar. Furthermore, after carefully subtracting both the quasars (PSFs) and the host galaxies (using Sersic models), we may discover low surface brightness tidal features as direct evidence for mergers. Alternatively, in lensed quasars, the unresolved lensed quasar images will be carefully modeled (using PSFs) and subtracted in order to either detect or put stringent upper limits on the foreground lens galaxy. Using the structure decomposition constraints (on both the lensed images and the lens), we will perform strong lensing mass modeling tests in order to quantitatively assess the strong gravitational lensing scenario. The results will reveal bona-fide high-redshift kpc-scale dual quasars that are still largely illusive (but are predicted to be abundant by theory).

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We adopt the 256x256 subarray (30"x30" FOV, corresponding to ~250kpcx250kpc at  $z=2$ , more than enough to cover the double quasars and host galaxies). We adopt SPARS10 (NSAMP=15) to increase the dynamic range and account for potential saturation of bright cores, and the 4-step BOX dither (similar to the default WFC3-IR-DITHER-BOX-MIN but with increased spacing to meet the  $>10$  pixel requirement to avoid persistence effects) for cosmic-ray and bad-pixel rejection, to better sample the PSF for optimal effective resolution. Since our primary goal is to detect the lens galaxy (or the lack thereof) rather than to accurately measure host galaxy morphology, this dither pattern is sufficient - nor do we require a dedicated PSF observation; we will use field stars and/or recent archival data to build an empirical PSF template.

The IR depth assuming 412s on-source exposure is  $H \sim 24$  AB mag arcsec<sup>-2</sup> ( $3\sigma$ ), sufficient to detect double cores and rule out lensing. Accounting for overheads (including 6.5 min for guide star acquisition and ~6 min for SI overheads; WFC3 has no target acquisition overhead), we use 11 HST orbits in total for 11 targets to distinguish between dual and strongly lensed quasars. As noted at the end of the approved VLA proposal, the additional UVIS (F475W and F625W) imaging will be used to fill the unused time in an orbit for each target, which will help rule out stellar interlopers based on the (F475W-F625W) and (F625W-F160W) colors.

Visit 07 does not have any UVIS observations because otherwise it would not have any guide stars. Visit 11 does not have any UVIS observations either because the target has archival UVIS (F475W and F814W) imaging.

Proposal 17269 - J0032 (01) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at  $z > 1.5$

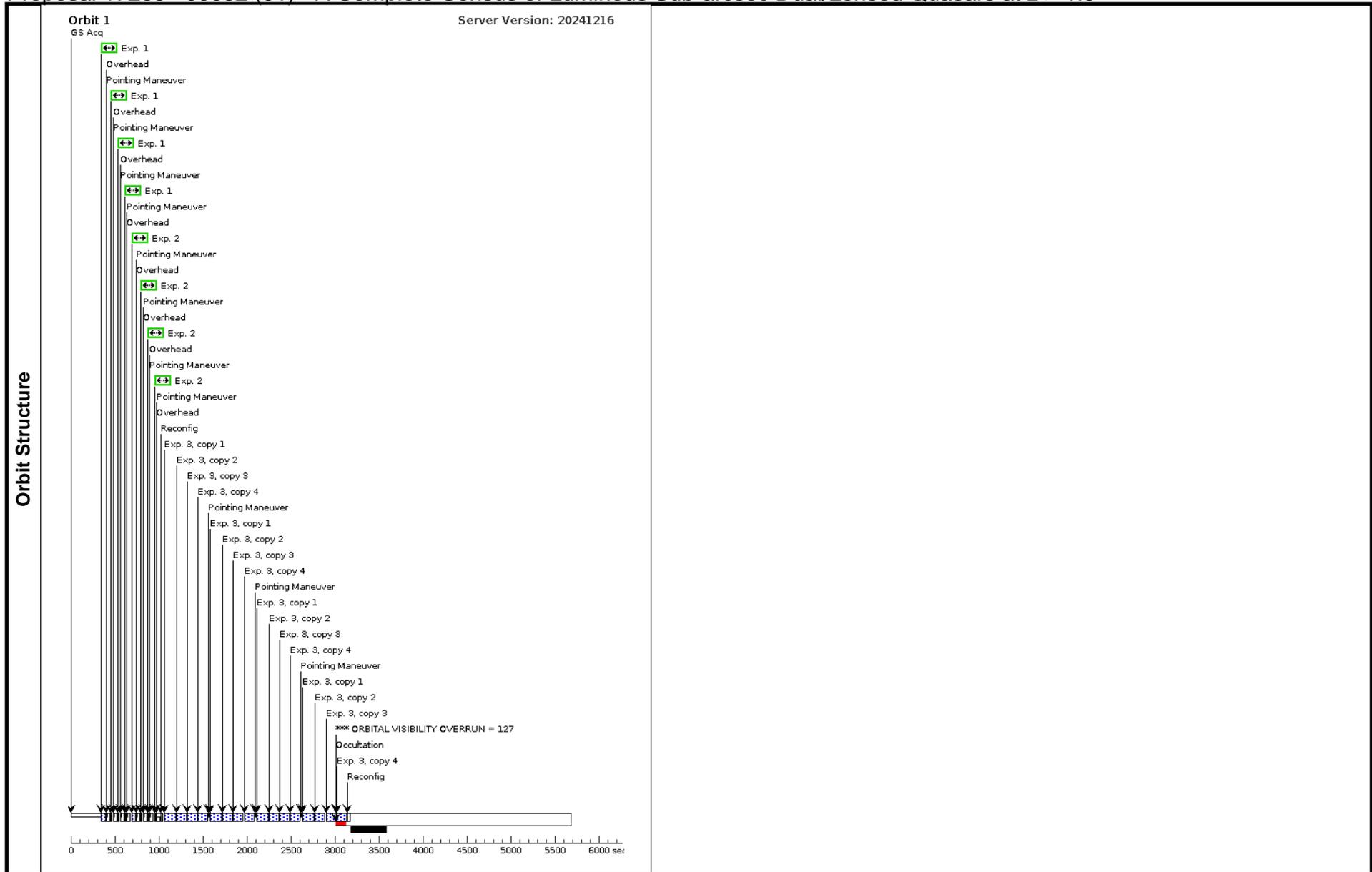
Mon Jan 27 20:00:40 GMT 2025

<b>Visit</b>	<b>Proposal 17269, J0032 (01), completed</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: WFC3/IR, WFC3/UVIS Special Requirements: (none)				
	(J0032 (01)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN				
<b>Diagnosics</b>					
<b>Patterns</b>	<b>#</b>	<b>Primary Pattern</b>	<b>Secondary Pattern</b>	<b>Exposures</b>	
	(2)	Pattern Type=BOX Purpose=DITHER Number Of Points=4 Point Spacing=1.365 Line Spacing=0.975	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(3)
<b>Fixed Targets</b>	(3)	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)
	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>	<b>Fluxes</b>
(1)	J0032-1053	RA: 00 32 50.1300 (8.2088750d) Dec: -10 53 57.58 (-10.89933d) Equinox: J2000	Redshift: 2.445	V=19.17 z = 18.94	Reference Frame: ICRS
<i>Comments:</i> Category=GALAXY Description=[QUASAR]					

Proposal 17269 - J0032 (01) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at  $z > 1.5$

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
Exposures	1	(WFC3UVI S.im.183492 6)	(1) J0032-1053	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F475W	FLASH=20	Pattern 3, Exps 1-1 i n J0032 (01) (3)	10 Secs (56 Secs) [==>14.0 Secs (Pattern 1)] [==>14.0 Secs (Pattern 2)] [==>14.0 Secs (Pattern 3)] [==>14.0 Secs (Pattern 4)]	[1]
	2	(WFC3UVI S.im.183492 8)	(1) J0032-1053	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F625W	FLASH=20	Pattern 3, Exps 2-2 i n J0032 (01) (3)	10 Secs (56 Secs) [==>14.0 Secs (Pattern 1)] [==>14.0 Secs (Pattern 2)] [==>14.0 Secs (Pattern 3)] [==>14.0 Secs (Pattern 4)]	[1]
	3	(WFC3IR.i m.1833563)	(1) J0032-1053	WFC3/IR, MULTIACCUM, IRSUB256	F160W	NSAMP=15; SAMP-SEQ=SPAR S10	Pattern 2, Exps 3-3 i n J0032 (01) (2)	103.128633 Secs X 4 (1650.058 Sec s) [==>(Pattern 1, Copy 1)] [==>(Pattern 1, Copy 2)] [==>(Pattern 1, Copy 3)] [==>(Pattern 1, Copy 4)] [==>(Pattern 2, Copy 1)] [==>(Pattern 2, Copy 2)] [==>(Pattern 2, Copy 3)] [==>(Pattern 2, Copy 4)] [==>(Pattern 3, Copy 1)] [==>(Pattern 3, Copy 2)] [==>(Pattern 3, Copy 3)] [==>(Pattern 3, Copy 4)] [==>(Pattern 4, Copy 1)] [==>(Pattern 4, Copy 2)] [==>(Pattern 4, Copy 3)] [==>(Pattern 4, Copy 4)]	[1]

Proposal 17269 - J0032 (01) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at  $z > 1.5$



Proposal 17269 - J0911 (02) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at  $z > 1.5$

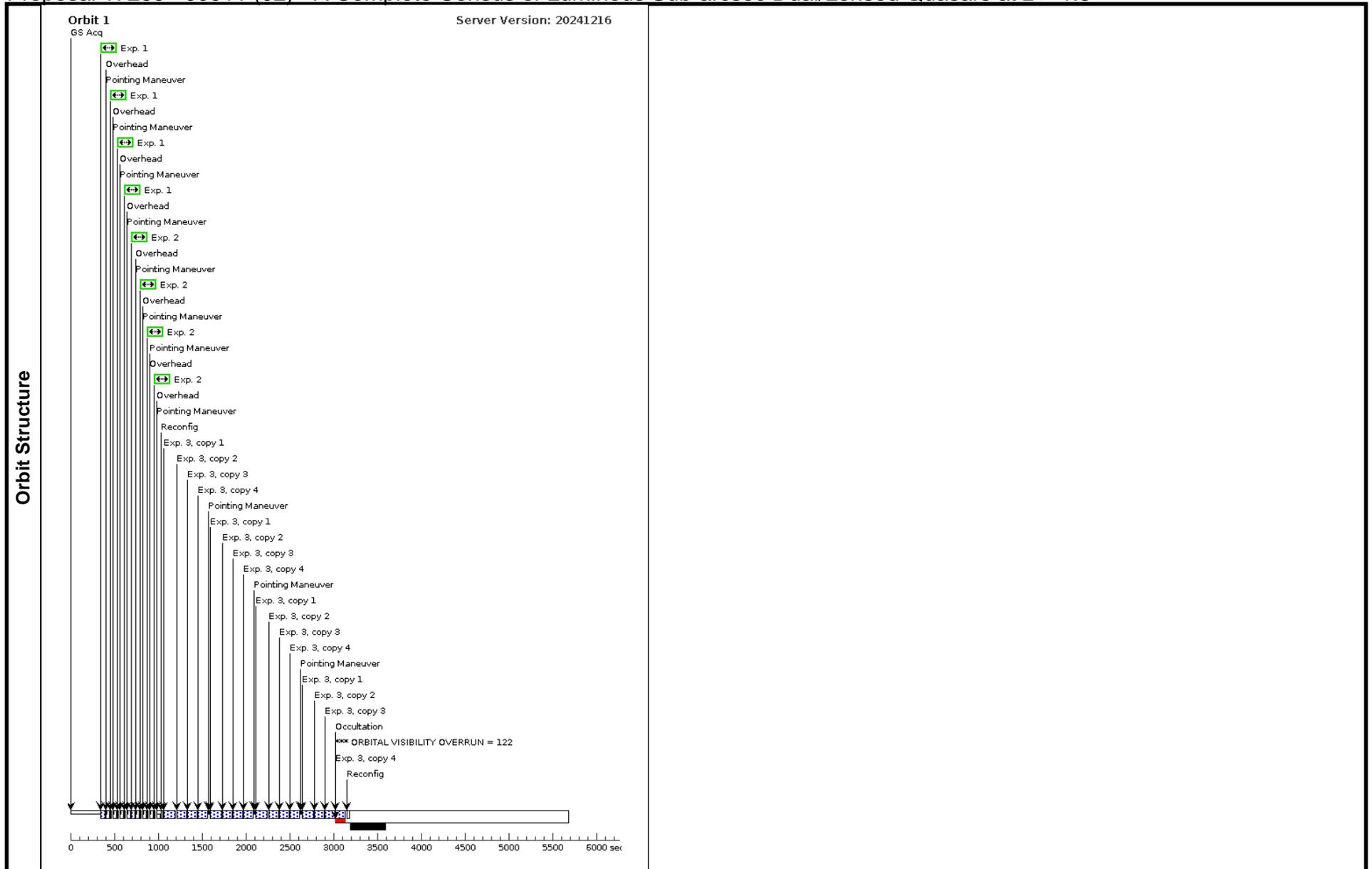
Mon Jan 27 20:00:40 GMT 2025

<b>Visit</b>	<b>Proposal 17269, J0911 (02), completed</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: WFC3/IR, WFC3/UVIS Special Requirements: (none)				
	(J0911 (02)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN				
<b>Diagnosics</b>					
<b>Patterns</b>	<b>#</b>	<b>Primary Pattern</b>	<b>Secondary Pattern</b>	<b>Exposures</b>	
	(2)	Pattern Type=BOX Purpose=DITHER Number Of Points=4 Point Spacing=1.365 Line Spacing=0.975	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(3)
<b>Fixed Targets</b>	(3)	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)
	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>	<b>Fluxes</b>
(2)	J0911+2405	RA: 09 11 50.6600 (137.9610833d) Dec: +24 05 45.78 (24.09605d) Equinox: J2000	Redshift: 2.479	V=19.1 z = 18.82	Reference Frame: ICRS
<i>Comments:</i> Category=GALAXY Description=[QUASAR]					

Proposal 17269 - J0911 (02) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at  $z > 1.5$

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
Exposures	1	(WFC3UVI S.im.183493 0)	(2) J0911+2405	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F475W	FLASH=20	Pattern 3, Exps 1-1 i n J0911 (02) (3)	10 Secs (60 Secs) [==>15.0 Secs (Pattern 1)] [==>15.0 Secs (Pattern 2)] [==>15.0 Secs (Pattern 3)] [==>15.0 Secs (Pattern 4)]	[1]
	2	(WFC3UVI S.im.183492 9)	(2) J0911+2405	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F625W	FLASH=20	Pattern 3, Exps 2-2 i n J0911 (02) (3)	10 Secs (60 Secs) [==>15.0 Secs (Pattern 1)] [==>15.0 Secs (Pattern 2)] [==>15.0 Secs (Pattern 3)] [==>15.0 Secs (Pattern 4)]	[1]
	3		(2) J0911+2405	WFC3/IR, MULTIACCUM, IRSUB256	F160W	NSAMP=15; SAMP-SEQ=SPAR S10	Pattern 2, Exps 3-3 i n J0911 (02) (2)	103.128633 Secs X 4 (1650.058 Sec s) [==>(Pattern 1, Copy 1)] [==>(Pattern 1, Copy 2)] [==>(Pattern 1, Copy 3)] [==>(Pattern 1, Copy 4)] [==>(Pattern 2, Copy 1)] [==>(Pattern 2, Copy 2)] [==>(Pattern 2, Copy 3)] [==>(Pattern 2, Copy 4)] [==>(Pattern 3, Copy 1)] [==>(Pattern 3, Copy 2)] [==>(Pattern 3, Copy 3)] [==>(Pattern 3, Copy 4)] [==>(Pattern 4, Copy 1)] [==>(Pattern 4, Copy 2)] [==>(Pattern 4, Copy 3)] [==>(Pattern 4, Copy 4)]	[1]

Proposal 17269 - J0911 (02) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at  $z > 1.5$



Proposal 17269 - J0938 (03) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at  $z > 1.5$

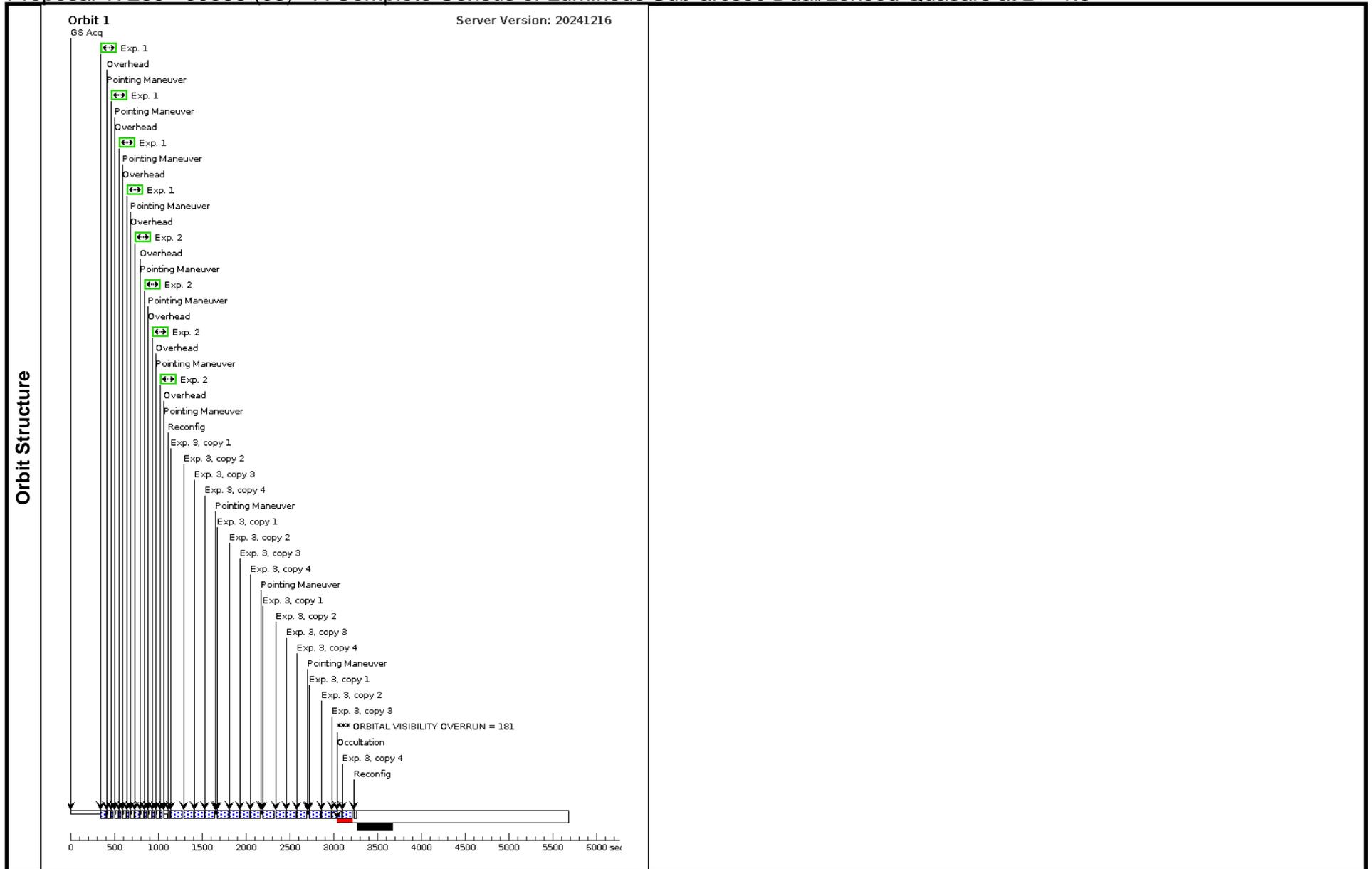
Mon Jan 27 20:00:40 GMT 2025

<b>Visit</b>	<b>Proposal 17269, J0938 (03), completed</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: WFC3/IR, WFC3/UVIS Special Requirements: (none)				
	(J0938 (03)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN				
<b>Diagnosics</b>					
<b>Patterns</b>	<b>#</b>	<b>Primary Pattern</b>	<b>Secondary Pattern</b>	<b>Exposures</b>	
	(2)	Pattern Type=BOX Purpose=DITHER Number Of Points=4 Point Spacing=1.365 Line Spacing=0.975	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(3)
<b>Fixed Targets</b>	(3)	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)
	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>	<b>Fluxes</b>
(3)	J0938+4216	RA: 09 38 1.8700 (144.5077917d) Dec: +42 16 3.26 (42.26757d) Equinox: J2000	Redshift: 1.714	V=19.31 z = 18.91	Reference Frame: ICRS
<i>Comments:</i> Category=GALAXY Description=[QUASAR]					

Proposal 17269 - J0938 (03) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at  $z > 1.5$

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
Exposures	1	(3) J0938+4216	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F475W	FLASH=20		Pattern 3, Exps 1-1 i n J0938 (03) (3)	10 Secs (100 Secs) [==>25.0 Secs (Pattern 1)] [==>25.0 Secs (Pattern 2)] [==>25.0 Secs (Pattern 3)] [==>25.0 Secs (Pattern 4)]	[1]
	2	(3) J0938+4216	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F625W	FLASH=20		Pattern 3, Exps 2-2 i n J0938 (03) (3)	10 Secs (100 Secs) [==>25.0 Secs (Pattern 1)] [==>25.0 Secs (Pattern 2)] [==>25.0 Secs (Pattern 3)] [==>25.0 Secs (Pattern 4)]	[1]
	3	(3) J0938+4216	WFC3/IR, MULTIACCUM, IRSUB256	F160W	NSAMP=15; SAMP-SEQ=SPAR S10		Pattern 2, Exps 3-3 i n J0938 (03) (2)	103.128633 Secs X 4 (1650.058 Sec s) [==>(Pattern 1, Copy 1)] [==>(Pattern 1, Copy 2)] [==>(Pattern 1, Copy 3)] [==>(Pattern 1, Copy 4)] [==>(Pattern 2, Copy 1)] [==>(Pattern 2, Copy 2)] [==>(Pattern 2, Copy 3)] [==>(Pattern 2, Copy 4)] [==>(Pattern 3, Copy 1)] [==>(Pattern 3, Copy 2)] [==>(Pattern 3, Copy 3)] [==>(Pattern 3, Copy 4)] [==>(Pattern 4, Copy 1)] [==>(Pattern 4, Copy 2)] [==>(Pattern 4, Copy 3)] [==>(Pattern 4, Copy 4)]	[1]

Proposal 17269 - J0938 (03) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at  $z > 1.5$



Proposal 17269 - J0956 (04) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at  $z > 1.5$

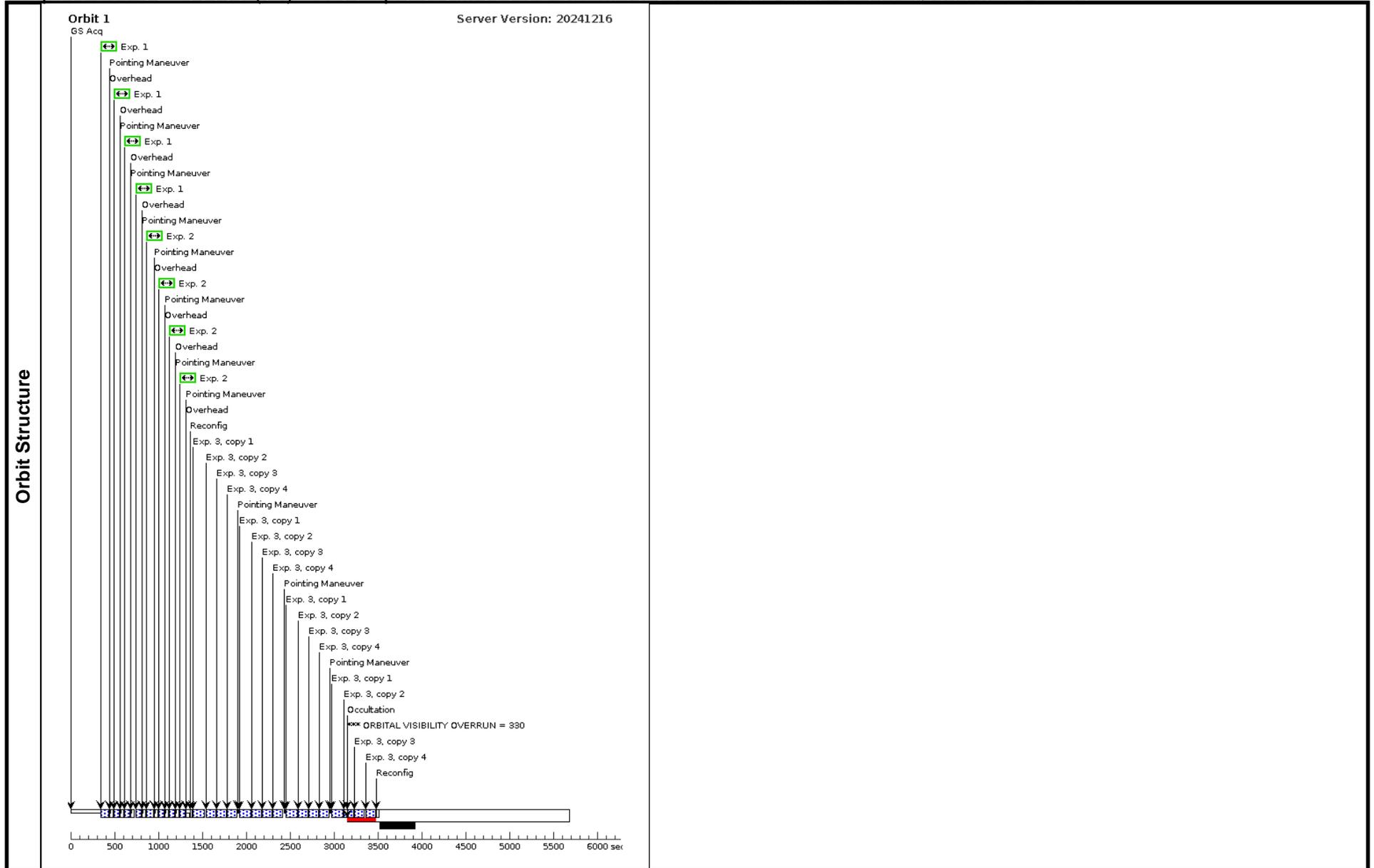
Mon Jan 27 20:00:40 GMT 2025

<b>Visit</b>	<b>Proposal 17269, J0956 (04), completed</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: WFC3/IR, WFC3/UVIS Special Requirements: (none)					
	<b>Diagnosics</b> (J0956 (04)) Warning (Orbit Planner): GS ACQ SCENARIO REQUESTED INCONSISTENT WITH VISIT GYRO MODE (J0956 (04)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (Exposure 1 (Pattern 3, Exps 1-1 in J0956 (04)) special requirements) Warning (Form): The specified GS Acq Scenario is not in the current list of valid scenarios.					
<b>Patterns</b>	<b>#</b>	<b>Primary Pattern</b>	<b>Secondary Pattern</b>	<b>Exposures</b>		
	(2)	Pattern Type=BOX Purpose=DITHER Number Of Points=4 Point Spacing=1.365 Line Spacing=0.975	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(3)	
	(3)	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)	
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>	<b>Fluxes</b>	<b>Miscellaneous</b>
	(4)	J0956+6900	RA: 09 56 36.4500 (149.1518750d) Dec: +69 00 28.10 (69.00781d) Equinox: J2000	Redshift: 1.975	V=18.55 H = 15.76	Reference Frame: ICRS
	<i>Comments:</i> Category=GALAXY Description=[QUASAR]					

Proposal 17269 - J0956 (04) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at  $z > 1.5$

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
Exposures	1	(4) J0956+6900	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F475W	FLASH=20	GS ACQ SCENARI O BASE1B3	Pattern 3, Exps 1-1 i n J0956 (04) (3)	20 Secs (224 Secs) [=>>56.0 Secs (Pattern 1)] [=>>56.0 Secs (Pattern 2)] [=>>56.0 Secs (Pattern 3)] [=>>56.0 Secs (Pattern 4)]	[1]
	2	(4) J0956+6900	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F625W	FLASH=20		Pattern 3, Exps 2-2 i n J0956 (04) (3)	20 Secs (224 Secs) [=>>56.0 Secs (Pattern 1)] [=>>56.0 Secs (Pattern 2)] [=>>56.0 Secs (Pattern 3)] [=>>56.0 Secs (Pattern 4)]	[1]
	3	(4) J0956+6900	WFC3/IR, MULTIACCUM, IRSUB256	F160W	NSAMP=15; SAMP-SEQ=SPAR S10		Pattern 2, Exps 3-3 i n J0956 (04) (2)	103.128633 Secs X 4 (1650.058 Sec s) [=>>(Pattern 1, Copy 1)] [=>>(Pattern 1, Copy 2)] [=>>(Pattern 1, Copy 3)] [=>>(Pattern 1, Copy 4)] [=>>(Pattern 2, Copy 1)] [=>>(Pattern 2, Copy 2)] [=>>(Pattern 2, Copy 3)] [=>>(Pattern 2, Copy 4)] [=>>(Pattern 3, Copy 1)] [=>>(Pattern 3, Copy 2)] [=>>(Pattern 3, Copy 3)] [=>>(Pattern 3, Copy 4)] [=>>(Pattern 4, Copy 1)] [=>>(Pattern 4, Copy 2)] [=>>(Pattern 4, Copy 3)] [=>>(Pattern 4, Copy 4)]	[1]

Proposal 17269 - J0956 (04) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at  $z > 1.5$



Proposal 17269 - J1002 (05) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at  $z > 1.5$

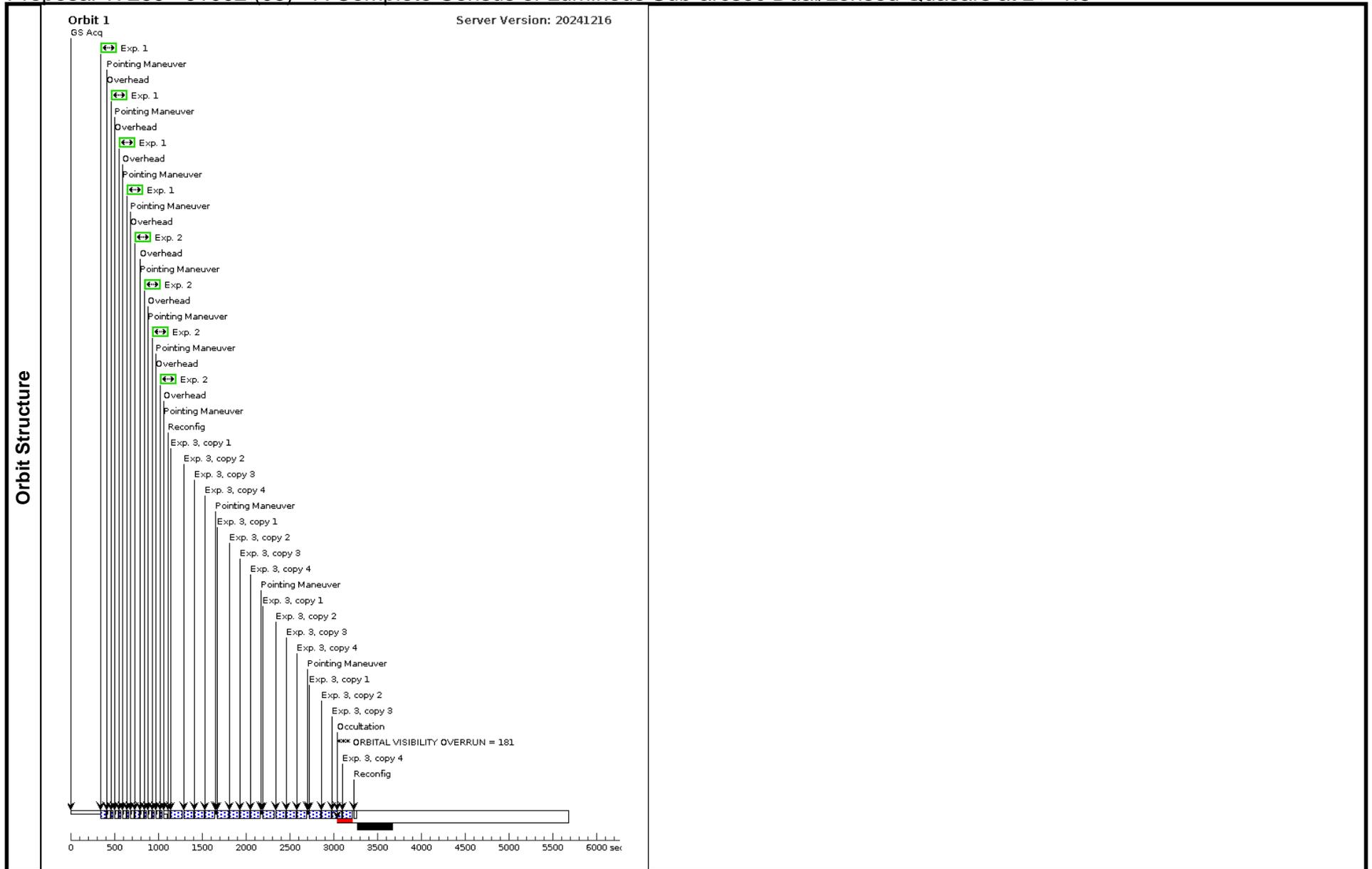
Mon Jan 27 20:00:40 GMT 2025

<b>Visit</b>	<b>Proposal 17269, J1002 (05), failed</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: WFC3/IR, WFC3/UVIS Special Requirements: (none)				
	(J1002 (05)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN				
<b>Diagnosics</b>					
<b>Patterns</b>	<b>#</b>	<b>Primary Pattern</b>	<b>Secondary Pattern</b>	<b>Exposures</b>	
	(2)	Pattern Type=BOX Purpose=DITHER Number Of Points=4 Point Spacing=1.365 Line Spacing=0.975	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(3)
<b>Fixed Targets</b>	(3)	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)
	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>	<b>Fluxes</b>
(5)	J1002+4449	RA: 10 02 29.4500 (150.6227083d) Dec: +44 49 42.84 (44.82857d) Equinox: J2000	Redshift: 2.061	V=18.51 z = 18.19	Reference Frame: ICRS
<i>Comments:</i> Category=GALAXY Description=[QUASAR]					

Proposal 17269 - J1002 (05) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at  $z > 1.5$

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
Exposures	1	(5) J1002+4449	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F475W	FLASH=20		Pattern 3, Exps 1-1 i n J1002 (05) (3)	10 Secs (100 Secs) [==>25.0 Secs (Pattern 1)] [==>25.0 Secs (Pattern 2)] [==>25.0 Secs (Pattern 3)] [==>25.0 Secs (Pattern 4)]	[1]
	2	(5) J1002+4449	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F625W	FLASH=20		Pattern 3, Exps 2-2 i n J1002 (05) (3)	10 Secs (100 Secs) [==>25.0 Secs (Pattern 1)] [==>25.0 Secs (Pattern 2)] [==>25.0 Secs (Pattern 3)] [==>25.0 Secs (Pattern 4)]	[1]
	3	(5) J1002+4449	WFC3/IR, MULTIACCUM, IRSUB256	F160W	NSAMP=15; SAMP-SEQ=SPAR S10		Pattern 2, Exps 3-3 i n J1002 (05) (2)	103.128633 Secs X 4 (1650.058 Sec s) [==>(Pattern 1, Copy 1)] [==>(Pattern 1, Copy 2)] [==>(Pattern 1, Copy 3)] [==>(Pattern 1, Copy 4)] [==>(Pattern 2, Copy 1)] [==>(Pattern 2, Copy 2)] [==>(Pattern 2, Copy 3)] [==>(Pattern 2, Copy 4)] [==>(Pattern 3, Copy 1)] [==>(Pattern 3, Copy 2)] [==>(Pattern 3, Copy 3)] [==>(Pattern 3, Copy 4)] [==>(Pattern 4, Copy 1)] [==>(Pattern 4, Copy 2)] [==>(Pattern 4, Copy 3)] [==>(Pattern 4, Copy 4)]	[1]

Proposal 17269 - J1002 (05) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at  $z > 1.5$



Proposal 17269 - J1002 (57) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at  $z > 1.5$

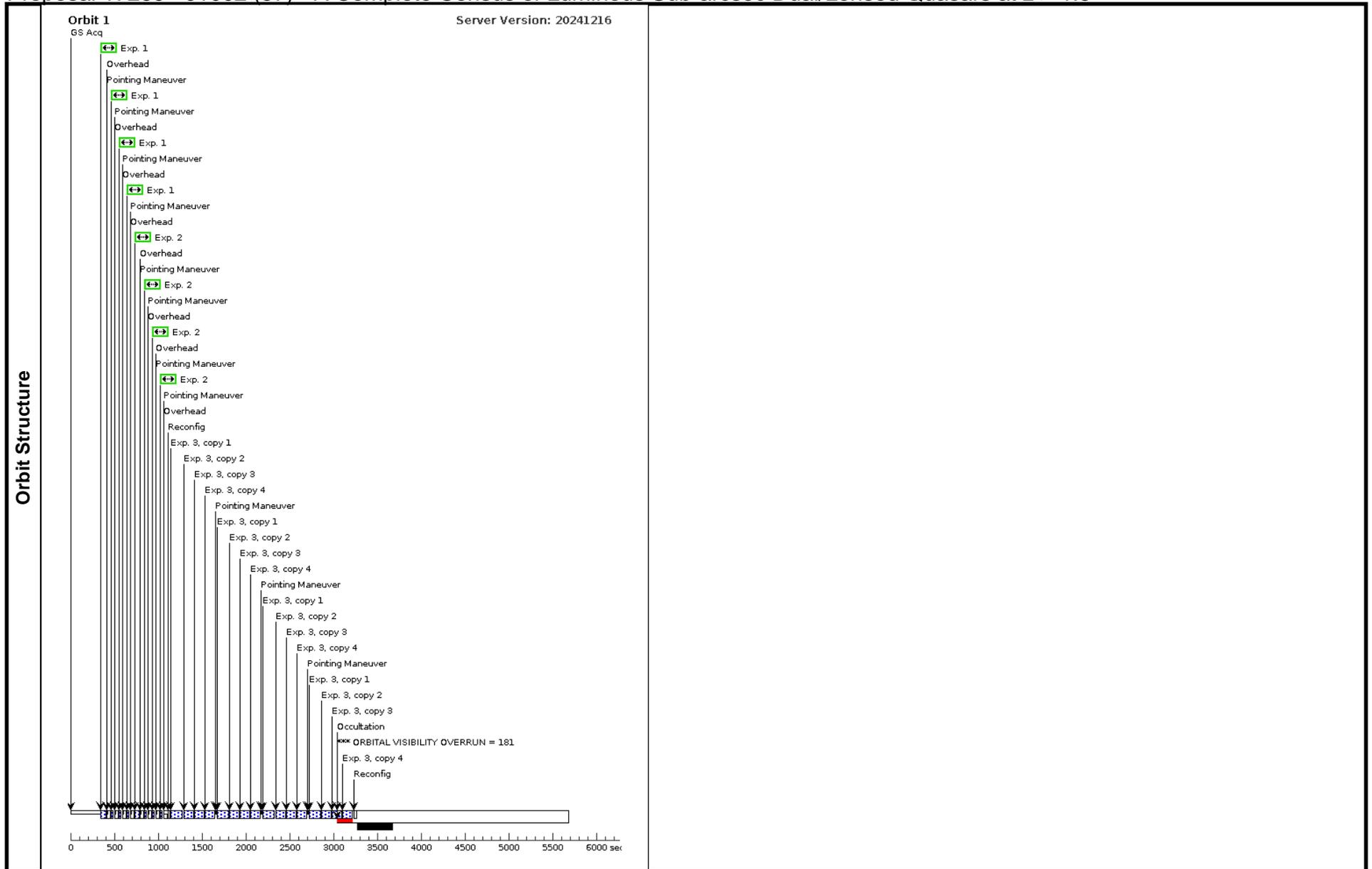
Mon Jan 27 20:00:40 GMT 2025

<b>Visit</b>	<b>Proposal 17269, J1002 (57), completed</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: WFC3/IR, WFC3/UVIS Special Requirements: (none) <i>Comments: HOPR copy of visit 5</i>					
	<b>Diagnosics</b> (J1002 (57)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN					
<b>Patterns</b>	<b>#</b>	<b>Primary Pattern</b>	<b>Secondary Pattern</b>	<b>Exposures</b>		
	(2)	Pattern Type=BOX Purpose=DITHER Number Of Points=4 Point Spacing=1.365 Line Spacing=0.975 Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(3)		
(3)	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)			
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>	<b>Fluxes</b>	<b>Miscellaneous</b>
	(5)	J1002+4449	RA: 10 02 29.4500 (150.6227083d) Dec: +44 49 42.84 (44.82857d) Equinox: J2000	Redshift: 2.061	V=18.51 z = 18.19	Reference Frame: ICRS
<i>Comments:</i> Category=GALAXY Description=[QUASAR]						

Proposal 17269 - J1002 (57) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at  $z > 1.5$

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
Exposures	1	(5) J1002+4449	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F475W	FLASH=20		Pattern 3, Exps 1-1 i n J1002 (57) (3)	10 Secs (100 Secs) [==>25.0 Secs (Pattern 1)] [==>25.0 Secs (Pattern 2)] [==>25.0 Secs (Pattern 3)] [==>25.0 Secs (Pattern 4)]	[1]
	2	(5) J1002+4449	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F625W	FLASH=20		Pattern 3, Exps 2-2 i n J1002 (57) (3)	10 Secs (100 Secs) [==>25.0 Secs (Pattern 1)] [==>25.0 Secs (Pattern 2)] [==>25.0 Secs (Pattern 3)] [==>25.0 Secs (Pattern 4)]	[1]
	3	(5) J1002+4449	WFC3/IR, MULTIACCUM, IRSUB256	F160W	NSAMP=15; SAMP-SEQ=SPAR S10		Pattern 2, Exps 3-3 i n J1002 (57) (2)	103.128633 Secs X 4 (1650.058 Sec s) [==>(Pattern 1, Copy 1)] [==>(Pattern 1, Copy 2)] [==>(Pattern 1, Copy 3)] [==>(Pattern 1, Copy 4)] [==>(Pattern 2, Copy 1)] [==>(Pattern 2, Copy 2)] [==>(Pattern 2, Copy 3)] [==>(Pattern 2, Copy 4)] [==>(Pattern 3, Copy 1)] [==>(Pattern 3, Copy 2)] [==>(Pattern 3, Copy 3)] [==>(Pattern 3, Copy 4)] [==>(Pattern 4, Copy 1)] [==>(Pattern 4, Copy 2)] [==>(Pattern 4, Copy 3)] [==>(Pattern 4, Copy 4)]	[1]

Proposal 17269 - J1002 (57) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at  $z > 1.5$



Proposal 17269 - J1015 (06) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at  $z > 1.5$

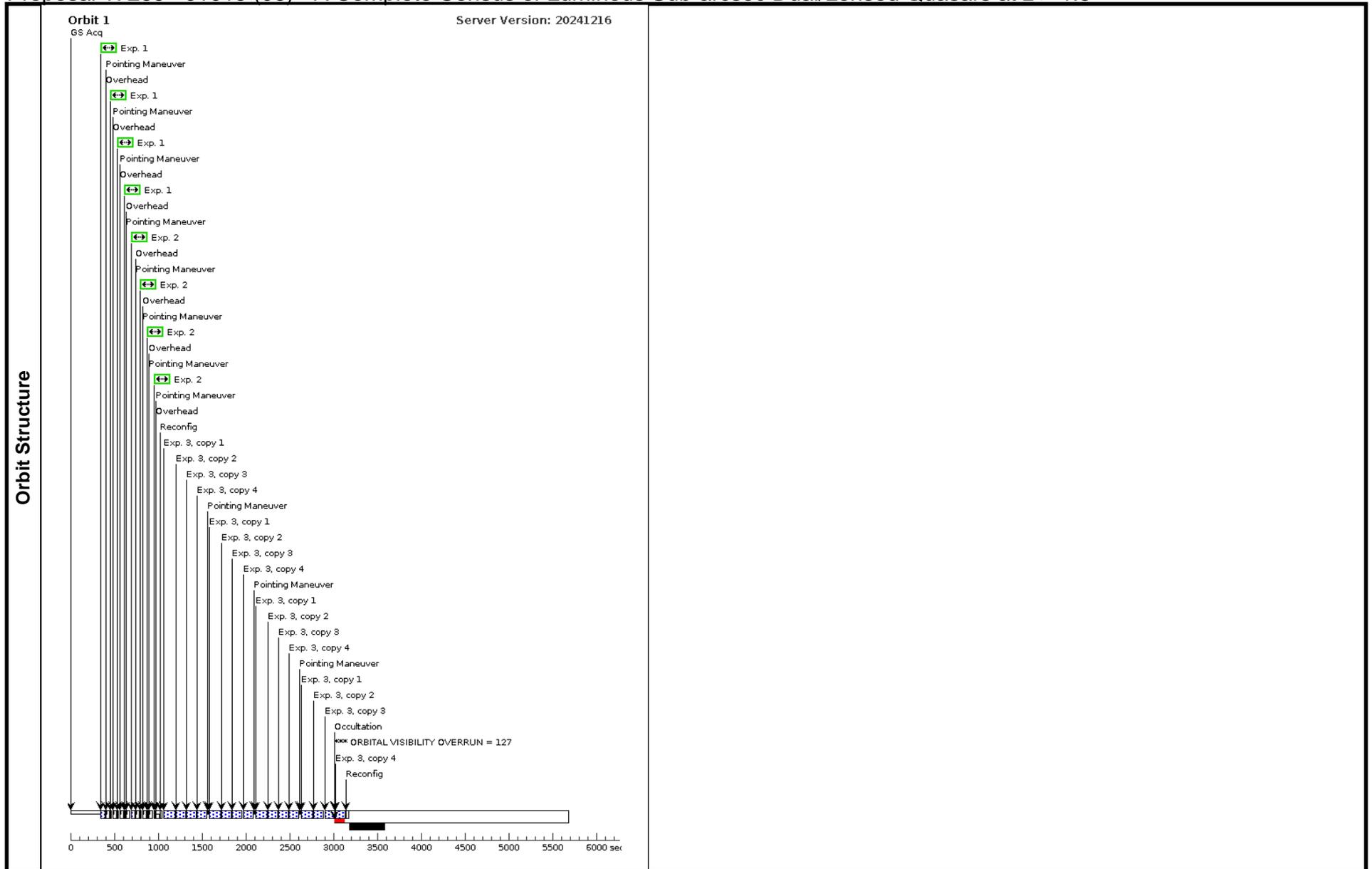
Mon Jan 27 20:00:41 GMT 2025

<b>Visit</b>	<b>Proposal 17269, J1015 (06), failed</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: WFC3/IR, WFC3/UVIS Special Requirements: (none)					
	<b>Diagnosics</b> (J1015 (06)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN					
<b>Patterns</b>	<b>#</b>	<b>Primary Pattern</b>	<b>Secondary Pattern</b>	<b>Exposures</b>		
	(2)	Pattern Type=BOX Purpose=DITHER Number Of Points=4 Point Spacing=1.365 Line Spacing=0.975	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(3)	
(3)	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)		
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>	<b>Fluxes</b>	<b>Miscellaneous</b>
	(6)	J1015+1230	RA: 10 15 4.7600 (153.7698333d) Dec: +12 30 22.29 (12.50619d) Equinox: J2000	Redshift: 1.705	V=17.90 H = 15.99	Reference Frame: ICRS
Comments: Category=GALAXY Description=[QUASAR]						

Proposal 17269 - J1015 (06) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at  $z > 1.5$

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
Exposures	1	(6) J1015+1230	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F475W	FLASH=20		Pattern 3, Exps 1-1 i n J1015 (06) (3)	10 Secs (56 Secs) [==>14.0 Secs (Pattern 1)] [==>14.0 Secs (Pattern 2)] [==>14.0 Secs (Pattern 3)] [==>14.0 Secs (Pattern 4)]	[1]
	2	(6) J1015+1230	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F625W	FLASH=20		Pattern 3, Exps 2-2 i n J1015 (06) (3)	10 Secs (56 Secs) [==>14.0 Secs (Pattern 1)] [==>14.0 Secs (Pattern 2)] [==>14.0 Secs (Pattern 3)] [==>14.0 Secs (Pattern 4)]	[1]
	3	(6) J1015+1230	WFC3/IR, MULTIACCUM, IRSUB256	F160W	NSAMP=15; SAMP-SEQ=SPAR S10		Pattern 2, Exps 3-3 i n J1015 (06) (2)	103.128633 Secs X 4 (1650.058 Sec s) [==>(Pattern 1, Copy 1)] [==>(Pattern 1, Copy 2)] [==>(Pattern 1, Copy 3)] [==>(Pattern 1, Copy 4)] [==>(Pattern 2, Copy 1)] [==>(Pattern 2, Copy 2)] [==>(Pattern 2, Copy 3)] [==>(Pattern 2, Copy 4)] [==>(Pattern 3, Copy 1)] [==>(Pattern 3, Copy 2)] [==>(Pattern 3, Copy 3)] [==>(Pattern 3, Copy 4)] [==>(Pattern 4, Copy 1)] [==>(Pattern 4, Copy 2)] [==>(Pattern 4, Copy 3)] [==>(Pattern 4, Copy 4)]	[1]

Proposal 17269 - J1015 (06) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at  $z > 1.5$



Proposal 17269 - J1015 (56) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at  $z > 1.5$

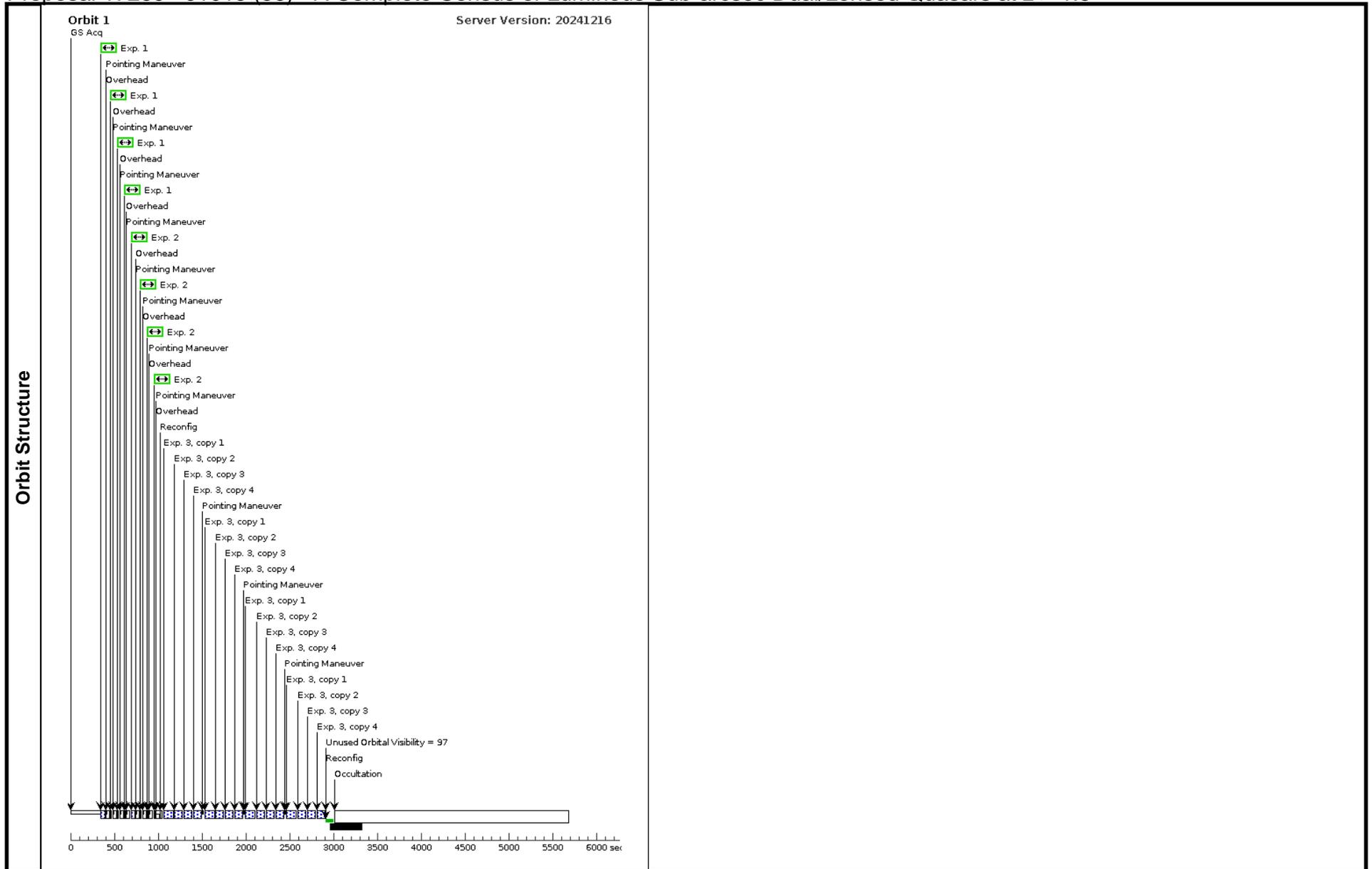
Mon Jan 27 20:00:41 GMT 2025

<b>Visit</b>	<b>Proposal 17269, J1015 (56), failed</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: WFC3/IR, WFC3/UVIS Special Requirements: (none) Comments: HOPR copy of visit 06					
<b>Patterns</b>	<b>#</b>	<b>Primary Pattern</b>	<b>Secondary Pattern</b>	<b>Exposures</b>		
	(2)	Pattern Type=BOX Purpose=DITHER Number Of Points=4 Point Spacing=1.365 Line Spacing=0.975	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(3)	
	(3)	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)	
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>	<b>Fluxes</b>	<b>Miscellaneous</b>
	(6)	J1015+1230	RA: 10 15 4.7600 (153.7698333d) Dec: +12 30 22.29 (12.50619d) Equinox: J2000	Redshift: 1.705	V=17.90 H = 15.99	Reference Frame: ICRS
	Comments: Category=GALAXY Description=[QUASAR]					

Proposal 17269 - J1015 (56) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at  $z > 1.5$

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
Exposures	1	(6) J1015+1230	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F475W	FLASH=20		Pattern 3, Exps 1-1 i n J1015 (56) (3)	10 Secs (56 Secs) [=>14.0 Secs (Pattern 1)] [=>14.0 Secs (Pattern 2)] [=>14.0 Secs (Pattern 3)] [=>14.0 Secs (Pattern 4)]	[1]
	2	(6) J1015+1230	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F625W	FLASH=20		Pattern 3, Exps 2-2 i n J1015 (56) (3)	10 Secs (56 Secs) [=>14.0 Secs (Pattern 1)] [=>14.0 Secs (Pattern 2)] [=>14.0 Secs (Pattern 3)] [=>14.0 Secs (Pattern 4)]	[1]
	3	(6) J1015+1230	WFC3/IR, MULTIACCUM, IRSUB256	F160W	NSAMP=13; SAMP-SEQ=SPAR S10		Pattern 2, Exps 3-3 i n J1015 (56) (2)	88.435659 Secs X 4 (1414.971 Secs) [=>(Pattern 1, Copy 1)] [=>(Pattern 1, Copy 2)] [=>(Pattern 1, Copy 3)] [=>(Pattern 1, Copy 4)] [=>(Pattern 2, Copy 1)] [=>(Pattern 2, Copy 2)] [=>(Pattern 2, Copy 3)] [=>(Pattern 2, Copy 4)] [=>(Pattern 3, Copy 1)] [=>(Pattern 3, Copy 2)] [=>(Pattern 3, Copy 3)] [=>(Pattern 3, Copy 4)] [=>(Pattern 4, Copy 1)] [=>(Pattern 4, Copy 2)] [=>(Pattern 4, Copy 3)] [=>(Pattern 4, Copy 4)]	[1]

Proposal 17269 - J1015 (56) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at  $z > 1.5$



Proposal 17269 - J1015 (59) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at  $z > 1.5$

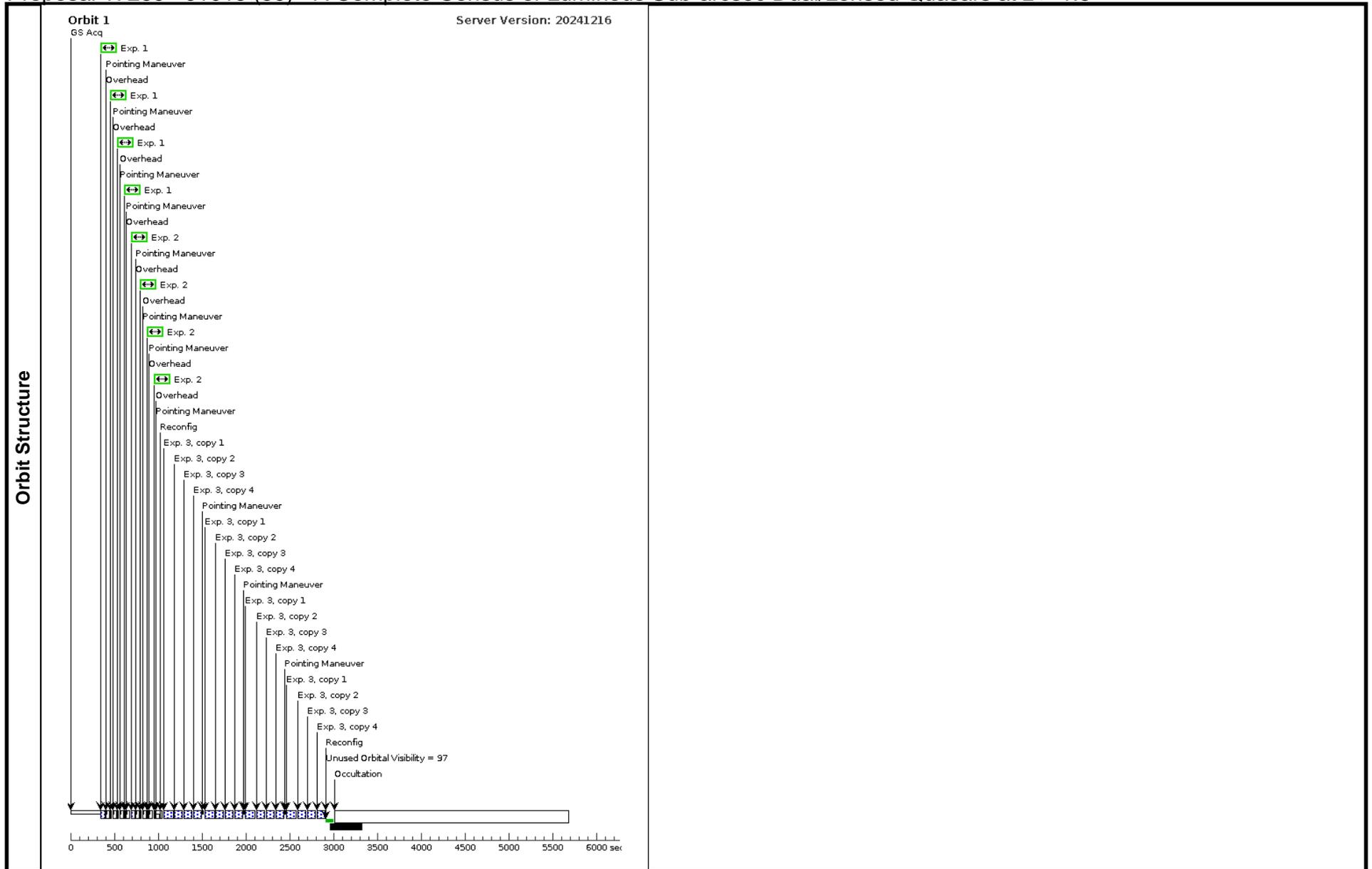
Mon Jan 27 20:00:41 GMT 2025

<b>Visit</b>	<b>Proposal 17269, J1015 (59), failed</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: WFC3/IR, WFC3/UVIS Special Requirements: (none) <i>Comments: HOPR copy of visit 56</i>					
<b>Patterns</b>	<b>#</b>	<b>Primary Pattern</b>	<b>Secondary Pattern</b>	<b>Exposures</b>		
	(2)	Pattern Type=BOX Purpose=DITHER Number Of Points=4 Point Spacing=1.365 Line Spacing=0.975	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(3)	
	(3)	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)	
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>	<b>Fluxes</b>	<b>Miscellaneous</b>
	(6)	J1015+1230	RA: 10 15 4.7600 (153.7698333d) Dec: +12 30 22.29 (12.50619d) Equinox: J2000	Redshift: 1.705	V=17.90 H = 15.99	Reference Frame: ICRS
	<i>Comments:</i> Category=GALAXY Description=[QUASAR]					

Proposal 17269 - J1015 (59) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at  $z > 1.5$

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
Exposures	1	(6) J1015+1230	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F475W	FLASH=20		Pattern 3, Exps 1-1 i n J1015 (59) (3)	10 Secs (56 Secs) [==>14.0 Secs (Pattern 1)] [==>14.0 Secs (Pattern 2)] [==>14.0 Secs (Pattern 3)] [==>14.0 Secs (Pattern 4)]	[1]
	2	(6) J1015+1230	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F625W	FLASH=20		Pattern 3, Exps 2-2 i n J1015 (59) (3)	10 Secs (56 Secs) [==>14.0 Secs (Pattern 1)] [==>14.0 Secs (Pattern 2)] [==>14.0 Secs (Pattern 3)] [==>14.0 Secs (Pattern 4)]	[1]
	3	(6) J1015+1230	WFC3/IR, MULTIACCUM, IRSUB256	F160W	NSAMP=13; SAMP-SEQ=SPAR S10		Pattern 2, Exps 3-3 i n J1015 (59) (2)	88.435659 Secs X 4 (1414.971 Secs) [==>(Pattern 1, Copy 1)] [==>(Pattern 1, Copy 2)] [==>(Pattern 1, Copy 3)] [==>(Pattern 1, Copy 4)] [==>(Pattern 2, Copy 1)] [==>(Pattern 2, Copy 2)] [==>(Pattern 2, Copy 3)] [==>(Pattern 2, Copy 4)] [==>(Pattern 3, Copy 1)] [==>(Pattern 3, Copy 2)] [==>(Pattern 3, Copy 3)] [==>(Pattern 3, Copy 4)] [==>(Pattern 4, Copy 1)] [==>(Pattern 4, Copy 2)] [==>(Pattern 4, Copy 3)] [==>(Pattern 4, Copy 4)]	[1]

Proposal 17269 - J1015 (59) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at  $z > 1.5$



Proposal 17269 - J1015 (60) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at  $z > 1.5$

Mon Jan 27 20:00:41 GMT 2025

<b>Visit</b>	<b>Proposal 17269, J1015 (60), failed</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: WFC3/IR, WFC3/UVIS Special Requirements: (none) Comments: HOPR copy of visit 59					
<b>Patterns</b>	<b>#</b>	<b>Primary Pattern</b>	<b>Secondary Pattern</b>	<b>Exposures</b>		
	(2)	Pattern Type=BOX Purpose=DITHER Number Of Points=4 Point Spacing=1.365 Line Spacing=0.975	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(3)	
	(3)	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)	
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>	<b>Fluxes</b>	<b>Miscellaneous</b>
	(6)	J1015+1230	RA: 10 15 4.7600 (153.7698333d) Dec: +12 30 22.29 (12.50619d) Equinox: J2000	Redshift: 1.705	V=17.90 H = 15.99	Reference Frame: ICRS
	Comments: Category=GALAXY Description=[QUASAR]					

Proposal 17269 - J1015 (60) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at  $z > 1.5$

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
Exposures	1	(6) J1015+1230	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F475W	FLASH=20		Pattern 3, Exps 1-1 i n J1015 (60) (3)	10 Secs (56 Secs) [==>14.0 Secs (Pattern 1)] [==>14.0 Secs (Pattern 2)] [==>14.0 Secs (Pattern 3)] [==>14.0 Secs (Pattern 4)]	[1]
	2	(6) J1015+1230	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F625W	FLASH=20		Pattern 3, Exps 2-2 i n J1015 (60) (3)	10 Secs (56 Secs) [==>14.0 Secs (Pattern 1)] [==>14.0 Secs (Pattern 2)] [==>14.0 Secs (Pattern 3)] [==>14.0 Secs (Pattern 4)]	[1]
	3	(6) J1015+1230	WFC3/IR, MULTIACCUM, IRSUB256	F160W	NSAMP=13; SAMP-SEQ=SPAR S10		Pattern 2, Exps 3-3 i n J1015 (60) (2)	88.435659 Secs X 4 (1414.971 Secs) [==>(Pattern 1, Copy 1)] [==>(Pattern 1, Copy 2)] [==>(Pattern 1, Copy 3)] [==>(Pattern 1, Copy 4)] [==>(Pattern 2, Copy 1)] [==>(Pattern 2, Copy 2)] [==>(Pattern 2, Copy 3)] [==>(Pattern 2, Copy 4)] [==>(Pattern 3, Copy 1)] [==>(Pattern 3, Copy 2)] [==>(Pattern 3, Copy 3)] [==>(Pattern 3, Copy 4)] [==>(Pattern 4, Copy 1)] [==>(Pattern 4, Copy 2)] [==>(Pattern 4, Copy 3)] [==>(Pattern 4, Copy 4)]	[1]



Proposal 17269 - J1015 (61) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at  $z > 1.5$

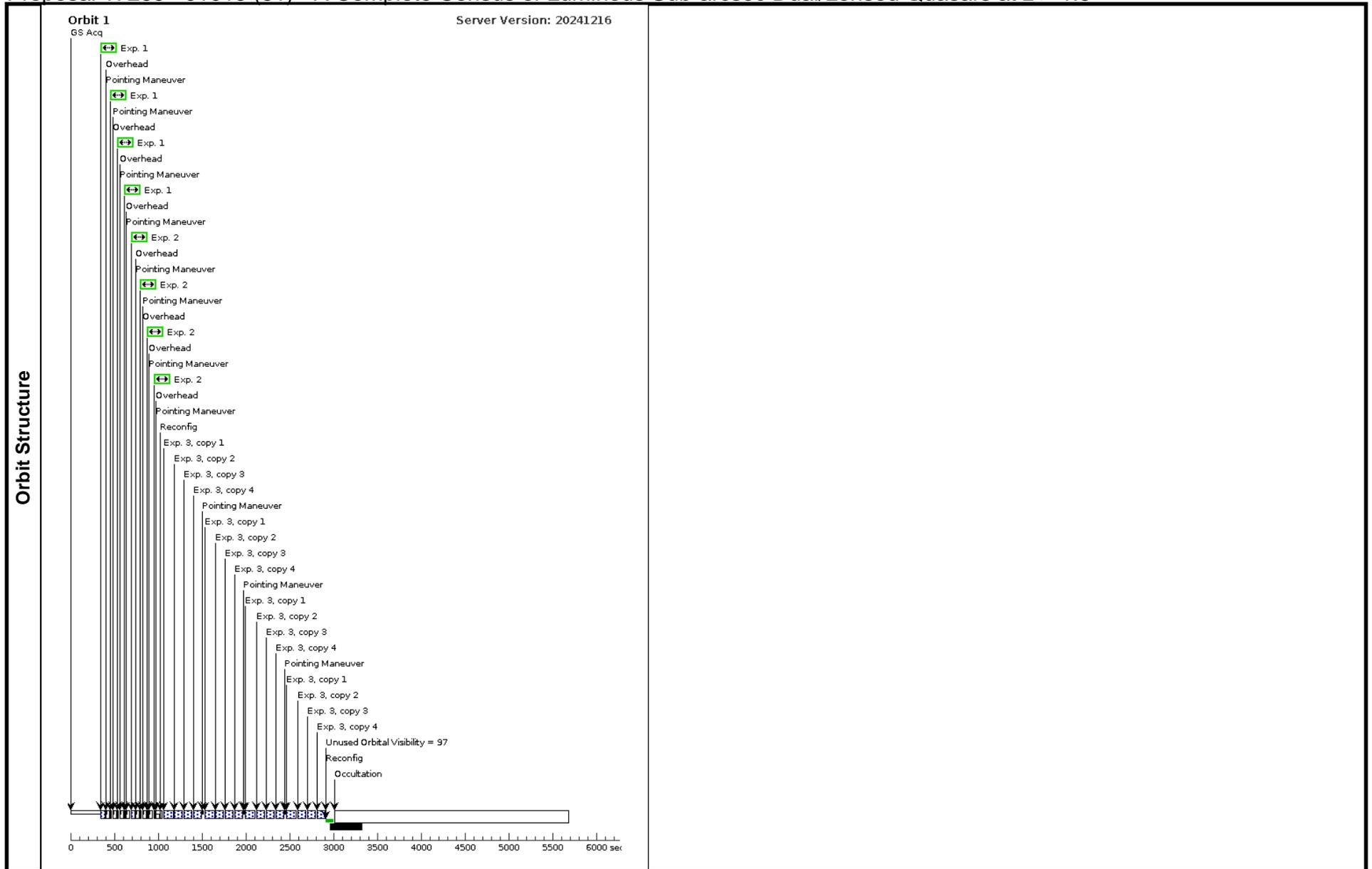
Mon Jan 27 20:00:41 GMT 2025

<b>Visit</b>	<b>Proposal 17269, J1015 (61)</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: WFC3/IR, WFC3/UVIS Special Requirements: (none) Comments: <i>HOPR copy of visit 60</i>					
<b>Patterns</b>	<b>#</b>	<b>Primary Pattern</b>	<b>Secondary Pattern</b>	<b>Exposures</b>		
	(2)	Pattern Type=BOX Purpose=DITHER Number Of Points=4 Point Spacing=1.365 Line Spacing=0.975	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(3)	
	(3)	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)	
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>	<b>Fluxes</b>	<b>Miscellaneous</b>
	(6)	J1015+1230	RA: 10 15 4.7600 (153.7698333d) Dec: +12 30 22.29 (12.50619d) Equinox: J2000	Redshift: 1.705	V=17.90 H = 15.99	Reference Frame: ICRS
	Comments: Category=GALAXY Description=[QUASAR]					

Proposal 17269 - J1015 (61) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at  $z > 1.5$

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
Exposures	1	(6) J1015+1230	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F475W	FLASH=20	GS ACQ SCENARI O BASE103	Pattern 3, Exps 1-1 i n J1015 (61) (3)	10 Secs (56 Secs) [=>14.0 Secs (Pattern 1)] [=>14.0 Secs (Pattern 2)] [=>14.0 Secs (Pattern 3)] [=>14.0 Secs (Pattern 4)]	[1]
	2	(6) J1015+1230	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F625W	FLASH=20		Pattern 3, Exps 2-2 i n J1015 (61) (3)	10 Secs (56 Secs) [=>14.0 Secs (Pattern 1)] [=>14.0 Secs (Pattern 2)] [=>14.0 Secs (Pattern 3)] [=>14.0 Secs (Pattern 4)]	[1]
	3	(6) J1015+1230	WFC3/IR, MULTIACCUM, IRSUB256	F160W	NSAMP=13; SAMP-SEQ=SPAR S10		Pattern 2, Exps 3-3 i n J1015 (61) (2)	88.435659 Secs X 4 (1414.971 Secs) [=>(Pattern 1, Copy 1)] [=>(Pattern 1, Copy 2)] [=>(Pattern 1, Copy 3)] [=>(Pattern 1, Copy 4)] [=>(Pattern 2, Copy 1)] [=>(Pattern 2, Copy 2)] [=>(Pattern 2, Copy 3)] [=>(Pattern 2, Copy 4)] [=>(Pattern 3, Copy 1)] [=>(Pattern 3, Copy 2)] [=>(Pattern 3, Copy 3)] [=>(Pattern 3, Copy 4)] [=>(Pattern 4, Copy 1)] [=>(Pattern 4, Copy 2)] [=>(Pattern 4, Copy 3)] [=>(Pattern 4, Copy 4)]	[1]

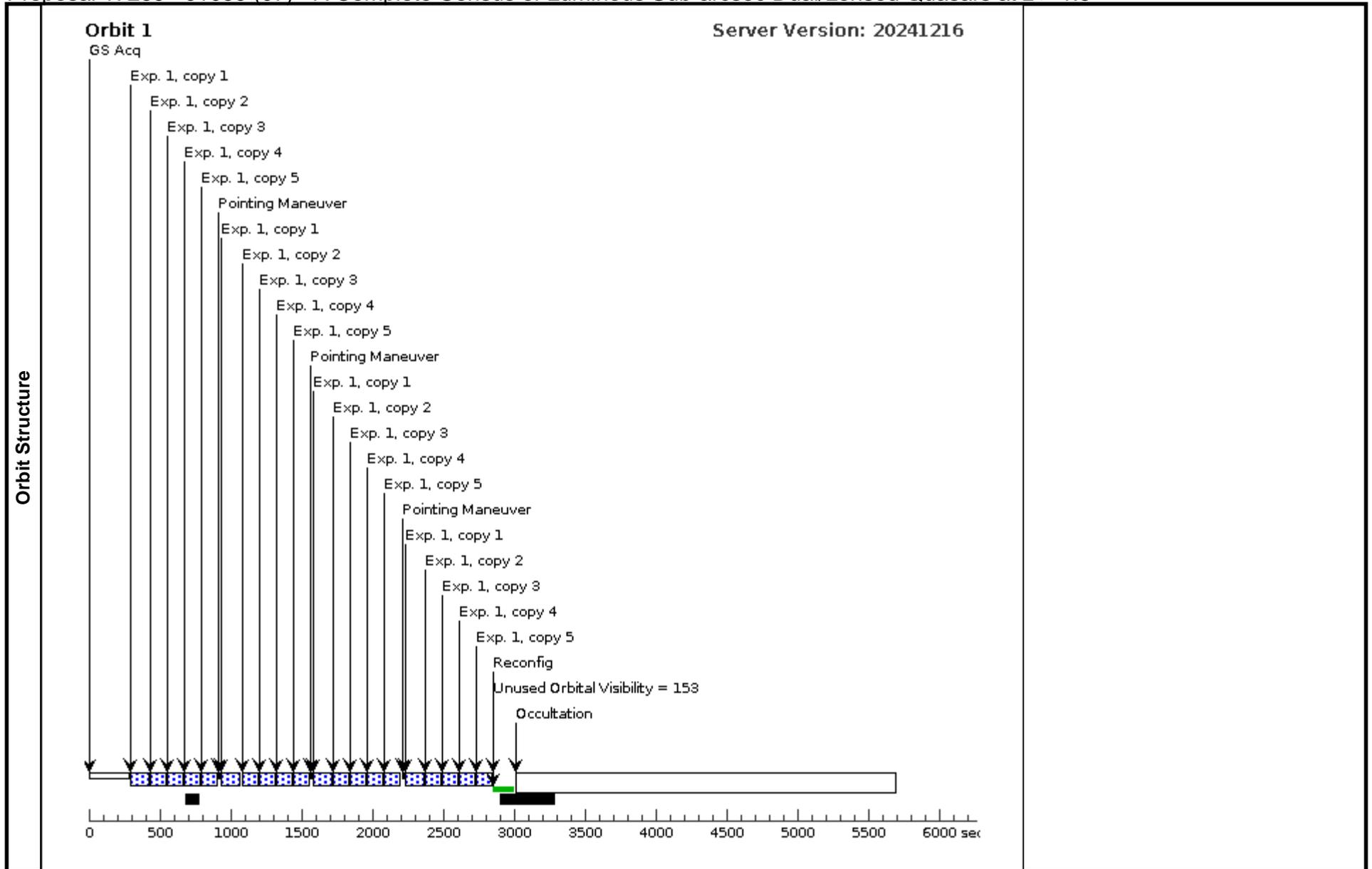
Proposal 17269 - J1015 (61) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at  $z > 1.5$



Proposal 17269 - J1059 (07) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at z > 1.5

Mon Jan 27 20:00:41 GMT 2025

<b>Visit</b>	Proposal 17269, J1059 (07), completed Diagnostic Status: Warning Scientific Instruments: WFC3/IR Special Requirements: (none)									
	(J1059 (07)) Warning (Orbit Planner): GS ACQ SCENARIO REQUESTED INCONSISTENT WITH VISIT GYRO MODE (Exposure 1 (Pattern 2, Exps 1-1 in J1059 (07)) special requirements) Warning (Form): The specified GS Acq Scenario is not in the current list of valid scenarios.									
<b>Diagnosics</b>										
<b>Patterns</b>	#	Primary Pattern		Secondary Pattern	Exposures					
	(2)	Pattern Type=BOX Purpose=DITHER Number Of Points=4 Point Spacing=1.365 Line Spacing=0.975	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(1)					
<b>Fixed Targets</b>	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(7)	J1059+0622	RA: 10 59 26.4300 (164.8601250d) Dec: +06 22 27.47 (6.37430d) Equinox: J2000	Redshift: 2.199	V=17.75 H = 15.27	Reference Frame: ICRS				
Comments: Category=GALAXY Description=[QUASAR]										
<b>Exposures</b>	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(7) J1059+0622		WFC3/IR, MULTIACCUM, IRSUB256	F160W	NSAMP=15; SAMP-SEQ=SPAR S10	GS ACQ SCENARI O ONEB1B3	Pattern 2, Exps 1-1 in J1059 (07) (2)	103.128633 Secs X 5 (2062.573 Secs)	[1]
									[=>(Pattern 1, Copy 1)] [=>(Pattern 1, Copy 2)] [=>(Pattern 1, Copy 3)] [=>(Pattern 1, Copy 4)] [=>(Pattern 1, Copy 5)] [=>(Pattern 2, Copy 1)] [=>(Pattern 2, Copy 2)] [=>(Pattern 2, Copy 3)] [=>(Pattern 2, Copy 4)] [=>(Pattern 2, Copy 5)] [=>(Pattern 3, Copy 1)] [=>(Pattern 3, Copy 2)] [=>(Pattern 3, Copy 3)] [=>(Pattern 3, Copy 4)] [=>(Pattern 3, Copy 5)] [=>(Pattern 4, Copy 1)] [=>(Pattern 4, Copy 2)] [=>(Pattern 4, Copy 3)] [=>(Pattern 4, Copy 4)] [=>(Pattern 4, Copy 5)]	



Proposal 17269 - J1118 (08) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at  $z > 1.5$

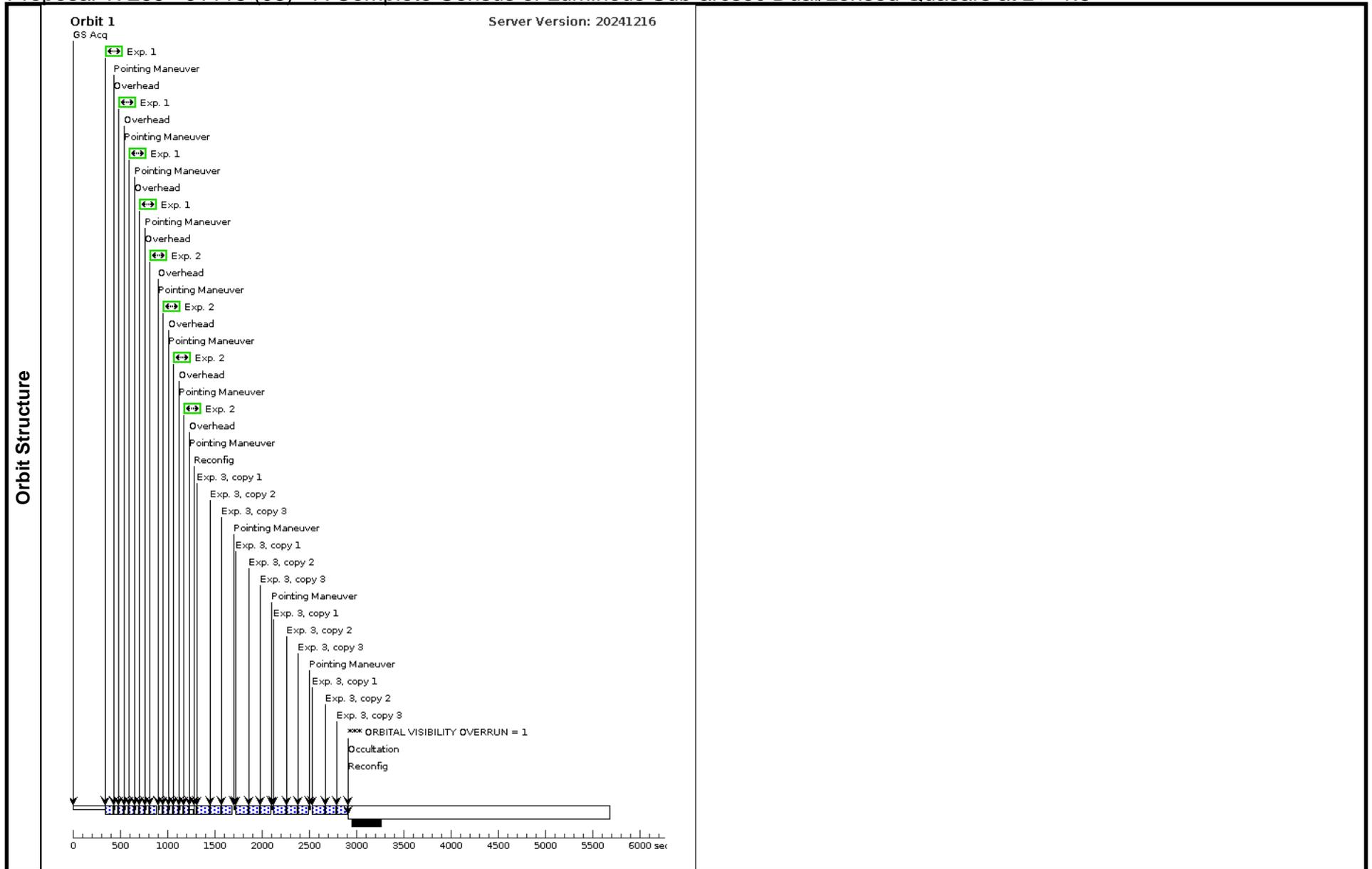
Mon Jan 27 20:00:41 GMT 2025

<b>Visit</b>	<b>Proposal 17269, J1118 (08), failed</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: WFC3/IR, WFC3/UVIS Special Requirements: SCHED 100%				
	(J1118 (08)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN				
<b>Diagnosics</b>					
<b>Patterns</b>	<b>#</b>	<b>Primary Pattern</b>		<b>Secondary Pattern</b>	<b>Exposures</b>
	(2)	Pattern Type=BOX Purpose=DITHER Number Of Points=4 Point Spacing=1.365 Line Spacing=0.975	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(3)
<b>Fixed Targets</b>	(3)	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)
	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>	<b>Fluxes</b>
(8)	J1118+0749	RA: 11 18 53.5000 (169.7229167d) Dec: +07 49 46.00 (7.82944d) Equinox: J2000	Redshift: 2.038	V=19.17 H = 18.47	Reference Frame: ICRS
<i>Comments:</i> Category=GALAXY Description=[QUASAR]					

Proposal 17269 - J1118 (08) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at  $z > 1.5$

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
Exposures	1	(8) J1118+0749	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F475W	FLASH=20		Pattern 3, Exps 1-1 in J1118 (08) (3)	10 Secs (184 Secs) [=>46.0 Secs (Pattern 1)] [=>46.0 Secs (Pattern 2)] [=>46.0 Secs (Pattern 3)] [=>46.0 Secs (Pattern 4)]	[1]
	2	(8) J1118+0749	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F625W	FLASH=20		Pattern 3, Exps 2-2 in J1118 (08) (3)	10 Secs (184 Secs) [=>46.0 Secs (Pattern 1)] [=>46.0 Secs (Pattern 2)] [=>46.0 Secs (Pattern 3)] [=>46.0 Secs (Pattern 4)]	[1]
	3	(8) J1118+0749	WFC3/IR, MULTIACCUM, IRSUB256	F160W	NSAMP=15; SAMP-SEQ=SPAR S10		Pattern 2, Exps 3-3 in J1118 (08) (2)	103.128633 Secs X 3 (1237.544 Secs) [=>(Pattern 1, Copy 1)] [=>(Pattern 1, Copy 2)] [=>(Pattern 1, Copy 3)] [=>(Pattern 2, Copy 1)] [=>(Pattern 2, Copy 2)] [=>(Pattern 2, Copy 3)] [=>(Pattern 3, Copy 1)] [=>(Pattern 3, Copy 2)] [=>(Pattern 3, Copy 3)] [=>(Pattern 4, Copy 1)] [=>(Pattern 4, Copy 2)] [=>(Pattern 4, Copy 3)]	[1]

Proposal 17269 - J1118 (08) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at  $z > 1.5$



Proposal 17269 - J1118 (12) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at  $z > 1.5$

Mon Jan 27 20:00:41 GMT 2025

<b>Visit</b>	<b>Proposal 17269, J1118 (12), failed</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: WFC3/IR, WFC3/UVIS Special Requirements: SCHED 100% <i>Comments: HOPR copy of visit 8</i>					
	<b>Diagnosics</b> (J1118 (12)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN					
<b>Patterns</b>	<b>#</b>	<b>Primary Pattern</b>	<b>Secondary Pattern</b>	<b>Exposures</b>		
	(2)	Pattern Type=BOX Purpose=DITHER Number Of Points=4 Point Spacing=1.365 Line Spacing=0.975 Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(3)		
(3)	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)			
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>	<b>Fluxes</b>	<b>Miscellaneous</b>
	(8)	J1118+0749	RA: 11 18 53.5000 (169.7229167d) Dec: +07 49 46.00 (7.82944d) Equinox: J2000	Redshift: 2.038	V=19.17 H = 18.47	Reference Frame: ICRS
<i>Comments:</i> Category=GALAXY Description=[QUASAR]						

Proposal 17269 - J1118 (12) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at  $z > 1.5$

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(8) J1118+0749	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F475W	FLASH=20			Pattern 3, Exps 1-1 i n J1118 (12) (3)	10 Secs (184 Secs)	
									[==>46.0 Secs (Pattern 1)] [==>46.0 Secs (Pattern 2)] [==>46.0 Secs (Pattern 3)] [==>46.0 Secs (Pattern 4)]	[1]
	2	(8) J1118+0749	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F625W	FLASH=20			Pattern 3, Exps 2-2 i n J1118 (12) (3)	10 Secs (184 Secs)	
								[==>46.0 Secs (Pattern 1)] [==>46.0 Secs (Pattern 2)] [==>46.0 Secs (Pattern 3)] [==>46.0 Secs (Pattern 4)]	[1]	
3	(8) J1118+0749	WFC3/IR, MULTIACCUM, IRSUB256	F160W	NSAMP=15; SAMP-SEQ=SPAR S10			Pattern 2, Exps 3-3 i n J1118 (12) (2)	103.128633 Secs X 3 (1237.544 Secs)		
								[==>(Pattern 1, Copy 1)] [==>(Pattern 1, Copy 2)] [==>(Pattern 1, Copy 3)] [==>(Pattern 2, Copy 1)] [==>(Pattern 2, Copy 2)] [==>(Pattern 2, Copy 3)] [==>(Pattern 3, Copy 1)] [==>(Pattern 3, Copy 2)] [==>(Pattern 3, Copy 3)] [==>(Pattern 4, Copy 1)] [==>(Pattern 4, Copy 2)] [==>(Pattern 4, Copy 3)]	[1]	



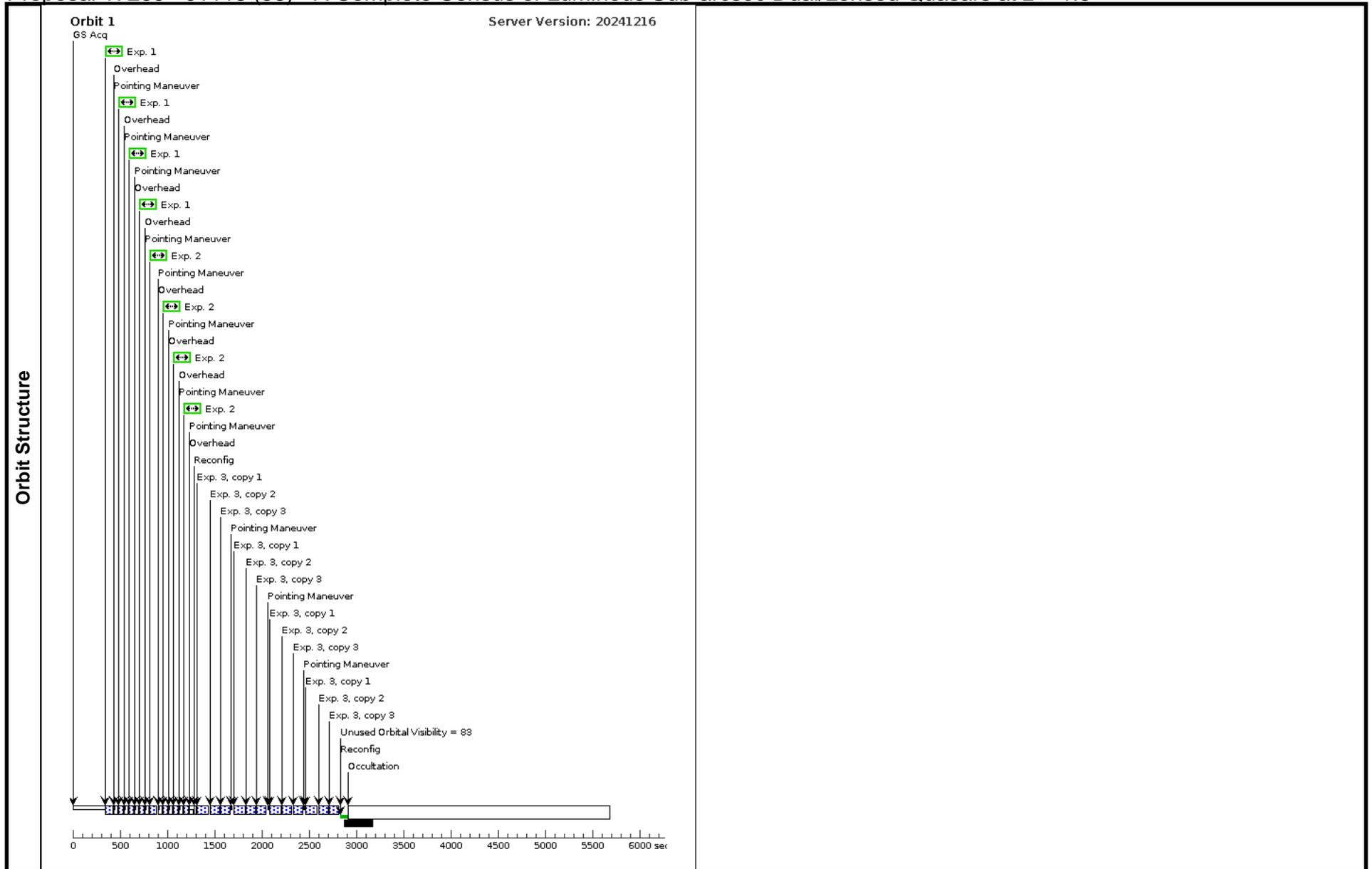
Proposal 17269 - J1118 (58) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at  $z > 1.5$

Mon Jan 27 20:00:41 GMT 2025

<b>Visit</b>	<b>Proposal 17269, J1118 (58), scheduling</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: WFC3/IR, WFC3/UVIS Special Requirements: SCHED 100% Comments: HOPR copy of visit 12					
<b>Patterns</b>	<b>#</b>	<b>Primary Pattern</b>	<b>Secondary Pattern</b>	<b>Exposures</b>		
	(2)	Pattern Type=BOX Purpose=DITHER Number Of Points=4 Point Spacing=1.365 Line Spacing=0.975	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(3)	
	(3)	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)	
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>	<b>Fluxes</b>	<b>Miscellaneous</b>
	(8)	J1118+0749	RA: 11 18 53.5000 (169.7229167d) Dec: +07 49 46.00 (7.82944d) Equinox: J2000	Redshift: 2.038	V=19.17 H = 18.47	Reference Frame: ICRS
	Comments: Category=GALAXY Description=[QUASAR]					

Proposal 17269 - J1118 (58) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at  $z > 1.5$

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(8) J1118+0749	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F475W	FLASH=20			Pattern 3, Exps 1-1 i n J1118 (58) (3)	10 Secs (184 Secs)	
									[==>46.0 Secs (Pattern 1)] [==>46.0 Secs (Pattern 2)] [==>46.0 Secs (Pattern 3)] [==>46.0 Secs (Pattern 4)]	[1]
	2	(8) J1118+0749	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F625W	FLASH=20			Pattern 3, Exps 2-2 i n J1118 (58) (3)	10 Secs (184 Secs)	
								[==>46.0 Secs (Pattern 1)] [==>46.0 Secs (Pattern 2)] [==>46.0 Secs (Pattern 3)] [==>46.0 Secs (Pattern 4)]	[1]	
3	(8) J1118+0749	WFC3/IR, MULTIACCUM, IRSUB256	F160W	NSAMP=14; SAMP-SEQ=SPAR S10			Pattern 2, Exps 3-3 i n J1118 (58) (2)	95.782146 Secs X 3 (1149.386 Secs)		
								[==>(Pattern 1, Copy 1)] [==>(Pattern 1, Copy 2)] [==>(Pattern 1, Copy 3)] [==>(Pattern 2, Copy 1)] [==>(Pattern 2, Copy 2)] [==>(Pattern 2, Copy 3)] [==>(Pattern 3, Copy 1)] [==>(Pattern 3, Copy 2)] [==>(Pattern 3, Copy 3)] [==>(Pattern 4, Copy 1)] [==>(Pattern 4, Copy 2)] [==>(Pattern 4, Copy 3)]	[1]	



Proposal 17269 - J1613 (09) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at  $z > 1.5$

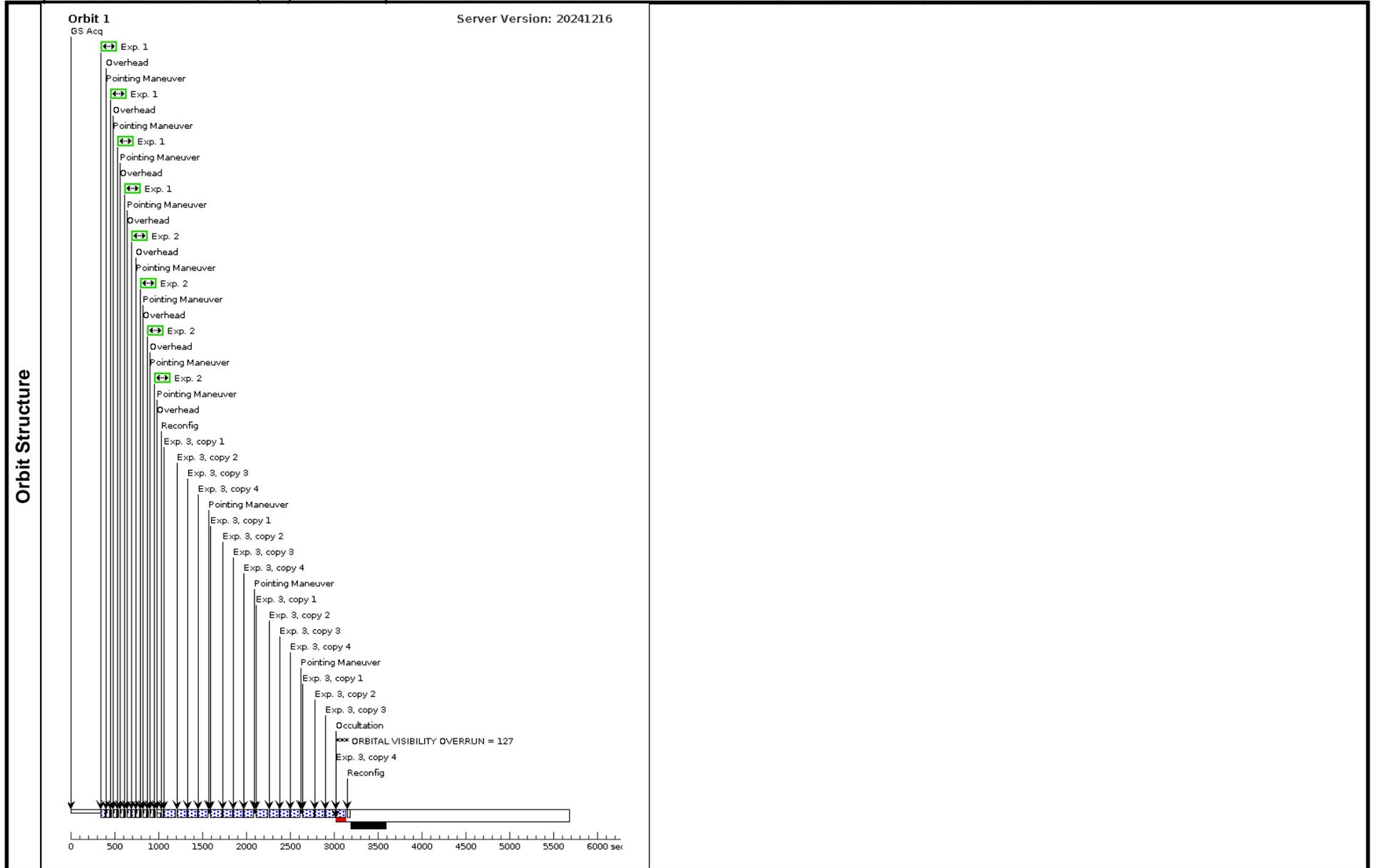
Mon Jan 27 20:00:41 GMT 2025

<b>Visit</b>	<b>Proposal 17269, J1613 (09), failed</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: WFC3/IR, WFC3/UVIS Special Requirements: (none)					
	<b>Diagnosics</b> (J1613 (09)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN					
<b>Patterns</b>	<b>#</b>	<b>Primary Pattern</b>	<b>Secondary Pattern</b>	<b>Exposures</b>		
	(2)	Pattern Type=BOX Purpose=DITHER Number Of Points=4 Point Spacing=1.365 Line Spacing=0.975	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(3)	
(3)	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)		
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>	<b>Fluxes</b>	<b>Miscellaneous</b>
	(9)	J1613+1708	RA: 16 13 20.0100 (243.3333750d) Dec: +17 08 39.25 (17.14424d) Equinox: J2000	Redshift: 1.549	V=19.18 z = 18.93	Reference Frame: ICRS
Comments: Category=GALAXY Description=[QUASAR]						

Proposal 17269 - J1613 (09) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at  $z > 1.5$

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
Exposures	1	(9) J1613+1708	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F475W	FLASH=20		Pattern 3, Exps 1-1 i n J1613 (09) (3)	10 Secs (60 Secs) [==>15.0 Secs (Pattern 1)] [==>15.0 Secs (Pattern 2)] [==>15.0 Secs (Pattern 3)] [==>15.0 Secs (Pattern 4)]	[1]
	2	(9) J1613+1708	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F625W	FLASH=20		Pattern 3, Exps 2-2 i n J1613 (09) (3)	10 Secs (60 Secs) [==>15.0 Secs (Pattern 1)] [==>15.0 Secs (Pattern 2)] [==>15.0 Secs (Pattern 3)] [==>15.0 Secs (Pattern 4)]	[1]
	3	(9) J1613+1708	WFC3/IR, MULTIACCUM, IRSUB256	F160W	NSAMP=15; SAMP-SEQ=SPAR S10		Pattern 2, Exps 3-3 i n J1613 (09) (2)	103.128633 Secs X 4 (1650.058 Sec s) [==>(Pattern 1, Copy 1)] [==>(Pattern 1, Copy 2)] [==>(Pattern 1, Copy 3)] [==>(Pattern 1, Copy 4)] [==>(Pattern 2, Copy 1)] [==>(Pattern 2, Copy 2)] [==>(Pattern 2, Copy 3)] [==>(Pattern 2, Copy 4)] [==>(Pattern 3, Copy 1)] [==>(Pattern 3, Copy 2)] [==>(Pattern 3, Copy 3)] [==>(Pattern 3, Copy 4)] [==>(Pattern 4, Copy 1)] [==>(Pattern 4, Copy 2)] [==>(Pattern 4, Copy 3)] [==>(Pattern 4, Copy 4)]	[1]

Proposal 17269 - J1613 (09) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at  $z > 1.5$



Proposal 17269 - J1613 (14) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at  $z > 1.5$

Mon Jan 27 20:00:41 GMT 2025

<b>Visit</b>	<b>Proposal 17269, J1613 (14), failed</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: WFC3/IR, WFC3/UVIS Special Requirements: (none) <i>Comments: HOPR copy of visit 9</i>					
	<b>Diagnosics</b> (J1613 (14)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN					
<b>Patterns</b>	<b>#</b>	<b>Primary Pattern</b>	<b>Secondary Pattern</b>	<b>Exposures</b>		
	(2)	Pattern Type=BOX Purpose=DITHER Number Of Points=4 Point Spacing=1.365 Line Spacing=0.975	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(3)	
(3)	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)		
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>	<b>Fluxes</b>	<b>Miscellaneous</b>
	(9)	J1613+1708	RA: 16 13 20.0100 (243.3333750d) Dec: +17 08 39.25 (17.14424d) Equinox: J2000	Redshift: 1.549	V=19.18 z = 18.93	Reference Frame: ICRS
<i>Comments:</i> Category=GALAXY Description=[QUASAR]						

Proposal 17269 - J1613 (14) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at  $z > 1.5$

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
Exposures	1	(9) J1613+1708	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F475W	FLASH=20		Pattern 3, Exps 1-1 i n J1613 (14) (3)	10 Secs (60 Secs) [==>15.0 Secs (Pattern 1)] [==>15.0 Secs (Pattern 2)] [==>15.0 Secs (Pattern 3)] [==>15.0 Secs (Pattern 4)]	[1]
	2	(9) J1613+1708	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F625W	FLASH=20		Pattern 3, Exps 2-2 i n J1613 (14) (3)	10 Secs (60 Secs) [==>15.0 Secs (Pattern 1)] [==>15.0 Secs (Pattern 2)] [==>15.0 Secs (Pattern 3)] [==>15.0 Secs (Pattern 4)]	[1]
	3	(9) J1613+1708	WFC3/IR, MULTIACCUM, IRSUB256	F160W	NSAMP=15; SAMP-SEQ=SPAR S10		Pattern 2, Exps 3-3 i n J1613 (14) (2)	103.128633 Secs X 4 (1650.058 Sec s) [==>(Pattern 1, Copy 1)] [==>(Pattern 1, Copy 2)] [==>(Pattern 1, Copy 3)] [==>(Pattern 1, Copy 4)] [==>(Pattern 2, Copy 1)] [==>(Pattern 2, Copy 2)] [==>(Pattern 2, Copy 3)] [==>(Pattern 2, Copy 4)] [==>(Pattern 3, Copy 1)] [==>(Pattern 3, Copy 2)] [==>(Pattern 3, Copy 3)] [==>(Pattern 3, Copy 4)] [==>(Pattern 4, Copy 1)] [==>(Pattern 4, Copy 2)] [==>(Pattern 4, Copy 3)] [==>(Pattern 4, Copy 4)]	[1]



Proposal 17269 - J1613 (15) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at  $z > 1.5$

Mon Jan 27 20:00:41 GMT 2025

<b>Visit</b>	<b>Proposal 17269, J1613 (15), completed</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: WFC3/IR, WFC3/UVIS Special Requirements: (none) <i>Comments: HOPR copy of visit 14</i>					
	<b>Diagnosics</b> (J1613 (15)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN					
<b>Patterns</b>	<b>#</b>	<b>Primary Pattern</b>	<b>Secondary Pattern</b>	<b>Exposures</b>		
	(2)	Pattern Type=BOX Purpose=DITHER Number Of Points=4 Point Spacing=1.365 Line Spacing=0.975 Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(3)		
(3)	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)			
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>	<b>Fluxes</b>	<b>Miscellaneous</b>
	(9)	J1613+1708	RA: 16 13 20.0100 (243.3333750d) Dec: +17 08 39.25 (17.14424d) Equinox: J2000	Redshift: 1.549	V=19.18 z = 18.93	Reference Frame: ICRS
<i>Comments: Category=GALAXY Description=[QUASAR]</i>						

Proposal 17269 - J1613 (15) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at  $z > 1.5$

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
Exposures	1	(9) J1613+1708	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F475W	FLASH=20		Pattern 3, Exps 1-1 i n J1613 (15) (3)	10 Secs (60 Secs) [==>15.0 Secs (Pattern 1)] [==>15.0 Secs (Pattern 2)] [==>15.0 Secs (Pattern 3)] [==>15.0 Secs (Pattern 4)]	[1]
	2	(9) J1613+1708	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F625W	FLASH=20		Pattern 3, Exps 2-2 i n J1613 (15) (3)	10 Secs (60 Secs) [==>15.0 Secs (Pattern 1)] [==>15.0 Secs (Pattern 2)] [==>15.0 Secs (Pattern 3)] [==>15.0 Secs (Pattern 4)]	[1]
	3	(9) J1613+1708	WFC3/IR, MULTIACCUM, IRSUB256	F160W	NSAMP=15; SAMP-SEQ=SPAR S10		Pattern 2, Exps 3-3 i n J1613 (15) (2)	103.128633 Secs X 4 (1650.058 Sec s) [==>(Pattern 1, Copy 1)] [==>(Pattern 1, Copy 2)] [==>(Pattern 1, Copy 3)] [==>(Pattern 1, Copy 4)] [==>(Pattern 2, Copy 1)] [==>(Pattern 2, Copy 2)] [==>(Pattern 2, Copy 3)] [==>(Pattern 2, Copy 4)] [==>(Pattern 3, Copy 1)] [==>(Pattern 3, Copy 2)] [==>(Pattern 3, Copy 3)] [==>(Pattern 3, Copy 4)] [==>(Pattern 4, Copy 1)] [==>(Pattern 4, Copy 2)] [==>(Pattern 4, Copy 3)] [==>(Pattern 4, Copy 4)]	[1]



Proposal 17269 - J1625 (10) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at  $z > 1.5$

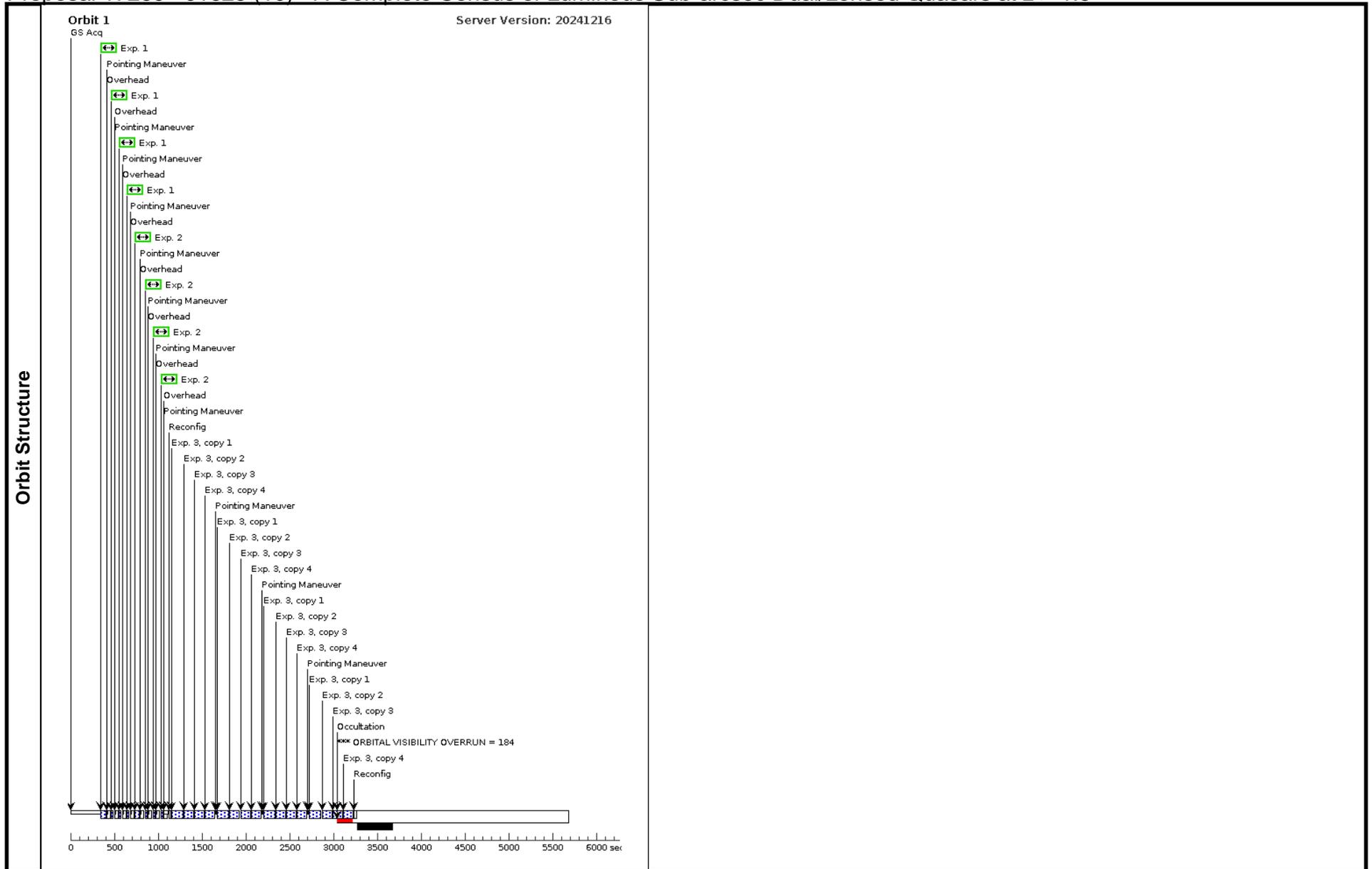
Mon Jan 27 20:00:41 GMT 2025

<b>Visit</b>	<b>Proposal 17269, J1625 (10), failed</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: WFC3/IR, WFC3/UVIS Special Requirements: (none)					
	<b>Diagnosics</b> (J1625 (10)) Warning (Orbit Planner): GS ACQ SCENARIO REQUESTED INCONSISTENT WITH VISIT GYRO MODE (J1625 (10)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (Exposure 1 (Pattern 3, Exps 1-1 in J1625 (10)) special requirements) Warning (Form): The specified GS Acq Scenario is not in the current list of valid scenarios.					
<b>Patterns</b>	<b>#</b>	<b>Primary Pattern</b>	<b>Secondary Pattern</b>	<b>Exposures</b>		
	(2)	Pattern Type=BOX Purpose=DITHER Number Of Points=4 Point Spacing=1.365 Line Spacing=0.975 Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(3)		
(3)	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)			
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>	<b>Fluxes</b>	<b>Miscellaneous</b>
	(10)	J1625+4309	RA: 16 25 1.9800 (246.2582500d) Dec: +43 09 31.60 (43.15878d) Equinox: J2000	Redshift: 1.654	V=18.86 z = 18.67	Reference Frame: ICRS
<i>Comments:</i> Category=GALAXY Description=[QUASAR]						

Proposal 17269 - J1625 (10) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at  $z > 1.5$

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
Exposures	1	(10) J1625+4309	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F475W	FLASH=20	GS ACQ SCENARI O BASE1B3	Pattern 3, Exps 1-1 i n J1625 (10) (3)	10 Secs (100 Secs) [==>25.0 Secs (Pattern 1)] [==>25.0 Secs (Pattern 2)] [==>25.0 Secs (Pattern 3)] [==>25.0 Secs (Pattern 4)]	[1]
	2	(10) J1625+4309	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F625W	FLASH=20		Pattern 3, Exps 2-2 i n J1625 (10) (3)	10 Secs (100 Secs) [==>25.0 Secs (Pattern 1)] [==>25.0 Secs (Pattern 2)] [==>25.0 Secs (Pattern 3)] [==>25.0 Secs (Pattern 4)]	[1]
	3	(10) J1625+4309	WFC3/IR, MULTIACCUM, IRSUB256	F160W	NSAMP=15; SAMP-SEQ=SPAR S10		Pattern 2, Exps 3-3 i n J1625 (10) (2)	103.128633 Secs X 4 (1650.058 Sec s) [==>(Pattern 1, Copy 1)] [==>(Pattern 1, Copy 2)] [==>(Pattern 1, Copy 3)] [==>(Pattern 1, Copy 4)] [==>(Pattern 2, Copy 1)] [==>(Pattern 2, Copy 2)] [==>(Pattern 2, Copy 3)] [==>(Pattern 2, Copy 4)] [==>(Pattern 3, Copy 1)] [==>(Pattern 3, Copy 2)] [==>(Pattern 3, Copy 3)] [==>(Pattern 3, Copy 4)] [==>(Pattern 4, Copy 1)] [==>(Pattern 4, Copy 2)] [==>(Pattern 4, Copy 3)] [==>(Pattern 4, Copy 4)]	[1]

Proposal 17269 - J1625 (10) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at  $z > 1.5$



Proposal 17269 - J1625 (13) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at  $z > 1.5$

Mon Jan 27 20:00:41 GMT 2025

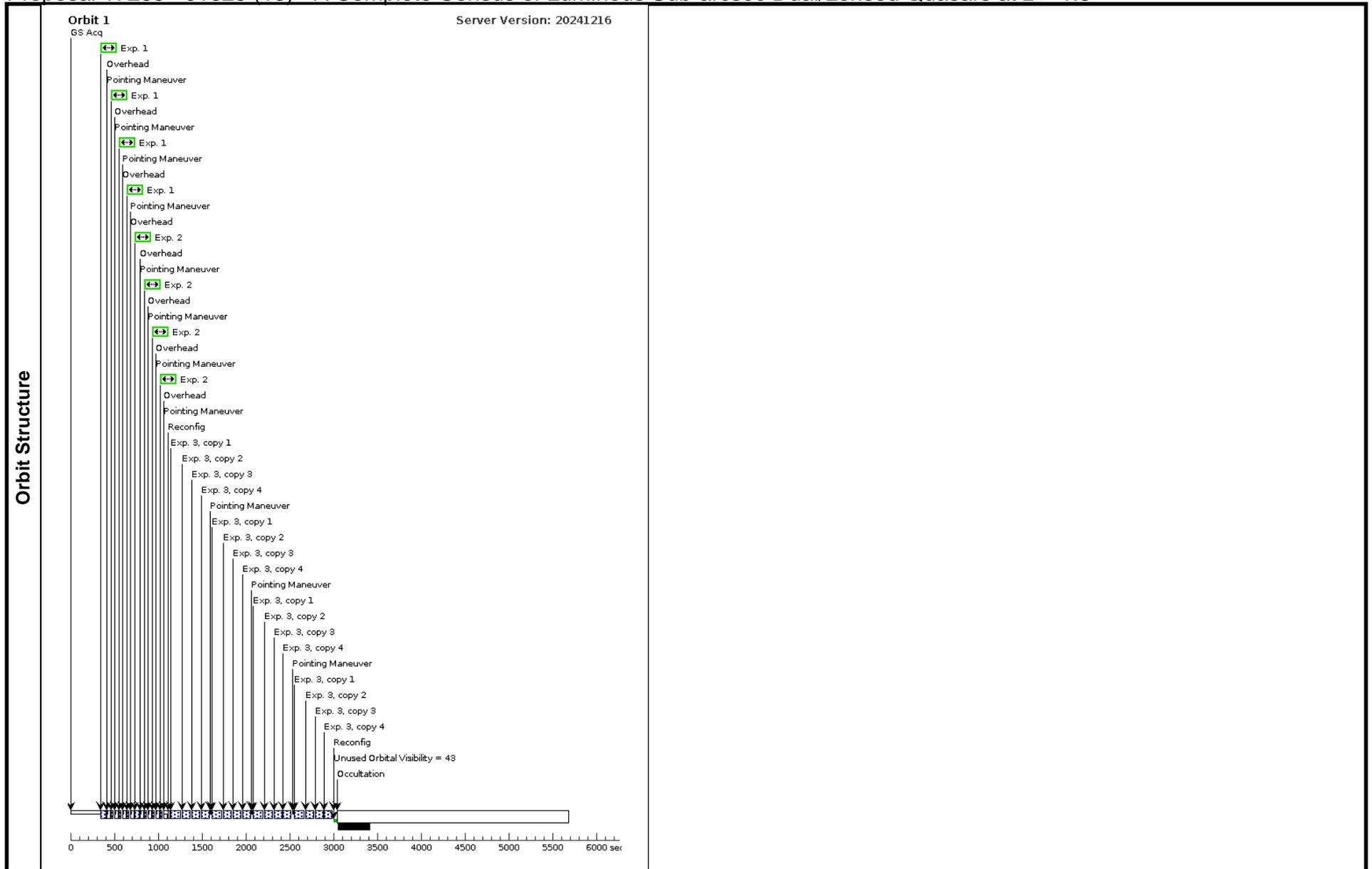
<b>Visit</b>	<b>Proposal 17269, J1625 (13), completed</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: WFC3/IR, WFC3/UVIS Special Requirements: (none) <i>Comments: HOPR copy of visit 10</i>					
<b>Patterns</b>	<b>#</b>	<b>Primary Pattern</b>	<b>Secondary Pattern</b>	<b>Exposures</b>		
	(2)	Pattern Type=BOX Purpose=DITHER Number Of Points=4 Point Spacing=1.365 Line Spacing=0.975 Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(3)		
	(3)	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)		
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>	<b>Fluxes</b>	<b>Miscellaneous</b>
	(10)	J1625+4309	RA: 16 25 1.9800 (246.2582500d) Dec: +43 09 31.60 (43.15878d) Equinox: J2000	Redshift: 1.654	V=18.86 z = 18.67	Reference Frame: ICRS
	<i>Comments:</i> Category=GALAXY Description=[QUASAR]					

Proposal 17269 - J1625 (13) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at  $z > 1.5$

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(10) J1625+4309	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F475W	FLASH=20	GS ACQ SCENARI O BASE103	Pattern 3, Exps 1-1 i n J1625 (13) (3)	10 Secs (100 Secs)	[1]	
							[==>25.0 Secs (Pattern 1)]		
							[==>25.0 Secs (Pattern 2)]		
[==>25.0 Secs (Pattern 3)]									
2	(10) J1625+4309	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F625W	FLASH=20		Pattern 3, Exps 2-2 i n J1625 (13) (3)	10 Secs (100 Secs)	[1]	
							[==>25.0 Secs (Pattern 1)]		
							[==>25.0 Secs (Pattern 2)]		
[==>25.0 Secs (Pattern 3)]									
3	(10) J1625+4309	WFC3/IR, MULTIACCUM, IRSUB256	F160W	NSAMP=13; SAMP-SEQ=SPAR S10		Pattern 2, Exps 3-3 i n J1625 (13) (2)	88.435659 Secs X 4 (1414.971 Secs)	[1]	
							[==>(Pattern 1, Copy 1)]		
							[==>(Pattern 1, Copy 2)]		
[==>(Pattern 1, Copy 3)]									
[==>(Pattern 1, Copy 4)]									
[==>(Pattern 2, Copy 1)]									
[==>(Pattern 2, Copy 2)]									
[==>(Pattern 2, Copy 3)]									
[==>(Pattern 2, Copy 4)]									
[==>(Pattern 3, Copy 1)]									
[==>(Pattern 3, Copy 2)]									
[==>(Pattern 3, Copy 3)]									
[==>(Pattern 3, Copy 4)]									
[==>(Pattern 4, Copy 1)]									
[==>(Pattern 4, Copy 2)]									
[==>(Pattern 4, Copy 3)]									
[==>(Pattern 4, Copy 4)]									

Exposures

# Proposal 17269 - J1625 (13) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at $z > 1.5$



Proposal 17269 - J2122 (11) - A Complete Census of Luminous Sub-arcsec Dual/Lensed Quasars at  $z > 1.5$

Mon Jan 27 20:00:41 GMT 2025

Visit	Proposal 17269, J2122 (11), completed Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: (none)									
	#	Primary Pattern	Secondary Pattern	Exposures						
Patterns	(2)	Pattern Type=BOX Purpose=DITHER Number Of Points=4 Point Spacing=1.365 Line Spacing=0.975	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false	(1)						
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
Fixed Targets	(11)	J2122-0026	RA: 21 22 43.0100 (320.6792083d) Dec: -00 26 53.61 (-.44822d) Equinox: J2000	Redshift: 1.969	V=18.86 z = 18.50	Reference Frame: ICRS				
	<i>Comments:</i> Category=GALAXY Description=[QUASAR]									
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(11) J2122-0026	WFC3/IR, MULTIACCUM, IRSUB256	F160W	NSAMP=15; SAMP-SEQ=SPAR S10		Pattern 2, Exps 1-1 in J2122 (11) (2)	103.128633 Secs X 5 (2062.573 Secs) [=>(Pattern 1, Copy 1)] [=>(Pattern 1, Copy 2)] [=>(Pattern 1, Copy 3)] [=>(Pattern 1, Copy 4)] [=>(Pattern 1, Copy 5)] [=>(Pattern 2, Copy 1)] [=>(Pattern 2, Copy 2)] [=>(Pattern 2, Copy 3)] [=>(Pattern 2, Copy 4)] [=>(Pattern 2, Copy 5)] [=>(Pattern 3, Copy 1)] [=>(Pattern 3, Copy 2)] [=>(Pattern 3, Copy 3)] [=>(Pattern 3, Copy 4)] [=>(Pattern 3, Copy 5)] [=>(Pattern 4, Copy 1)] [=>(Pattern 4, Copy 2)] [=>(Pattern 4, Copy 3)] [=>(Pattern 4, Copy 4)] [=>(Pattern 4, Copy 5)]	[1]

