



18366 - An extraordinary dusty Einstein ring at $z = 2.95$

Cycle: 34, Proposal Category: GO

(Availability Mode: SUPPORTED)

INVESTIGATORS

<i>Name</i>	<i>Institution</i>
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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) ACT-S-J0732.1+1709	WFC3/UVIS	1	28-Aug-2026 07:00:14.0	yes
02	(1) ACT-S-J0732.1+1709	WFC3/UVIS	1	28-Aug-2026 07:00:15.0	yes
03	(1) ACT-S-J0732.1+1709	WFC3/UVIS	1	28-Aug-2026 07:00:15.0	yes
04	(1) ACT-S-J0732.1+1709	WFC3/UVIS	1	28-Aug-2026 07:00:16.0	yes
05	(1) ACT-S-J0732.1+1709	WFC3/UVIS	1	28-Aug-2026 07:00:16.0	yes
06	(1) ACT-S-J0732.1+1709	WFC3/UVIS	1	28-Aug-2026 07:00:17.0	yes
07	(1) ACT-S-J0732.1+1709	WFC3/UVIS	1	28-Aug-2026 07:00:17.0	yes
08	(1) ACT-S-J0732.1+1709	WFC3/UVIS	1	28-Aug-2026 07:00:18.0	yes
09	(1) ACT-S-J0732.1+1709	WFC3/UVIS	1	28-Aug-2026 07:00:18.0	yes
10	(1) ACT-S-J0732.1+1709	WFC3/UVIS	1	28-Aug-2026 07:00:19.0	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>
11	(1) ACT-S-J0732.1+1709	WFC3/UVIS	1	28-Aug-2026 07:00:19.0	yes
12	(1) ACT-S-J0732.1+1709	WFC3/UVIS	1	28-Aug-2026 07:00:19.0	yes

12 Total Orbits Used

ABSTRACT

We propose a joint HST-JWST program to conduct a multi-wavelength analysis of ACT-S J0732.1+1709, an extraordinary 4"-radius, group-scale Einstein ring at $z = 2.95$. Discovered as one of the brightest high-redshift sub-mm galaxies, this "cosmic telescope" provides strong magnification (>10), allowing us to resolve the starbursting galaxy at the sub-100 pc scales typically inaccessible at cosmic noon.

We will use HST/WFC3 to map unobscured rest-frame UV star formation and JWST/NIRCam to trace the mature stellar backbone in the rest-frame optical. This will reveal if the system is a coherent disk or a complex merger. High-resolution imaging is a prerequisite to identify multiply-imaged knots and the morphology of the lensing group. Combining these data with existing ALMA CO and dust continuum data, we will map star formation efficiency and gas-to-stellar mass ratios. We will also test the IRX-beta relationship at sub-kpc scales and locate intense dust obscuration.

We request HST (F606W, F814W) and JWST (F150W, F444W) imaging. To mitigate a nearby bright interloper, we utilize specific dither patterns and roll angles to manage diffraction spikes and saturation. This program provides the essential high-resolution priors needed to resolve the baryon cycle in a system at $z = 3$.

OBSERVING DESCRIPTION

To model the source flux density, we have used a dusty CIGALE SED model (from [23] and consistent with Herschel dusty $z \sim 3$ galaxies) to translate the mm-wavelength flux density to the HST bands. For the total ring, in F606W we estimate an average flux density of 6.4×10^{-7} Jy, and in F814 we estimate 2.0×10^{-6} Jy. For the solid angle of the Einstein ring, we estimate a 4" radius and a 1" thickness, with a filling factor of $f = 0.25$, characteristic of a DSFG, for an effective solid angle of 6.3 arcsec^2 . Thus the typical surface brightnesses in the two HST bands are $1.0 \times 10^{-7} \text{ Jy arcsec}^{-2}$ and $3.2 \times 10^{-7} \text{ Jy arcsec}^{-2}$. According to the WFC3 Exposure Time Calculator, under typical conditions and 50 minutes of visibility per orbit, in a typical 0.4"-radius region, six orbits with F606W will yield S/N

of 11.3 and six orbits with F814W will yield S/N of 19.3. Since our SED is uncertain in the rest-frame UV, these S/N estimates give us some cushion if the brightness is lower than expected. On the other hand, if the galaxy is less dusty than our model, the rest frame UV emission will be less obscured and brighter.

Here is the reasoning for the proposed observations.

Nearby star---

The bright star nearby, $V \sim 16$, will saturate F606W band in about ~ 18 s. Although exposures this short are possible, the readout overhead is severe, so we have to accept some bloom from the saturated star. A rough computation indicates that the radius of the nearby star bloom will match the radius where the diffraction spikes fall below the background, at $2''$ - $3''$, at about 600s. I keep all exposures shorter than that.

Roll angles---

The available roll angles are roughly 255-332 deg for this target. Unfortunately this directs the CCD columns and thus the bloom from the saturated star toward the Einstein ring. Diffraction spikes are ± 45 deg from the bloom. We get 12 orbits, so we have chosen 12 visits, with orientation angles to cover the full range. This lets us rotate through almost but not quite 90 degrees, and will distribute the bloom and diffraction spikes differently in each visit of the telescope.

Readout times---

The main decision is full frame images (the pair of the UVIS1/UVIS2 CCDs, each 2048x4096) versus sub array images. The onboard buffer can hold two full frame images. The buffer can be dumped while the telescope is exposing if nothing else is happening. Subarrays imaging has better charge transfer efficiency and long exposures have better charge transfer efficiency. Subarray images have shorter readout time, so short exposures with less saturation are more efficient. Short exposures need to be "flushed" which improves CTE at the cost of photon shot noise. The readout times are roughly:

512x512 (20"x20") subarray: 50 s

4096x4096 (160"x160") full frame: 115 s

These sizes compare to the $\sim 8''$ - $10''$ diameter of the Einstein ring. Also, we don't know the redshift of the lens, but the photo-z is $z=0.7 \pm 0.3$. At 0.7, 10" is about 70-75 kpc, so the smallest subarray covers the Einstein ring, but not very far around the group core, so we need large frames to see

Proposal 18366 (STScI Edit Number: 0, Created: Friday, August 28, 2026, 6:00:20AM Eastern Standard Time) - Overview
the lensing group.

Observing sequence per visit---

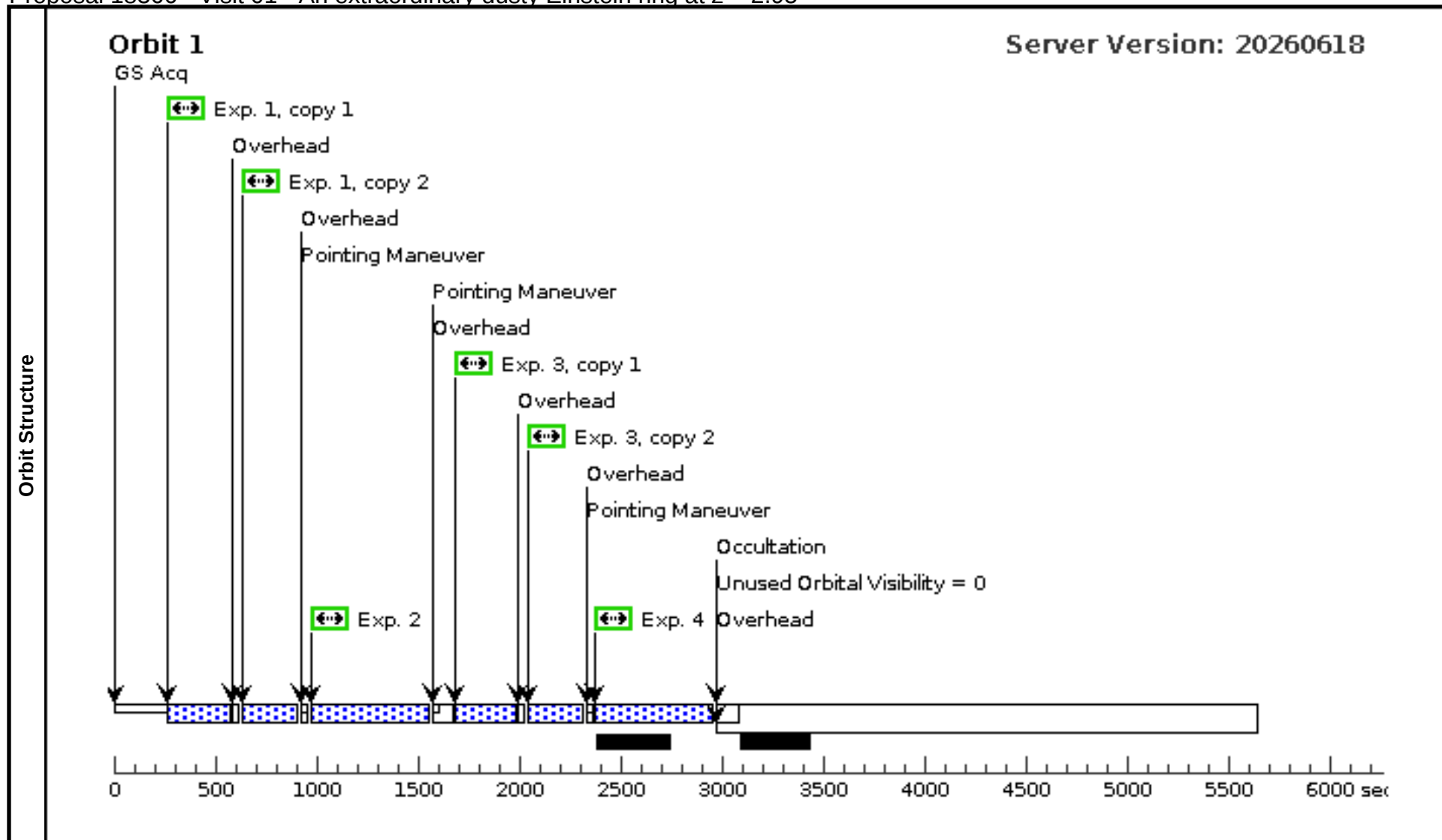
- * 512x512 exposure at F606W repeated x 2 for 275 s each
- * 512x512 exposure at F814W repeated x 2 for 275 s each
- * Slight repointing
- * Full frame exposure at F606W for 567 s
- * Buffer dump #1 during that exposure
- * Full frame exposure at F814W for 567 s, readout during occultation
- * Buffer dump #2 also during Earth occultation

Such a sequence gets us shorter exposures in the Einstein Ring for half the time, and the broader field half the time, which covers the lensing group.

An alternative is to just do the longer full frame exposures repeatedly. This yields almost the same total time on target overall, but you sacrifice the shorter exposures in the Einstein ring area for 2x deeper coverage in the broader field. Outside the Einstein ring where we are just seeing the lensing group, so we should not need such deep coverage, and the adopted plan with the short exposures helps deal with saturation in the nearby star.

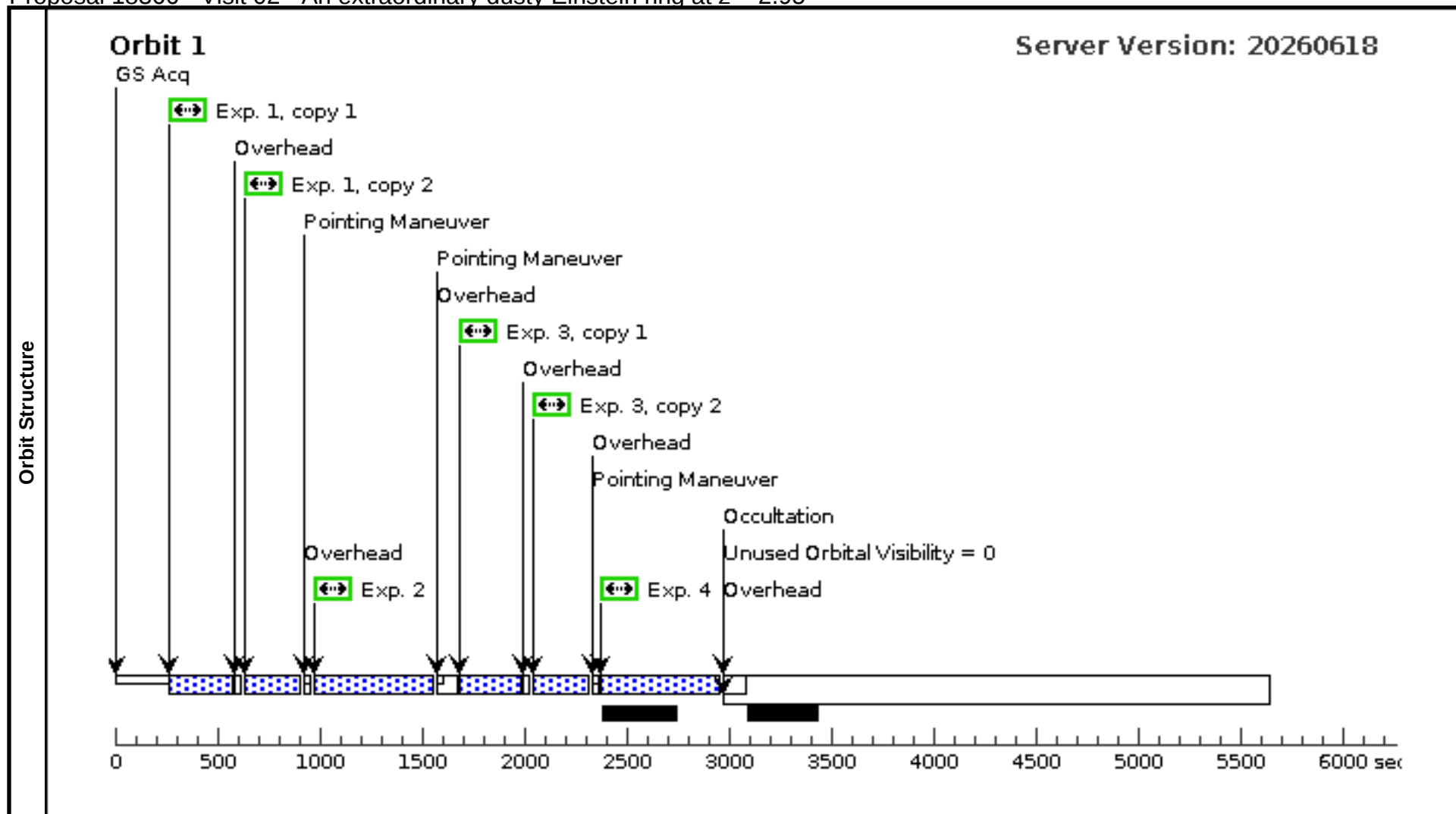
Proposal 18366 - Visit 01 - An extraordinary dusty Einstein ring at z = 2.95

Visit	Proposal 18366, Visit 01, implementation Fri Aug 28 11:00:20 GMT 2026									
	Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: ORIENT 290D TO 292 D									
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(1)	ACT-S-J0732.1+1709	RA: 07 32 9.2650 (113.0386042d) Dec: +17 09 43.09 (17.16197d) Equinox: J2000 <i>Comments: Estimated surface brightness for F606W.</i> <i>Source should be quite red, and brighter in F814W.</i> Category=GALAXY Description=[EINSTEIN RING, GRAVITATIONAL LENS, HIGH REDSHIFT GALAXY] Extended=YES		V=(?) 26.40 mag arcsec ⁻²	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(1) ACT-S-J0732.1+1709	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F606W	FLASH=10	POS TARG 0,0		277 Secs X 2 (554 Secs)	
									[==>(Copy 1)]	
									[==>(Copy 2)]	[1]
	2		(1) ACT-S-J0732.1+1709	WFC3/UVIS, ACCUM, UVIS	F606W		POS TARG 0.357,4.815		587 Secs (587 Secs)	
									[==>]	[1]
	3		(1) ACT-S-J0732.1+1709	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F814W	FLASH=14	SAME POS AS 1		276 Secs X 2 (552 Secs)	
									[==>(Copy 1)]	
									[==>(Copy 2)]	[1]
	4		(1) ACT-S-J0732.1+1709	WFC3/UVIS, ACCUM, UVIS	F814W	FLASH=5	SAME POS AS 2		587 Secs (587 Secs)	
									[==>]	[1]



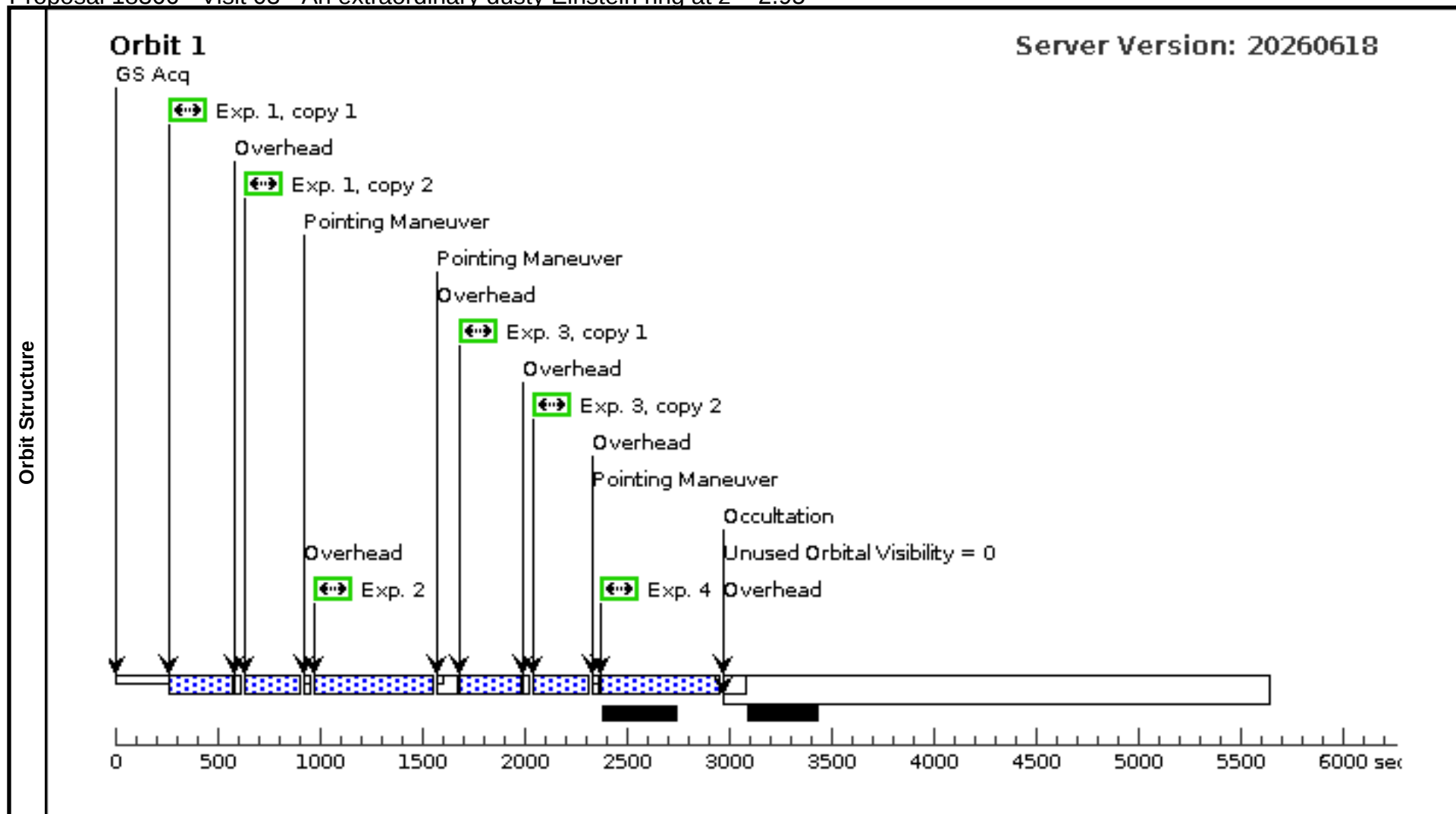
Proposal 18366 - Visit 02 - An extraordinary dusty Einstein ring at z = 2.95

Visit	Proposal 18366, Visit 02 Fri Aug 28 11:00:20 GMT 2026									
	Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: ORIENT 293D TO 295 D									
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(1)	ACT-S-J0732.1+1709	RA: 07 32 9.2650 (113.0386042d) Dec: +17 09 43.09 (17.16197d) Equinox: J2000 <i>Comments: Estimated surface brightness for F606W.</i> <i>Source should be quite red, and brighter in F814W.</i> Category=GALAXY Description=[EINSTEIN RING, GRAVITATIONAL LENS, HIGH REDSHIFT GALAXY] Extended=YES		V=(?) 26.40 mag arcsec ⁻²	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(1) ACT-S-J0732.1+1709	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F606W	FLASH=10	POS TARG 0.092,0.098		277 Secs X 2 (554 Secs)	
									[==>(Copy 1)]	[1]
									[==>(Copy 2)]	
	2		(1) ACT-S-J0732.1+1709	WFC3/UVIS, ACCUM, UVIS	F606W		POS TARG 0.536,7.222		587 Secs (587 Secs)	
									[==>]	[1]
	3		(1) ACT-S-J0732.1+1709	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F814W	FLASH=14	SAME POS AS 1		276 Secs X 2 (552 Secs)	
									[==>(Copy 1)]	[1]
									[==>(Copy 2)]	
	4		(1) ACT-S-J0732.1+1709	WFC3/UVIS, ACCUM, UVIS	F814W	FLASH=5	SAME POS AS 2		587 Secs (587 Secs)	
									[==>]	[1]



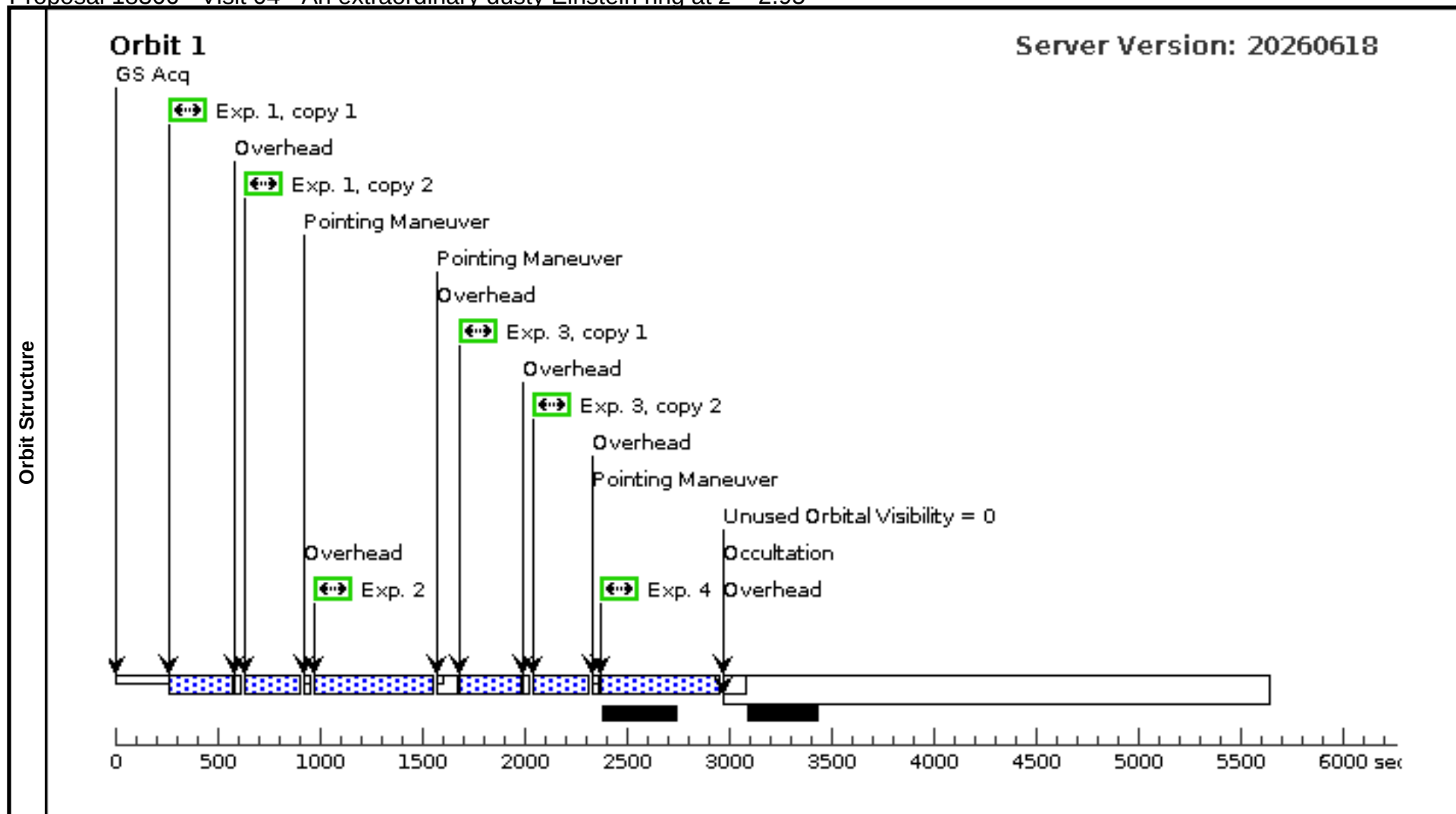
Proposal 18366 - Visit 03 - An extraordinary dusty Einstein ring at $z = 2.95$

Visit	Proposal 18366, Visit 03 Fri Aug 28 11:00:20 GMT 2026									
	Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: ORIENT 296D TO 298 D									
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(1)	ACT-S-J0732.1+1709	RA: 07 32 9.2650 (113.0386042d) Dec: +17 09 43.09 (17.16197d) Equinox: J2000 <i>Comments: Estimated surface brightness for F606W.</i> <i>Source should be quite red, and brighter in F814W.</i> Category=GALAXY Description=[EINSTEIN RING, GRAVITATIONAL LENS, HIGH REDSHIFT GALAXY] Extended=YES		V=(?) 26.40 mag arcsec ⁻²	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(1) ACT-S-J0732.1+1709	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F606W	FLASH=10	POS TARG 0.185,0.197		277 Secs X 2 (554 Secs)	
									[==>(Copy 1)]	[1]
									[==>(Copy 2)]	
	2		(1) ACT-S-J0732.1+1709	WFC3/UVIS, ACCUM, UVIS	F606W		POS TARG 0.714,9.630		587 Secs (587 Secs)	
									[==>]	[1]
	3		(1) ACT-S-J0732.1+1709	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F814W	FLASH=14	SAME POS AS 1		276 Secs X 2 (552 Secs)	
									[==>(Copy 1)]	[1]
									[==>(Copy 2)]	
	4		(1) ACT-S-J0732.1+1709	WFC3/UVIS, ACCUM, UVIS	F814W	FLASH=5	SAME POS AS 2		587 Secs (587 Secs)	
									[==>]	[1]



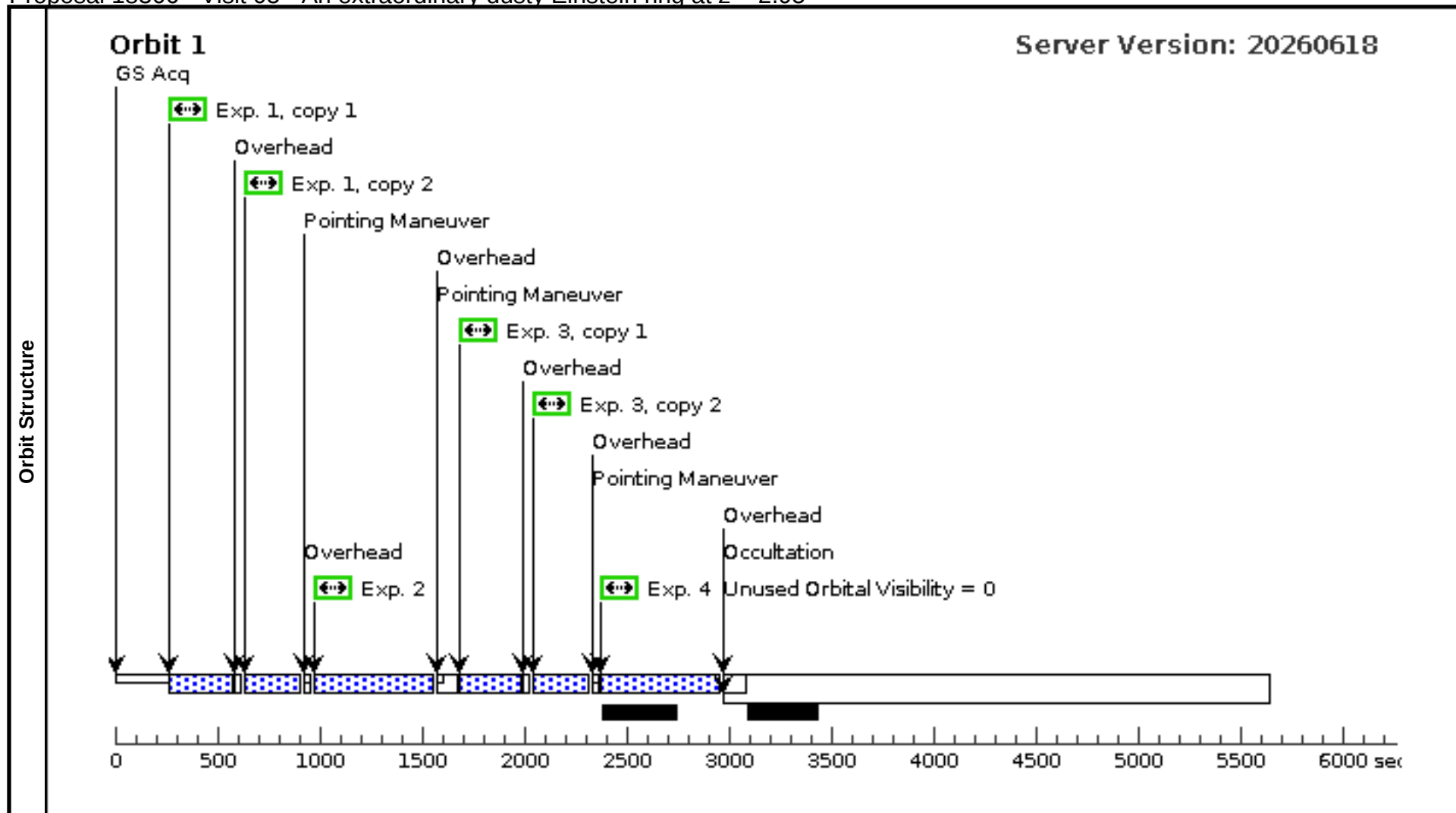
Proposal 18366 - Visit 04 - An extraordinary dusty Einstein ring at z = 2.95

Visit	Proposal 18366, Visit 04										Fri Aug 28 11:00:20 GMT 2026	
	Diagnostic Status: No Diagnostics											
	Scientific Instruments: WFC3/UVIS											
	Special Requirements: ORIENT 299D TO 301 D											
Fixed Targets	#	Name	Target Coordinates			Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(1)	ACT-S-J0732.1+1709	RA: 07 32 9.2650 (113.0386042d)					V=(?)		Reference Frame: ICRS		
			Dec: +17 09 43.09 (17.16197d)					26.40 mag arcsec^-2				
			Equinox: J2000									
			Comments: Estimated surface brightness for F606W.									
			Source should be quite red, and brighter in F814W.									
Exposures			Category=GALAXY									
			Description=[EINSTEIN RING, GRAVITATIONAL LENS, HIGH REDSHIFT GALAXY]									
			Extended=YES									
	#	Label	Target	Config,Mode,Aperture		Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit
	1		(1) ACT-S-J0732.1+1709	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB		F606W	FLASH=10	POS TARG 0.277,0.295		277 Secs X 2 (554 Secs)		
									[==>(Copy 1)]			
									[==>(Copy 2)]		[1]	
	2		(1) ACT-S-J0732.1+1709	WFC3/UVIS, ACCUM, UVIS		F606W		POS TARG 0.357,4.815		587 Secs (587 Secs)		
										[==>]		[1]
	3		(1) ACT-S-J0732.1+1709	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB		F814W	FLASH=14	SAME POS AS 1		276 Secs X 2 (552 Secs)		
										[==>(Copy 1)]		
										[==>(Copy 2)]		[1]
	4		(1) ACT-S-J0732.1+1709	WFC3/UVIS, ACCUM, UVIS		F814W	FLASH=5	SAME POS AS 2		587 Secs (587 Secs)		
										[==>]		[1]



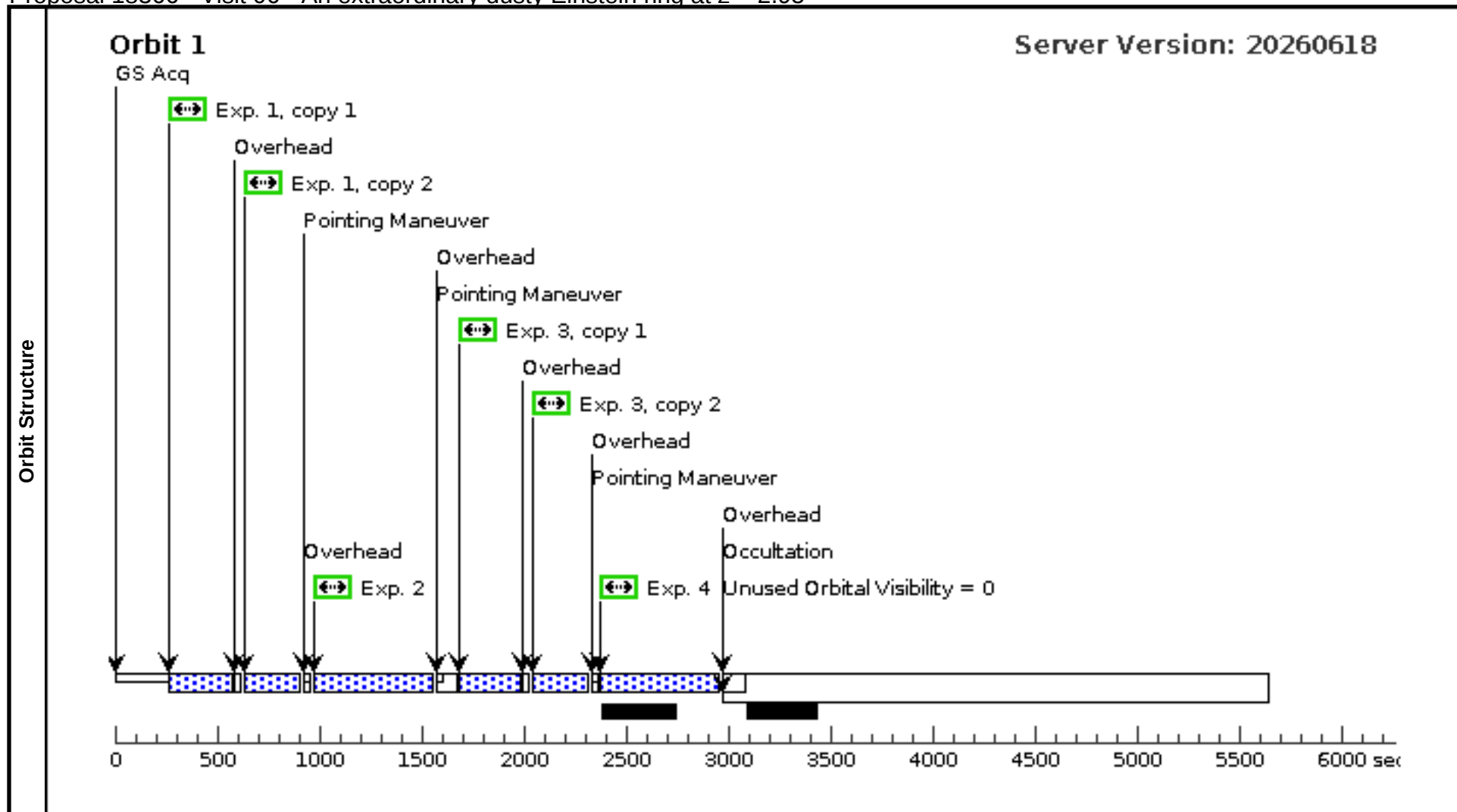
Proposal 18366 - Visit 05 - An extraordinary dusty Einstein ring at z = 2.95

Visit	Proposal 18366, Visit 05 Fri Aug 28 11:00:20 GMT 2026									
	Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: ORIENT 302D TO 304 D									
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(1)	ACT-S-J0732.1+1709	RA: 07 32 9.2650 (113.0386042d) Dec: +17 09 43.09 (17.16197d) Equinox: J2000 <i>Comments: Estimated surface brightness for F606W.</i> <i>Source should be quite red, and brighter in F814W.</i> Category=GALAXY Description=[EINSTEIN RING, GRAVITATIONAL LENS, HIGH REDSHIFT GALAXY] Extended=YES		V=(?) 26.40 mag arcsec ⁻²	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(1) ACT-S-J0732.1+1709	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F606W	FLASH=10	POS TARG 0.369,0.394		277 Secs X 2 (554 Secs)	
									[==>(Copy 1)]	[1]
									[==>(Copy 2)]	
	2		(1) ACT-S-J0732.1+1709	WFC3/UVIS, ACCUM, UVIS	F606W		POS TARG 0.536,7.222		587 Secs (587 Secs)	
									[==>]	[1]
	3		(1) ACT-S-J0732.1+1709	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F814W	FLASH=14	SAME POS AS 1		276 Secs X 2 (552 Secs)	
									[==>(Copy 1)]	[1]
									[==>(Copy 2)]	
	4		(1) ACT-S-J0732.1+1709	WFC3/UVIS, ACCUM, UVIS	F814W	FLASH=5	SAME POS AS 2		587 Secs (587 Secs)	
									[==>]	[1]



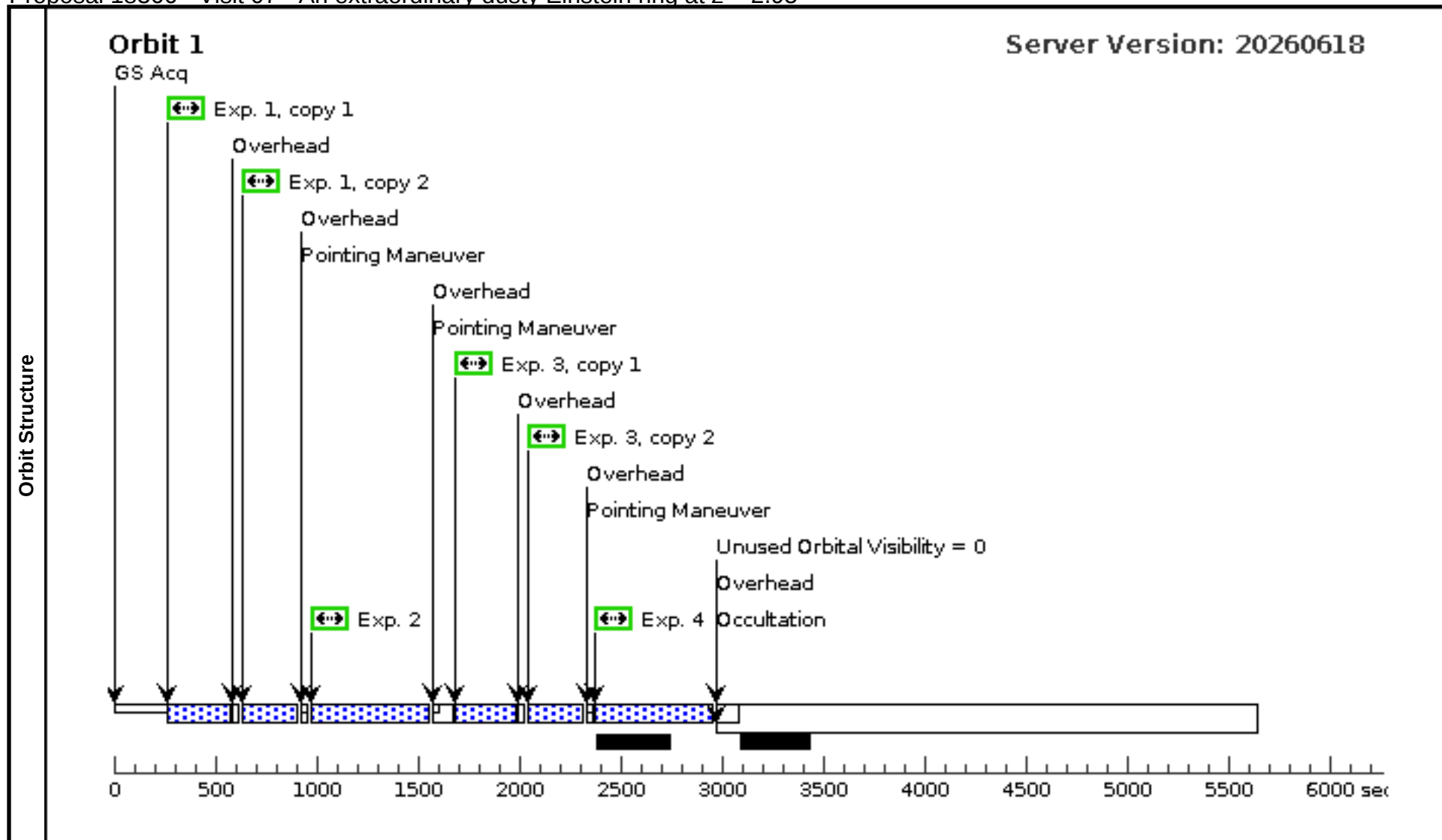
Proposal 18366 - Visit 06 - An extraordinary dusty Einstein ring at $z = 2.95$

Visit	Proposal 18366, Visit 06 Fri Aug 28 11:00:20 GMT 2026									
	Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: ORIENT 305D TO 307 D									
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(1)	ACT-S-J0732.1+1709	RA: 07 32 9.2650 (113.0386042d) Dec: +17 09 43.09 (17.16197d) Equinox: J2000 <i>Comments: Estimated surface brightness for F606W.</i> <i>Source should be quite red, and brighter in F814W.</i> Category=GALAXY Description=[EINSTEIN RING, GRAVITATIONAL LENS, HIGH REDSHIFT GALAXY] Extended=YES		V=(?) 26.40 mag arcsec ⁻²	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(1) ACT-S-J0732.1+1709	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F606W	FLASH=10	POS TARG 0.462,0.492		277 Secs X 2 (554 Secs)	
									[==>(Copy 1)]	[1]
									[==>(Copy 2)]	
	2		(1) ACT-S-J0732.1+1709	WFC3/UVIS, ACCUM, UVIS	F606W		POS TARG 0.714,9.630		587 Secs (587 Secs)	
									[==>]	[1]
	3		(1) ACT-S-J0732.1+1709	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F814W	FLASH=14	SAME POS AS 1		276 Secs X 2 (552 Secs)	
									[==>(Copy 1)]	[1]
									[==>(Copy 2)]	
	4		(1) ACT-S-J0732.1+1709	WFC3/UVIS, ACCUM, UVIS	F814W	FLASH=5	SAME POS AS 2		587 Secs (587 Secs)	
									[==>]	[1]



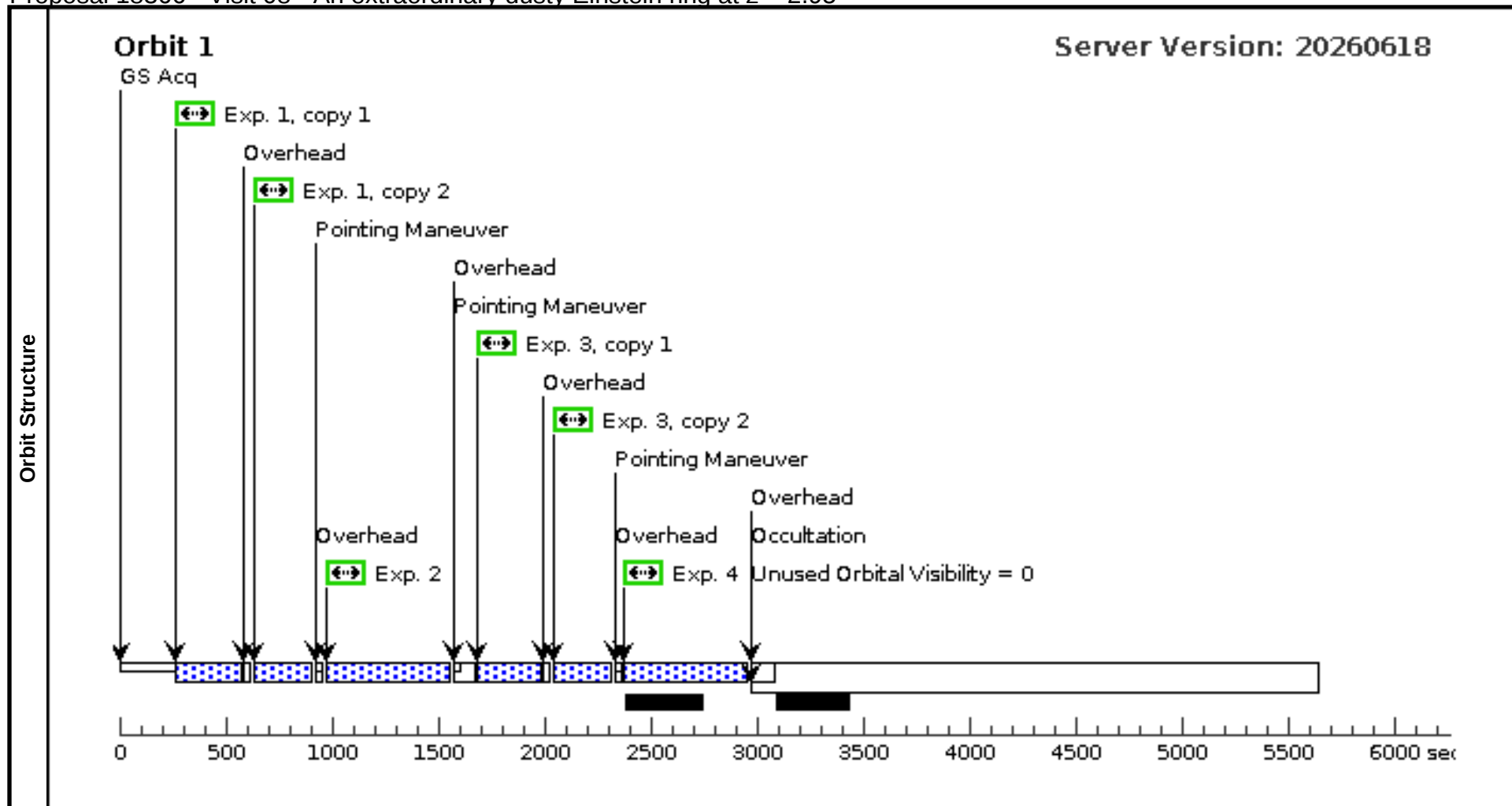
Proposal 18366 - Visit 07 - An extraordinary dusty Einstein ring at $z = 2.95$

Visit	Proposal 18366, Visit 07										Fri Aug 28 11:00:20 GMT 2026	
	Diagnostic Status: No Diagnostics											
	Scientific Instruments: WFC3/UVIS											
	Special Requirements: ORIENT 307D TO 309 D											
Fixed Targets	#	Name	Target Coordinates			Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(1)	ACT-S-J0732.1+1709	RA: 07 32 9.2650 (113.0386042d)					V=(?)		Reference Frame: ICRS		
			Dec: +17 09 43.09 (17.16197d)					26.40 mag arcsec^-2				
			Equinox: J2000									
		Comments: Estimated surface brightness for F606W.										
		Source should be quite red, and brighter in F814W.										
		Category=GALAXY Description=[EINSTEIN RING, GRAVITATIONAL LENS, HIGH REDSHIFT GALAXY] Extended=YES										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit	
	1		(1) ACT-S-J0732.1+1709	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F606W	FLASH=10	POS TARG 0.554,0.591		277 Secs X 2 (554 Secs)			
									[==>(Copy 1)]			
									[==>(Copy 2)]		[1]	
	2		(1) ACT-S-J0732.1+1709	WFC3/UVIS, ACCUM, UVIS	F606W		POS TARG 0.357,4.815		587 Secs (587 Secs)			
									[==>]		[1]	
	3		(1) ACT-S-J0732.1+1709	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F814W	FLASH=14	SAME POS AS 1		276 Secs X 2 (552 Secs)			
								[==>(Copy 1)]				
								[==>(Copy 2)]		[1]		
	4		(1) ACT-S-J0732.1+1709	WFC3/UVIS, ACCUM, UVIS	F814W	FLASH=5	SAME POS AS 2		587 Secs (587 Secs)			
									[==>]		[1]	



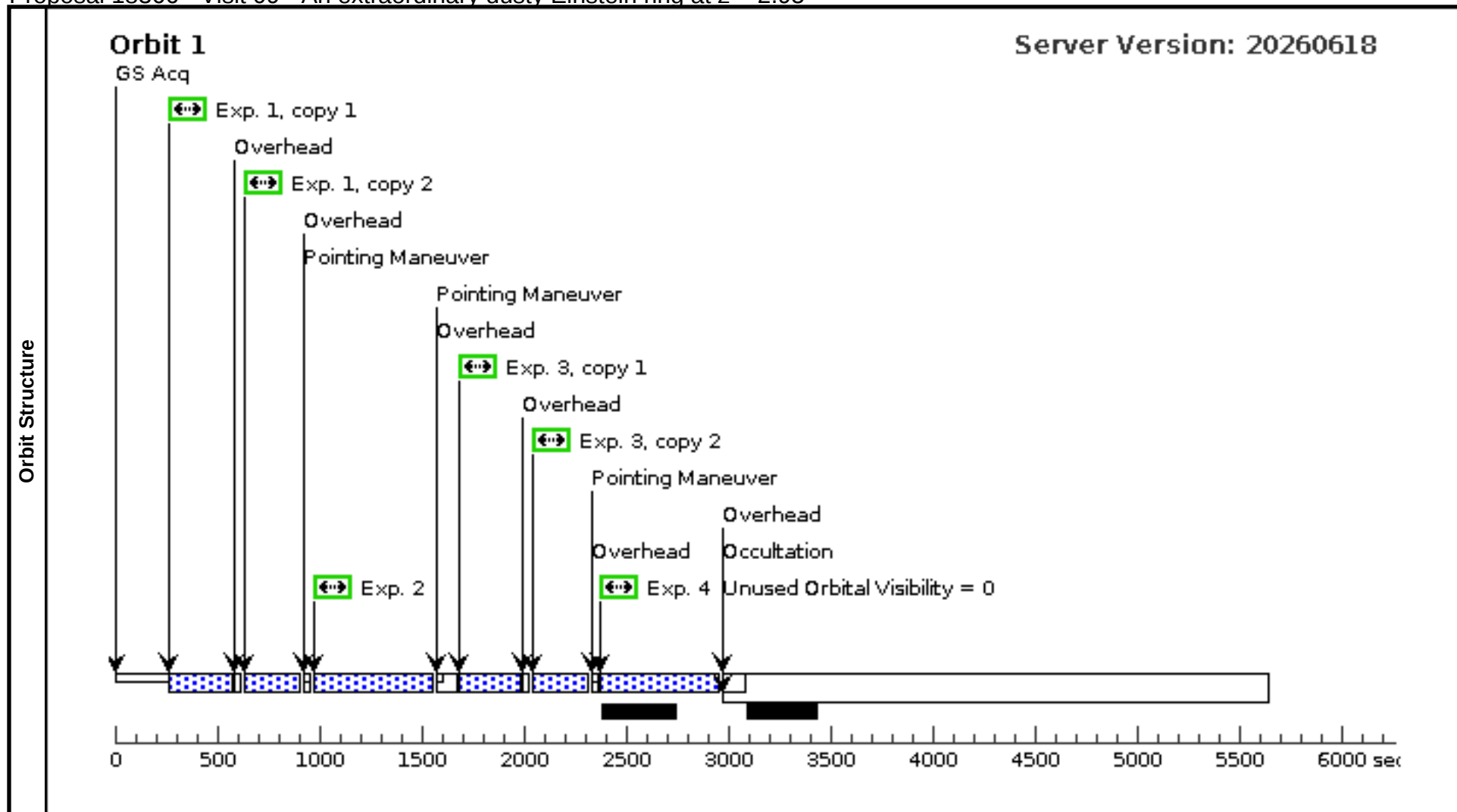
Proposal 18366 - Visit 08 - An extraordinary dusty Einstein ring at z = 2.95

Visit	Proposal 18366, Visit 08 Fri Aug 28 11:00:20 GMT 2026									
	Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: ORIENT 310D TO 312 D									
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(1)	ACT-S-J0732.1+1709	RA: 07 32 9.2650 (113.0386042d) Dec: +17 09 43.09 (17.16197d) Equinox: J2000 <i>Comments: Estimated surface brightness for F606W.</i> <i>Source should be quite red, and brighter in F814W.</i> Category=GALAXY Description=[EINSTEIN RING, GRAVITATIONAL LENS, HIGH REDSHIFT GALAXY] Extended=YES		V=(?) 26.40 mag arcsec ⁻²	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(1) ACT-S-J0732.1+1709	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F606W	FLASH=10	POS TARG 0.646,0.689		277 Secs X 2 (554 Secs)	
									[==>(Copy 1)]	[1]
									[==>(Copy 2)]	
	2		(1) ACT-S-J0732.1+1709	WFC3/UVIS, ACCUM, UVIS	F606W		POS TARG 0.536,7.222		587 Secs (587 Secs)	
									[==>]	[1]
	3		(1) ACT-S-J0732.1+1709	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F814W	FLASH=14	SAME POS AS 1		276 Secs X 2 (552 Secs)	
									[==>(Copy 1)]	[1]
									[==>(Copy 2)]	
	4		(1) ACT-S-J0732.1+1709	WFC3/UVIS, ACCUM, UVIS	F814W	FLASH=5	SAME POS AS 2		587 Secs (587 Secs)	
									[==>]	[1]



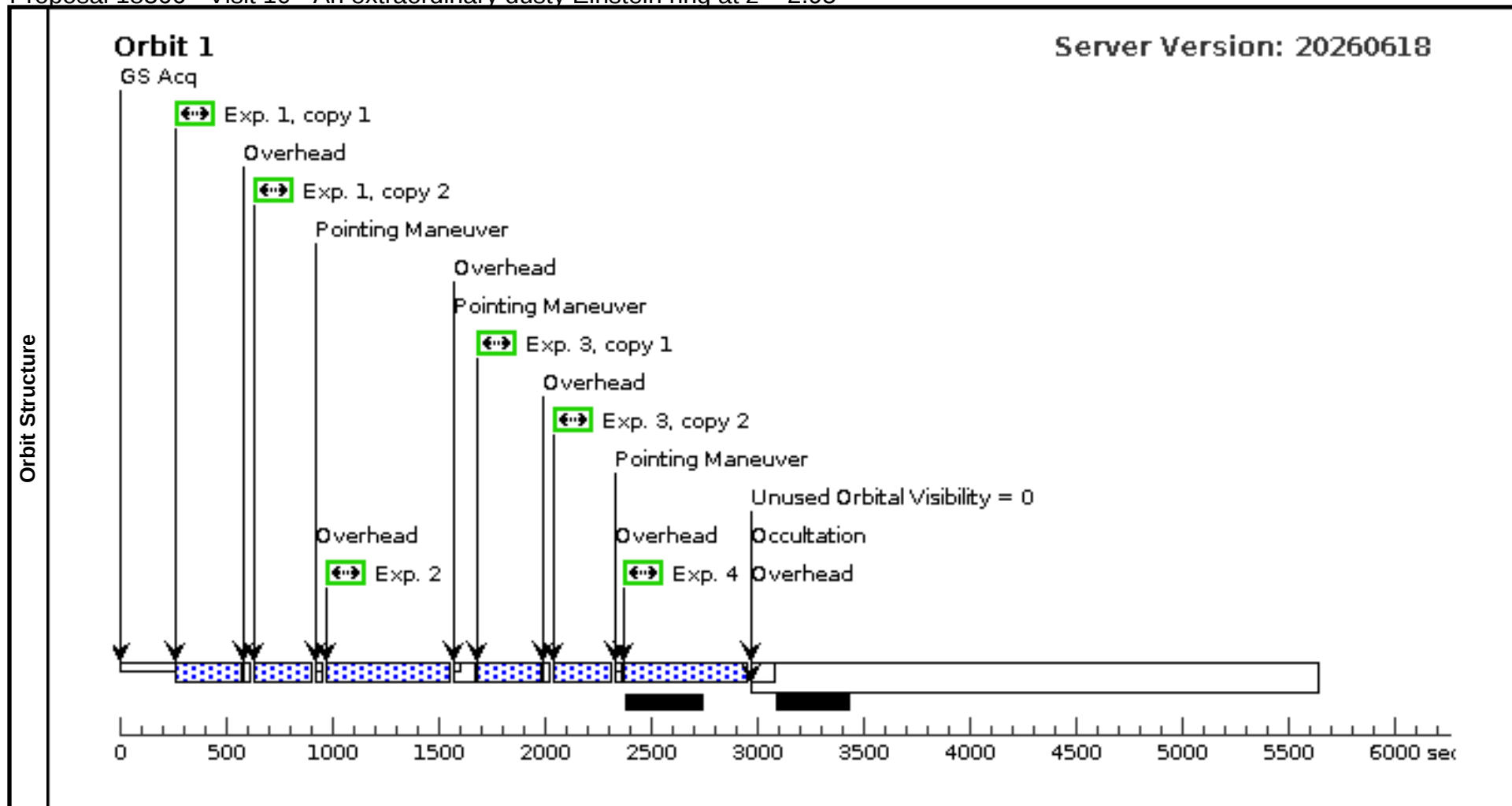
Proposal 18366 - Visit 09 - An extraordinary dusty Einstein ring at $z = 2.95$

Visit	Proposal 18366, Visit 09										Fri Aug 28 11:00:20 GMT 2026	
	Diagnostic Status: No Diagnostics											
	Scientific Instruments: WFC3/UVIS											
	Special Requirements: ORIENT 313D TO 315 D											
Fixed Targets	#	Name	Target Coordinates			Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(1)	ACT-S-J0732.1+1709	RA: 07 32 9.2650 (113.0386042d)					V=(?)		Reference Frame: ICRS		
			Dec: +17 09 43.09 (17.16197d)					26.40 mag arcsec^-2				
			Equinox: J2000									
		Comments: Estimated surface brightness for F606W.										
		Source should be quite red, and brighter in F814W.										
Exposures		Category=GALAXY										
		Description=[EINSTEIN RING, GRAVITATIONAL LENS, HIGH REDSHIFT GALAXY]										
		Extended=YES										
	#	Label	Target	Config,Mode,Aperture		Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit
	1		(1) ACT-S-J0732.1+1709	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB		F606W	FLASH=10	POS TARG 0.739,0.788		277 Secs X 2 (554 Secs)		
									[==>(Copy 1)]			
									[==>(Copy 2)]		[1]	
	2		(1) ACT-S-J0732.1+1709	WFC3/UVIS, ACCUM, UVIS		F606W		POS TARG 0.714,9.630		587 Secs (587 Secs)		
										[==>]		[1]
	3		(1) ACT-S-J0732.1+1709	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB		F814W	FLASH=14	SAME POS AS 1		276 Secs X 2 (552 Secs)		
										[==>(Copy 1)]		
										[==>(Copy 2)]		[1]
	4		(1) ACT-S-J0732.1+1709	WFC3/UVIS, ACCUM, UVIS		F814W	FLASH=5	SAME POS AS 2		587 Secs (587 Secs)		
										[==>]		[1]



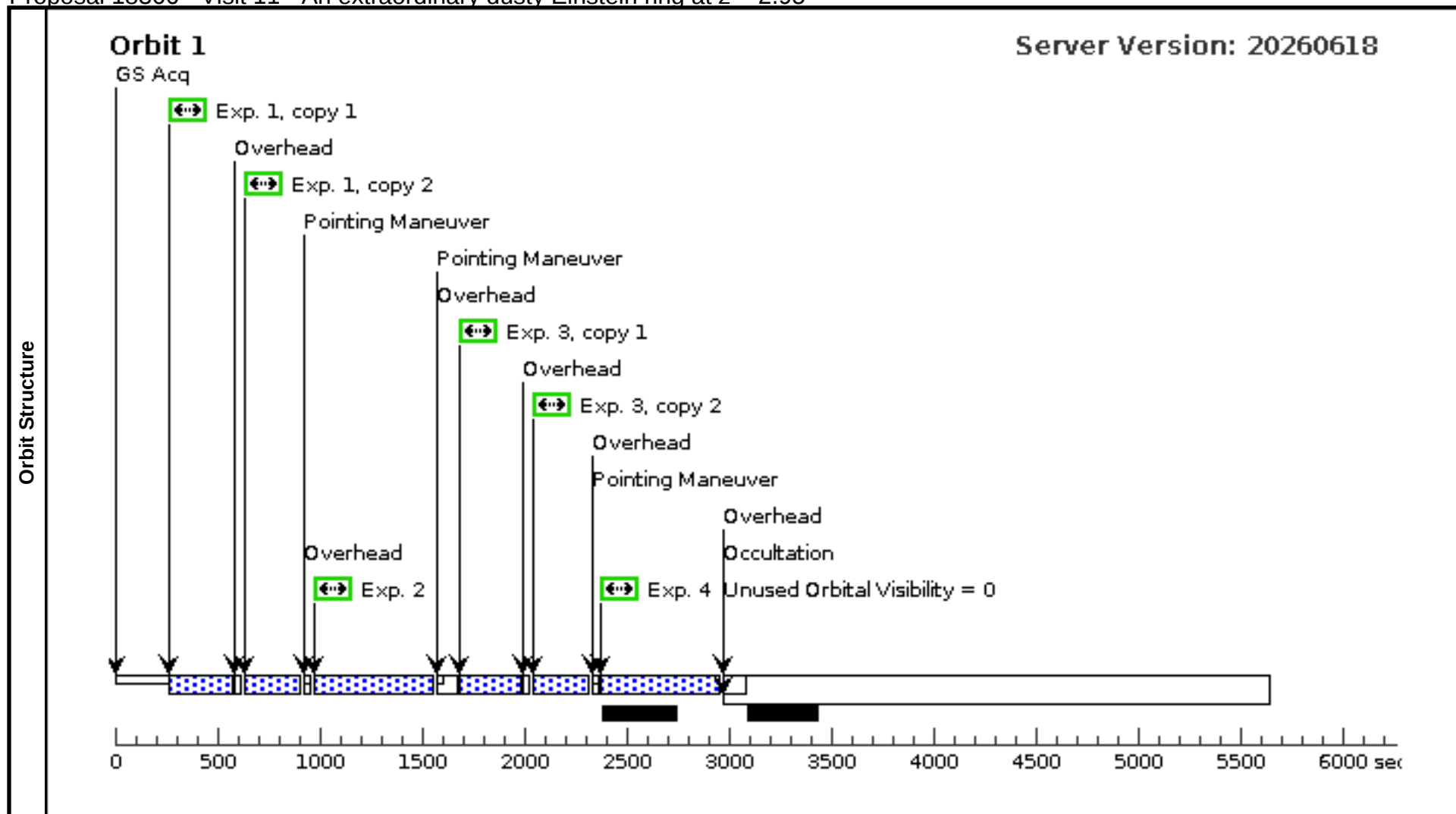
Proposal 18366 - Visit 10 - An extraordinary dusty Einstein ring at $z = 2.95$

Visit	Proposal 18366, Visit 10 Fri Aug 28 11:00:20 GMT 2026									
	Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: ORIENT 316D TO 318 D									
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(1)	ACT-S-J0732.1+1709	RA: 07 32 9.2650 (113.0386042d) Dec: +17 09 43.09 (17.16197d) Equinox: J2000 <i>Comments: Estimated surface brightness for F606W.</i> <i>Source should be quite red, and brighter in F814W.</i> Category=GALAXY Description=[EINSTEIN RING, GRAVITATIONAL LENS, HIGH REDSHIFT GALAXY] Extended=YES		V=(?) 26.40 mag arcsec ⁻²	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(1) ACT-S-J0732.1+1709	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F606W	FLASH=10	POS TARG 0.831,0.886		277 Secs X 2 (554 Secs)	
									[==>(Copy 1)]	[1]
									[==>(Copy 2)]	
	2		(1) ACT-S-J0732.1+1709	WFC3/UVIS, ACCUM, UVIS	F606W		POS TARG 0.357,4.815		587 Secs (587 Secs)	
									[==>]	[1]
	3		(1) ACT-S-J0732.1+1709	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F814W	FLASH=14	SAME POS AS 1		276 Secs X 2 (552 Secs)	
									[==>(Copy 1)]	[1]
									[==>(Copy 2)]	
	4		(1) ACT-S-J0732.1+1709	WFC3/UVIS, ACCUM, UVIS	F814W	FLASH=5	SAME POS AS 2		587 Secs (587 Secs)	
									[==>]	[1]



Proposal 18366 - Visit 11 - An extraordinary dusty Einstein ring at z = 2.95

Visit	Proposal 18366, Visit 11										Fri Aug 28 11:00:20 GMT 2026	
	Diagnostic Status: No Diagnostics											
	Scientific Instruments: WFC3/UVIS											
	Special Requirements: ORIENT 319D TO 321 D											
Fixed Targets	#	Name	Target Coordinates			Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(1)	ACT-S-J0732.1+1709	RA: 07 32 9.2650 (113.0386042d)					V=(?)		Reference Frame: ICRS		
			Dec: +17 09 43.09 (17.16197d)					26.40 mag arcsec^-2				
			Equinox: J2000									
			Comments: Estimated surface brightness for F606W.									
			Source should be quite red, and brighter in F814W. Category=GALAXY Description=[EINSTEIN RING, GRAVITATIONAL LENS, HIGH REDSHIFT GALAXY] Extended=YES									
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit	
	1		(1) ACT-S-J0732.1+1709	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F606W	FLASH=10	POS TARG 0.923,0.985		277 Secs X 2 (554 Secs)			
									[==>(Copy 1)]			
									[==>(Copy 2)]		[1]	
	2		(1) ACT-S-J0732.1+1709	WFC3/UVIS, ACCUM, UVIS	F606W		POS TARG 0.536,7.222		587 Secs (587 Secs)			
									[==>]		[1]	
	3		(1) ACT-S-J0732.1+1709	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F814W	FLASH=14	SAME POS AS 1		276 Secs X 2 (552 Secs)			
									[==>(Copy 1)]			
								[==>(Copy 2)]		[1]		
	4		(1) ACT-S-J0732.1+1709	WFC3/UVIS, ACCUM, UVIS	F814W	FLASH=5	SAME POS AS 2		587 Secs (587 Secs)			
									[==>]		[1]	



Proposal 18366 - Visit 12 - An extraordinary dusty Einstein ring at z = 2.95

Visit	Proposal 18366, Visit 12 Fri Aug 28 11:00:20 GMT 2026									
	Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: ORIENT 322D TO 324 D									
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(1)	ACT-S-J0732.1+1709	RA: 07 32 9.2650 (113.0386042d) Dec: +17 09 43.09 (17.16197d) Equinox: J2000 <i>Comments: Estimated surface brightness for F606W.</i> <i>Source should be quite red, and brighter in F814W.</i> Category=GALAXY Description=[EINSTEIN RING, GRAVITATIONAL LENS, HIGH REDSHIFT GALAXY] Extended=YES		V=(?) 26.40 mag arcsec ⁻²	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(1) ACT-S-J0732.1+1709	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F606W	FLASH=10	POS TARG 1.016,1.083		277 Secs X 2 (554 Secs)	
									[==>(Copy 1)]	[1]
									[==>(Copy 2)]	
	2		(1) ACT-S-J0732.1+1709	WFC3/UVIS, ACCUM, UVIS	F606W		POS TARG 0.714,9.630		587 Secs (587 Secs)	
									[==>]	[1]
	3		(1) ACT-S-J0732.1+1709	WFC3/UVIS, ACCUM, UVIS2-M512C-SUB	F814W	FLASH=14	SAME POS AS 1		276 Secs X 2 (552 Secs)	
									[==>(Copy 1)]	[1]
									[==>(Copy 2)]	
	4		(1) ACT-S-J0732.1+1709	WFC3/UVIS, ACCUM, UVIS	F814W	FLASH=5	SAME POS AS 2		587 Secs (587 Secs)	
									[==>]	[1]

