



# 17711 - Imaging a Giant Intragroup Filament associated with a Damped Lyman-alpha System

Cycle: 32, Proposal Category: GO

(UV Initiative)

(Availability Mode: SUPPORTED)

## INVESTIGATORS

<i>Name</i>	<i>Institution</i>
<b>Prof. Jay Christopher Howk (PI) (Contact)</b>	<b>University of Notre Dame</b>
Dr. Nicolas Lehner (CoI)	University of Notre Dame
Dr. Varsha Purushottam Kulkarni (CoI)	University of South Carolina
Prof. Matthew James Hayes (CoI) (ESA Member)	Stockholm University
Dr. Celine Peroux (CoI) (ESA Member)	European Southern Observatory - Germany
Dr. Ramona Augustin (CoI) (ESA Member)	Leibniz-Institut für Astrophysik Potsdam (AIP)
Dr. Anne Klitsch (CoI) (ESA Member)	University of Copenhagen, Niels Bohr Institute
Prof. Anne Verhamme (CoI) (ESA Member)	University of Geneva, Department of Astronomy
Prof. Michelle Berg (CoI)	Texas Christian University
Dr. William Cramer (CoI)	University of Notre Dame
Prof. Glenn G. Kacprzak (CoI)	Swinburne University of Technology

## VISITS

<i>Visit</i>	<i>Targets used in Visit</i>	<i>Configurations used in Visit</i>	<i>Orbits Used</i>	<i>Last Orbit Planner Run</i>	<i>OP Current with Visit?</i>
01	(1) QSO-J1130-1449-FIELD1	ACS/SBC	2	09-Apr-2026 12:00:14.0	yes
02	(1) QSO-J1130-1449-FIELD1	ACS/SBC	2	09-Apr-2026 12:00:14.0	yes
03	(1) QSO-J1130-1449-FIELD1	ACS/SBC	2	09-Apr-2026 12:00:15.0	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	(1) QSO-J1130-1449-FIELD1	ACS/SBC	2	09-Apr-2026 12:00:15.0	yes
05	(1) QSO-J1130-1449-FIELD1	ACS/SBC	2	09-Apr-2026 12:00:16.0	yes
06	(3) QSO-J1130-1449	COS/FUV COS/NUV	3	09-Apr-2026 12:00:17.0	yes
6A	(3) QSO-J1130-1449	COS/FUV COS/NUV	1	09-Apr-2026 12:00:17.0	yes

14 Total Orbits Used

## ABSTRACT

Streams of gas in dark matter halos are critical to galaxy evolution, as they bring matter into halos (accretion) and carry matter out (outflows), while "intergalactic transfer" from satellites and group members can be important for building up the gas mass of galaxies. Such streams may be responsible for a significant number of the metal-enriched QSO absorption lines used to study circumgalactic gas. We propose to study a giant (~100 kpc) intragroup filament identified through its association with a  $z=0.31$  damped Lyman-alpha (DLA) system. The filament overlaps the background AGN and shares kinematics with the DLA gas. Thus this structure gives us the opportunity to directly image the gas giving rise to a damped absorber. We will obtain ACS/SBC imaging to study the spatial distribution and intensity of Lyman-alpha emission from this filament+DLA, constructing a synthetic narrow band filter through difference imaging in two ACS longpass filters. This will allow us for the first time to image the \*gas\* of a DLA and assess the processes that form and energize it. We will obtain a COS FUV spectrum of the background AGN to precisely measure the metallicity of the gas, search for H<sub>2</sub> absorption associated with this very high column density system, and probe its physical properties (density, temperature, ionization). This filament is one of the few opportunities we have to image intergalactic gas prior to the next generation of UV telescopes and is a unique opportunity to compare absorption and emission line observations of a DLA.

## OBSERVING DESCRIPTION

Overview

This program aims to study a giant (~100 kpc) intragroup filament identified through its association with a  $z=0.31$  damped Lyman-alpha (DLA) system identified toward the AGN PKS1127-145 on the basis of HST UV spectroscopy. The filament overlaps the background AGN and shares kinematics with the DLA gas. Thus this structure gives us the opportunity to directly image the gas giving rise to a damped absorber. We will obtain ACS/SBC imaging to study the spatial distribution and intensity of Lyman-alpha emission from this filament+DLA, constructing a synthetic narrow

## Proposal 17711 (STScI Edit Number: 1, Created: Thursday, April 9, 2026, 11:00:17AM Eastern Standard Time) - Overview

band filter through difference imaging in two ACS longpass filters (F150LP, F165LP). This will allow us for the first time to image the \*gas\* of a DLA and assess the processes that form and energize it. We also will obtain a COS FUV spectrum of the background AGN to precisely measure the metallicity of the gas, search for H<sub>2</sub> absorption associated with this very high column density system, and probe its physical properties (density, temperature, ionization). Previous FOS/G160L spectroscopy suggests the DLA has a column density  $\log N(\text{HI}) = 21.7$ , but the absorption profile suggests a lower column could be appropriate. The COS/G160M data collected by this program will firmly determine the HI column density.

Imaging instrumental configuration: pseudo-filters to isolate emission lines

Following the technique pioneered by Hayes+ (2005, 2016) we aim to isolate diffuse emission in Ly-alpha 1215 from the  $z = 0.31$  filament associated with a group seen in the field of the AGN PKS1127-145. The Ly-alpha line will be redshifted to  $\sim 1590$  Ang. We will observe the field in the F150LP and F165LP filters of the ACS/SBC, covering an area  $145 \times 165$  kpc at  $z = 0.31$ . We will isolate Ly-alpha using image subtraction in the two longpass filters to create a synthetic narrowband filter:  $F155\text{NB}_{\text{syn}} = F150\text{LP} - F165\text{LP}$ . This approach takes advantage of the shared red wings of the longpass filters, which allow the accurate removal of continuum and redder line emission from the bluest filter used. This approach has successfully been demonstrated in several previous cycles through programs 13656, 14079, 15298, 15655, and 16231 in Cycles 22-28. Unlike many of these previous programs, we are imaging pure nebular emission with no continuum.

Imaging observing approach

We request that the visits are scheduled so that SBC has been switched off for at least 24 hours prior to reduce the dark current. For the same reason, we also request that each 2-orbit visit be spaced from the next visit by at least 24 hours, with the SBC turned off in between. The typical visibility of PKS1127-145 is 52 minutes. In a 2-orbit visit, overheads total  $\sim 10.5$  min and  $\sim 8$  min in orbits 1 and 2. This leaves  $\sim 2.5$  ks in each orbit for exposure. In each visit we will execute a square 4-point box dither pattern (with half-pixel shifts) to subsample the PSF.

To address potential large-scale gradients in the flatfielding, etc., each visit will be made on a  $3 \times 3$  grid with points offset by 2.5 arcsec using the POS TARG functionality (using only 5 of the 9 grid positions). The pointing center of this pattern is offset from the AGN. This ensures that different observatory orientations will all include the full extent of the filament within the SBC field of view.

COS FUV Spectroscopy

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For the COS G160M spectroscopy, we use ACQ/IMAGING Mirror A for the acquisition. We note the following warning from the ETC: "Partial overlap between instrument throughput band and target spectrum." We observe that where the throughput is  $>0$ , there is overlapping wavelength coverage between the target spectrum and throughput band.

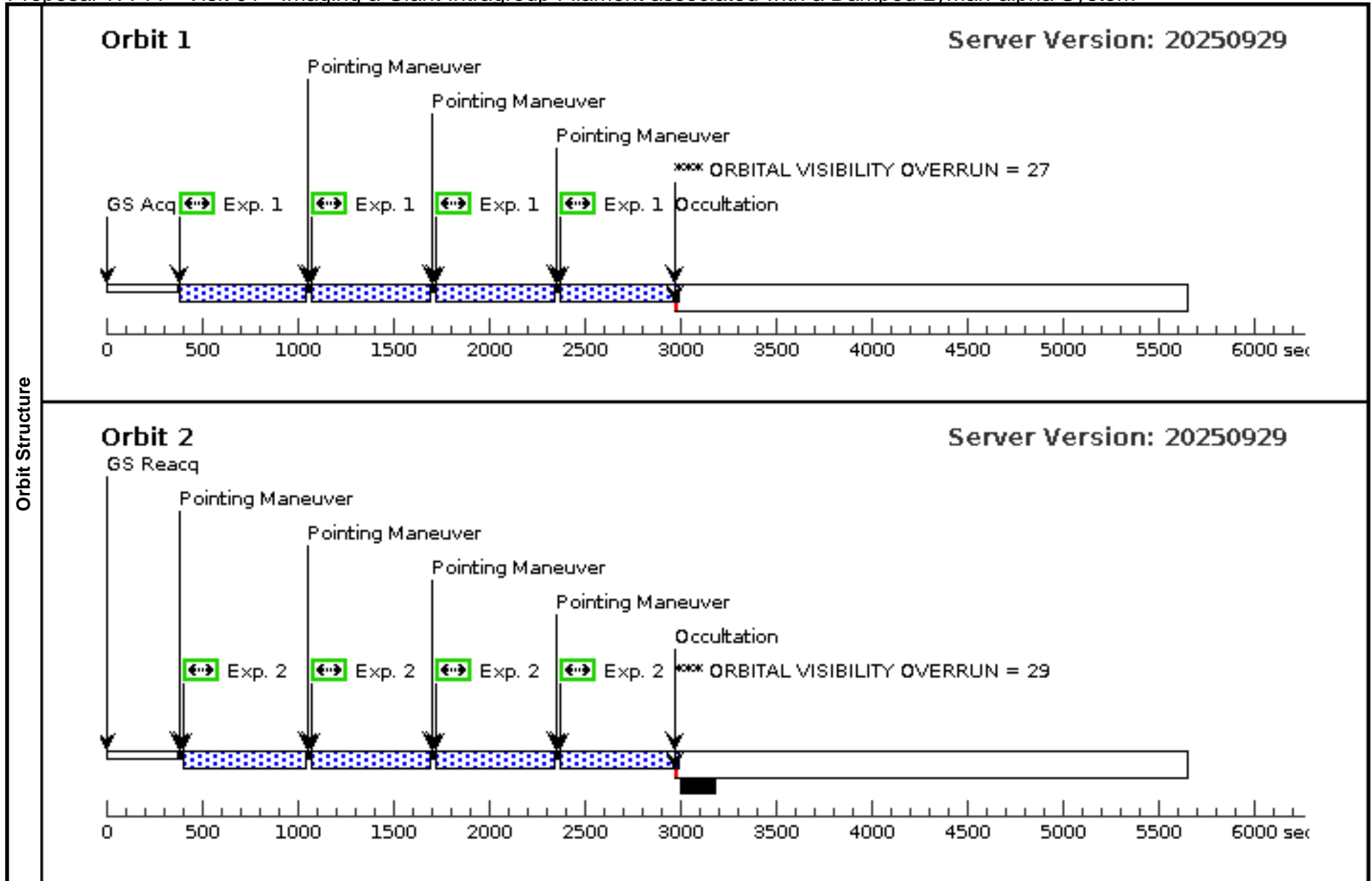
We target the AGN PKS 1127-145 with 3 orbits of COS/G160M/1533 FUV spectroscopy, which will provide coverage of the restframe wavelengths 1022-1154 Ang and 1167-1300 Ang. We aim for SNR $\sim$ 4 at Ly-alpha, which is sufficient to measure the damping wings extremely accurately and to detect S II 1250/1253/1259 and N I 1200 absorption. This same setup provides SNR $\sim$ 6 near Ly-beta, sufficient to measure O VI 1032/1037, O I 1039, and the large number of H2 lines. This will be adequate to detect or place strong limits on these important lines. Due to the low S/N  $< 20$  (SNR $\sim$ 3-7), we use a different FP-POS per orbit (FP-POS=2, 3, 4 for orbits 1, 2, and 3, respectively) to maximize the exposure time.

According to the bright object tool in the APT, exposure 1 of visit 06 has a health warning with the COS NUV imaging ACQ. The warning is triggered assuming the target is an O5V star, which it is not. Based on the GALEX FOV of this target, there is no UV bright object nearby. Therefore, our observations should not pose a bright limit threat to COS.

Proposal 17711 - Visit 01 - Imaging a Giant Intragroup Filament associated with a Damped Lyman-alpha System

Thu Apr 09 16:00:18 GMT 2026

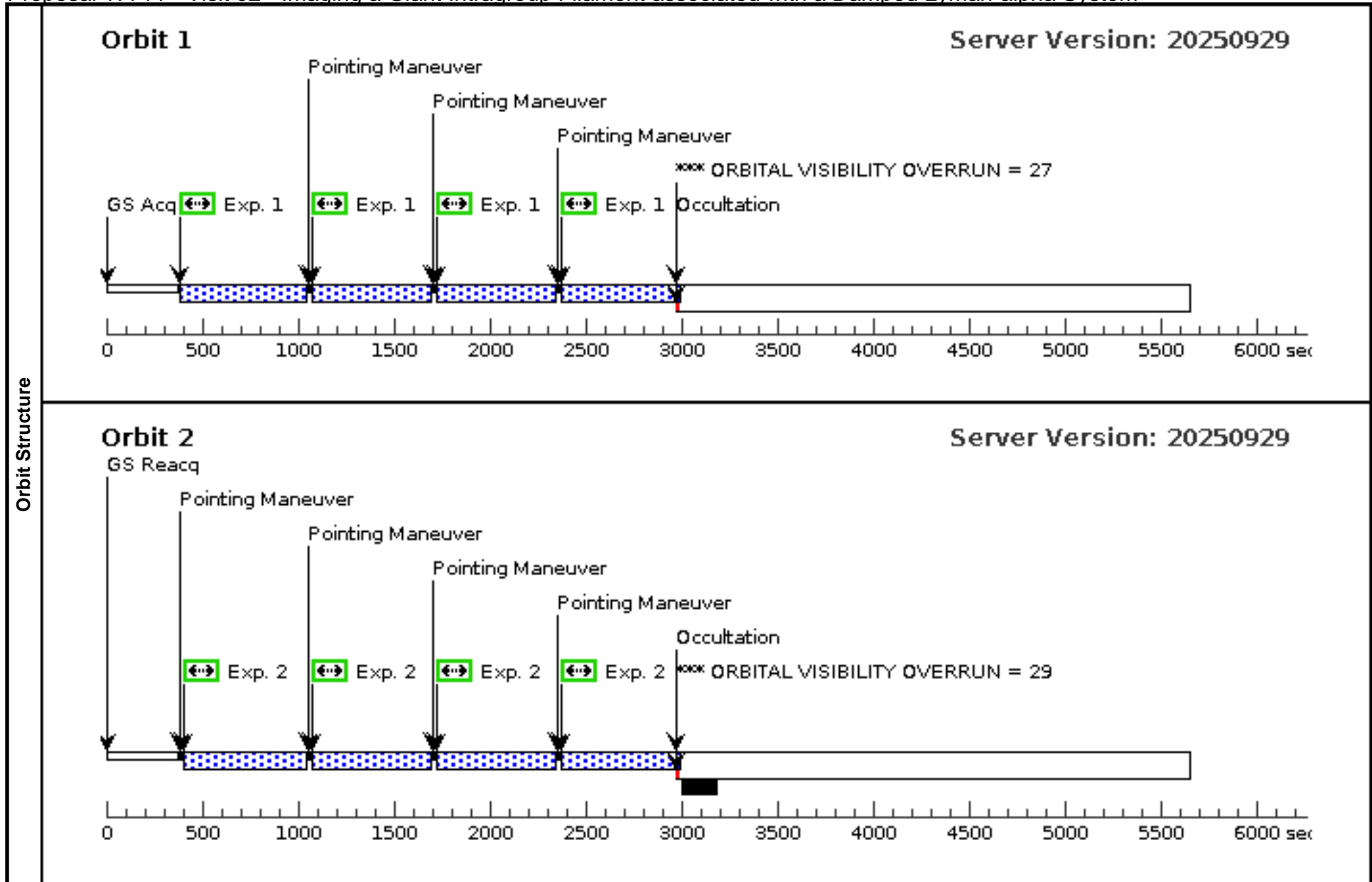
<b>Visit</b>	<b>Proposal 17711, Visit 01, completed</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: ACS/SBC Special Requirements: (none) <i>Comments: To minimize the dark current, please schedule after the SBC has been switched off for 24 hours. Similarly, consecutive visits should be spaced by at least 24 hours, with the SBC switched off in between</i>										
	(Visit 01) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (Visit 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=0.894773 Line Spacing=0.587116	Coordinate Frame=POS-TARG Pattern Orientation=20.151333 Angle Between Sides=64.478514 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>			
	(1)	QSO-J1130-1449-FIELD1	RA: 11 30 7.6000 (172.5316667d) Dec: -14 49 20.70 (-14.82242d) Equinox: J2000	Proper Motion RA: 1.448203336571992E-5 sec of time/yr Proper Motion Dec: -1.9999924916191958E-5 arcsec/yr Epoch of Position: 2015.5	V=16.9		Reference Frame: SIMBAD				
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> Category=GALAXY Description=[LYMAN ALPHA CLOUD, QSO, SPIRAL]											
<b>Exposures</b>	<b>#</b>	<b>Label (ETC Run)</b>	<b>Target</b>	<b>Config,Mode,Aperture</b>	<b>Spectral Els.</b>	<b>Opt. Params.</b>	<b>Special Reqs.</b>	<b>Groups</b>	<b>Exp. Time (Total)/[Actual Dur.]</b>		<b>Orbit</b>
	1	(ACS.im.19 11770)	(1) QSO-J1130-1449 -FIELD1	ACS/SBC, ACCUM, SBC	F165LP		POS TARG 0,0	Pattern 2, Exps 1-1 in Visit 01 (2)	590 Secs (2360 Secs)		
									[=>(Pattern 1)]		[1]
									[=>(Pattern 2)]		
									[=>(Pattern 3)]		
									[=>(Pattern 4)]		
									590 Secs (2360 Secs)		
									[=>(Pattern 1)]		[2]
									[=>(Pattern 2)]		
									[=>(Pattern 3)]		
									[=>(Pattern 4)]		



Proposal 17711 - Visit 02 - Imaging a Giant Intragroup Filament associated with a Damped Lyman-alpha System

Thu Apr 09 16:00:18 GMT 2026

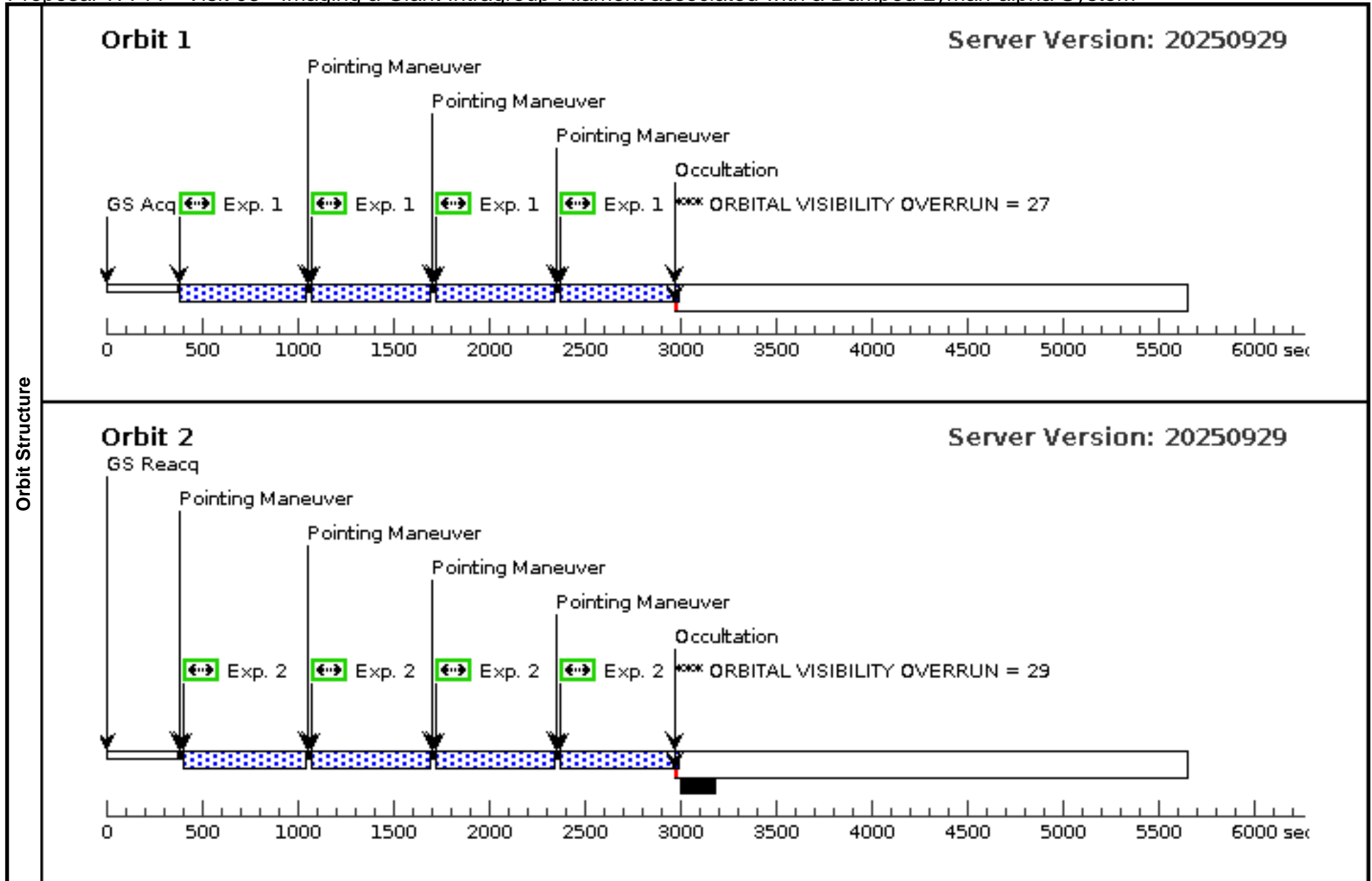
<b>Visit</b>	<b>Proposal 17711, Visit 02, completed</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: ACS/SBC Special Requirements: (none) <i>Comments: To minimize the dark current, please schedule after the SBC has been switched off for 24 hours. Similarly, consecutive visits should be spaced by at least 24 hours, with the SBC switched off in between</i>									
	(Visit 02) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (Visit 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=0.894773 Line Spacing=0.587116	Coordinate Frame=POS-TARG Pattern Orientation=20.151333 Angle Between Sides=64.478514 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>			
	(1)	QSO-J1130-1449-FIELD1	RA: 11 30 7.6000 (172.5316667d) Dec: -14 49 20.70 (-14.82242d) Equinox: J2000	Proper Motion RA: 1.448203336571992E-5 sec of time/yr Proper Motion Dec: -1.9999924916191958E-5 arcsec/yr Epoch of Position: 2015.5	V=16.9	Reference Frame: SIMBAD				
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> Category=GALAXY Description=[LYMAN ALPHA CLOUD, QSO, SPIRAL]										
<b>Exposures</b>	<b>#</b>	<b>Label (ETC Run)</b>	<b>Target</b>	<b>Config,Mode,Aperture</b>	<b>Spectral Els.</b>	<b>Opt. Params.</b>	<b>Special Reqs.</b>	<b>Groups</b>	<b>Exp. Time (Total)/[Actual Dur.]</b>	<b>Orbit</b>
	1	(ACS.im.19 11770)	(1) QSO-J1130-1449 -FIELD1	ACS/SBC, ACCUM, SBC	F165LP		POS TARG -1.25,-2.13	Pattern 2, Exps 1-1 in Visit 02 (2)	590 Secs (2360 Secs)	
	[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)] [==>(Pattern 4)]									[1]
2	(ACS.im.19 11770)	(1) QSO-J1130-1449 -FIELD1	ACS/SBC, ACCUM, SBC	F150LP		POS TARG -1.25,-2.13	Pattern 2, Exps 2-2 in Visit 02 (2)	590 Secs (2360 Secs)		
[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)] [==>(Pattern 4)]									[2]	



Proposal 17711 - Visit 03 - Imaging a Giant Intragroup Filament associated with a Damped Lyman-alpha System

Thu Apr 09 16:00:18 GMT 2026

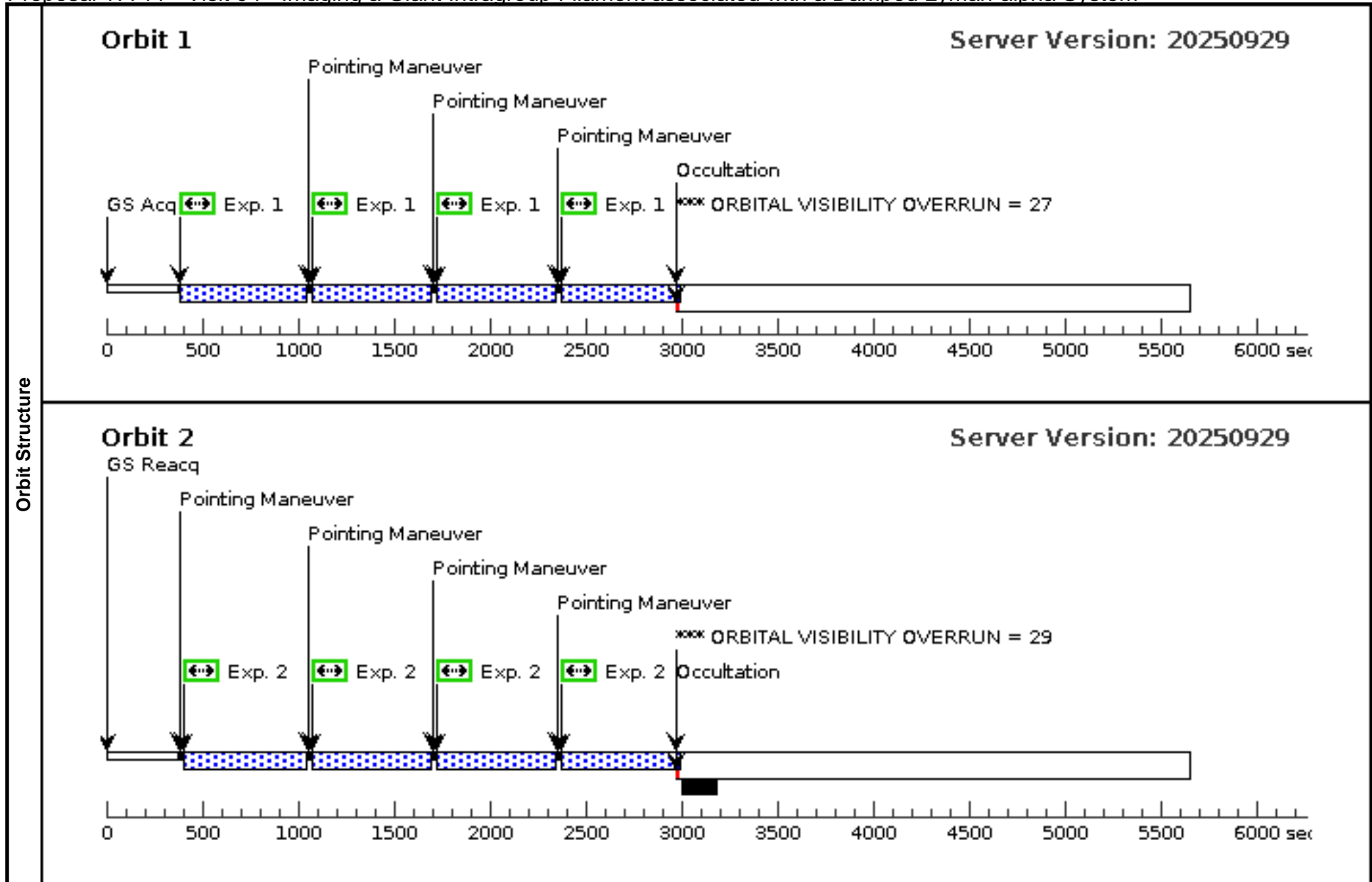
<b>Visit</b>	<b>Proposal 17711, Visit 03, completed</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: ACS/SBC Special Requirements: (none) <i>Comments: To minimize the dark current, please schedule after the SBC has been switched off for 24 hours. Similarly, consecutive visits should be spaced by at least 24 hours, with the SBC switched off in between</i>									
	(Visit 03) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (Visit 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=0.894773 Line Spacing=0.587116	Coordinate Frame=POS-TARG Pattern Orientation=20.151333 Angle Between Sides=64.478514 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>			
	(1)	QSO-J1130-1449-FIELD1	RA: 11 30 7.6000 (172.5316667d) Dec: -14 49 20.70 (-14.82242d) Equinox: J2000	Proper Motion RA: 1.448203336571992E-5 sec of time/yr Proper Motion Dec: -1.9999924916191958E-5 arcsec/yr Epoch of Position: 2015.5	V=16.9	Reference Frame: SIMBAD				
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> Category=GALAXY Description=[LYMAN ALPHA CLOUD, QSO, SPIRAL]										
<b>Exposures</b>	<b>#</b>	<b>Label (ETC Run)</b>	<b>Target</b>	<b>Config,Mode,Aperture</b>	<b>Spectral Els.</b>	<b>Opt. Params.</b>	<b>Special Reqs.</b>	<b>Groups</b>	<b>Exp. Time (Total)/[Actual Dur.]</b>	<b>Orbit</b>
	1	(ACS.im.19 11770)	(1) QSO-J1130-1449 -FIELD1	ACS/SBC, ACCUM, SBC	F165LP		POS TARG +1.25,+ 2.13	Pattern 2, Exps 1-1 i n Visit 03 (2)	590 Secs (2360 Secs) [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)] [=>(Pattern 4)]	[1]
2	(ACS.im.19 11770)	(1) QSO-J1130-1449 -FIELD1	ACS/SBC, ACCUM, SBC	F150LP		POS TARG +1.25,+ 2.13	Pattern 2, Exps 2-2 i n Visit 03 (2)	590 Secs (2360 Secs) [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)] [=>(Pattern 4)]	[2]	



Proposal 17711 - Visit 04 - Imaging a Giant Intragroup Filament associated with a Damped Lyman-alpha System

Thu Apr 09 16:00:18 GMT 2026

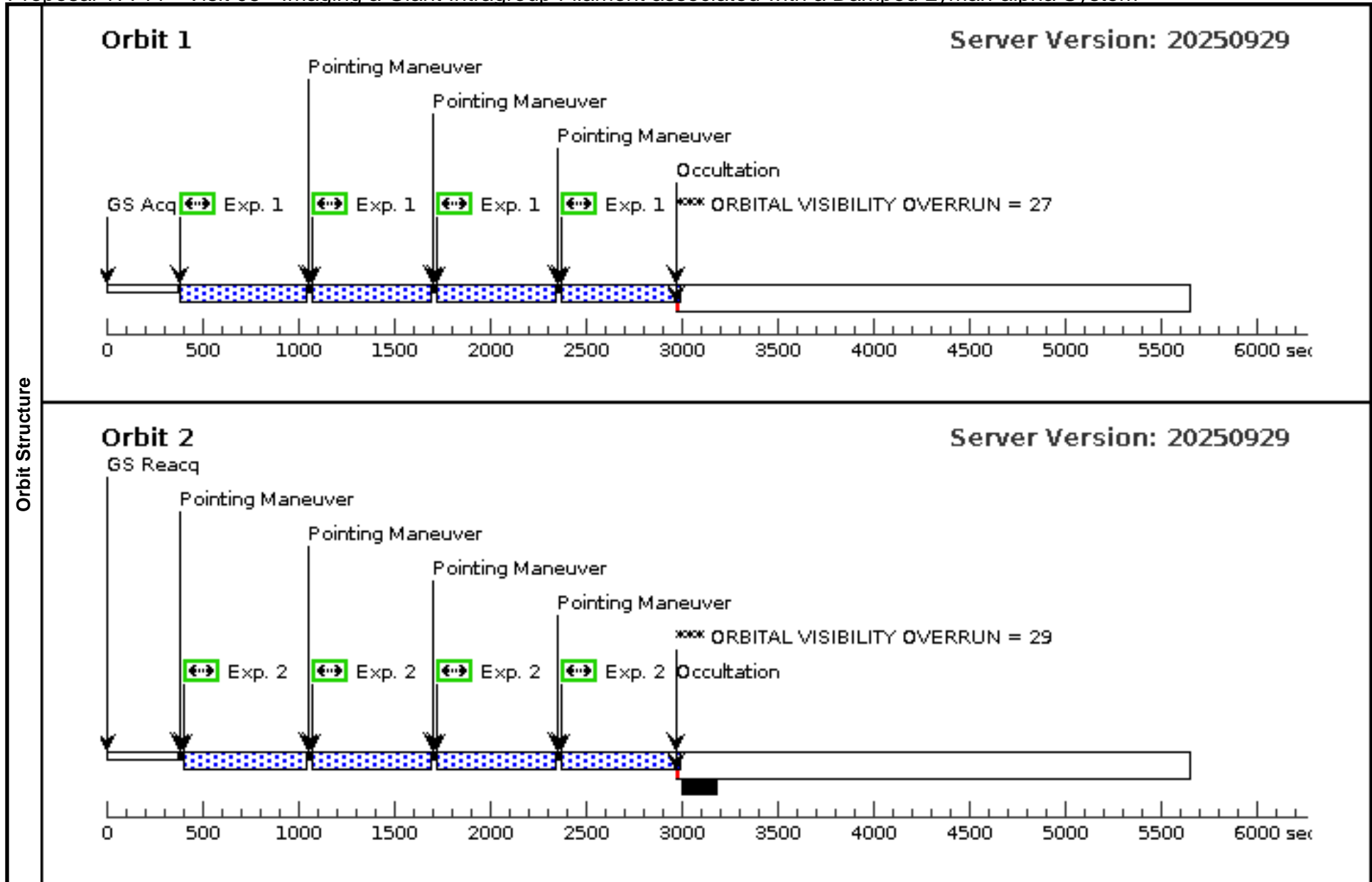
<b>Visit</b>	<b>Proposal 17711, Visit 04, implementation</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: ACS/SBC Special Requirements: (none) <i>Comments: To minimize the dark current, please schedule after the SBC has been switched off for 24 hours. Similarly, consecutive visits should be spaced by at least 24 hours, with the SBC switched off in between</i>										
	(Visit 04) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (Visit 04) 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=0.894773 Line Spacing=0.587116	Coordinate Frame=POS-TARG Pattern Orientation=20.151333 Angle Between Sides=64.478514 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>			
	(1)	QSO-J1130-1449-FIELD1	RA: 11 30 7.6000 (172.5316667d) Dec: -14 49 20.70 (-14.82242d) Equinox: J2000	Proper Motion RA: 1.448203336571992E-5 sec of time/yr Proper Motion Dec: -1.9999924916191958E-5 arcsec/yr Epoch of Position: 2015.5	V=16.9		Reference Frame: SIMBAD				
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> Category=GALAXY Description=[LYMAN ALPHA CLOUD, QSO, SPIRAL]											
<b>Exposures</b>	<b>#</b>	<b>Label (ETC Run)</b>	<b>Target</b>	<b>Config,Mode,Aperture</b>	<b>Spectral Els.</b>	<b>Opt. Params.</b>	<b>Special Reqs.</b>	<b>Groups</b>	<b>Exp. Time (Total)/[Actual Dur.]</b>		<b>Orbit</b>
	1	(ACS.im.19 11770)	(1) QSO-J1130-1449 -FIELD1	ACS/SBC, ACCUM, SBC	F165LP		POS TARG -3.74,+0.30	Pattern 2, Exps 1-1 in Visit 04 (2)	590 Secs (2360 Secs)		
										[=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)] [=>(Pattern 4)]	[1]
2	(ACS.im.19 11770)	(1) QSO-J1130-1449 -FIELD1	ACS/SBC, ACCUM, SBC	F150LP		POS TARG -3.74,+0.30	Pattern 2, Exps 2-2 in Visit 04 (2)	590 Secs (2360 Secs)			
									[=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)] [=>(Pattern 4)]	[2]	



Proposal 17711 - Visit 05 - Imaging a Giant Intragroup Filament associated with a Damped Lyman-alpha System

Thu Apr 09 16:00:18 GMT 2026

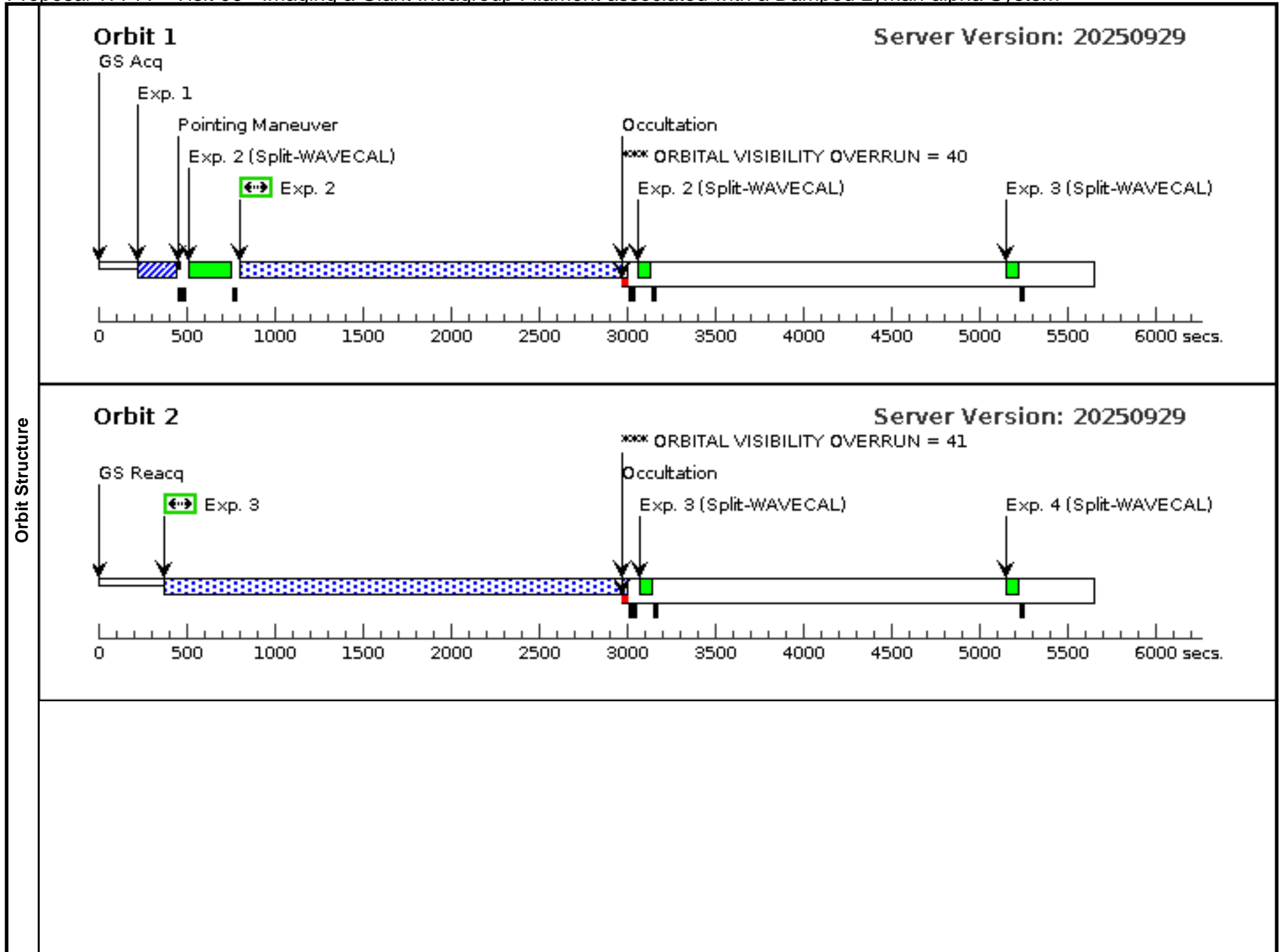
<b>Visit</b>	<b>Proposal 17711, Visit 05, completed</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: ACS/SBC Special Requirements: (none) <i>Comments: To minimize the dark current, please schedule after the SBC has been switched off for 24 hours. Similarly, consecutive visits should be spaced by at least 24 hours, with the SBC switched off in between</i>									
	<b>Diagnosics</b> (Visit 05) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (Visit 05) 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=0.894773 Line Spacing=0.587116	Coordinate Frame=POS-TARG Pattern Orientation=20.151333 Angle Between Sides=64.478514 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>			
	(1)	QSO-J1130-1449-FIELD1	RA: 11 30 7.6000 (172.5316667d) Dec: -14 49 20.70 (-14.82242d) Equinox: J2000	Proper Motion RA: 1.448203336571992E-5 sec of time/yr Proper Motion Dec: -1.9999924916191958E-5 arcsec/yr Epoch of Position: 2015.5	V=16.9	Reference Frame: SIMBAD				
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> Category=GALAXY Description=[LYMAN ALPHA CLOUD, QSO, SPIRAL]										
<b>Exposures</b>	<b>#</b>	<b>Label (ETC Run)</b>	<b>Target</b>	<b>Config,Mode,Aperture</b>	<b>Spectral Els.</b>	<b>Opt. Params.</b>	<b>Special Reqs.</b>	<b>Groups</b>	<b>Exp. Time (Total)/[Actual Dur.]</b>	<b>Orbit</b>
	1	(ACS.im.19 11770)	(1) QSO-J1130-1449 -FIELD1	ACS/SBC, ACCUM, SBC	F165LP		POS TARG +3.74,-0.30	Pattern 2, Exps 1-1 in Visit 05 (2)	590 Secs (2360 Secs)	
	[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)] [==>(Pattern 4)]									[1]
2	(ACS.im.19 11770)	(1) QSO-J1130-1449 -FIELD1	ACS/SBC, ACCUM, SBC	F150LP		POS TARG +3.74,-0.30	Pattern 2, Exps 2-2 in Visit 05 (2)	590 Secs (2360 Secs)		
[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)] [==>(Pattern 4)]									[2]	

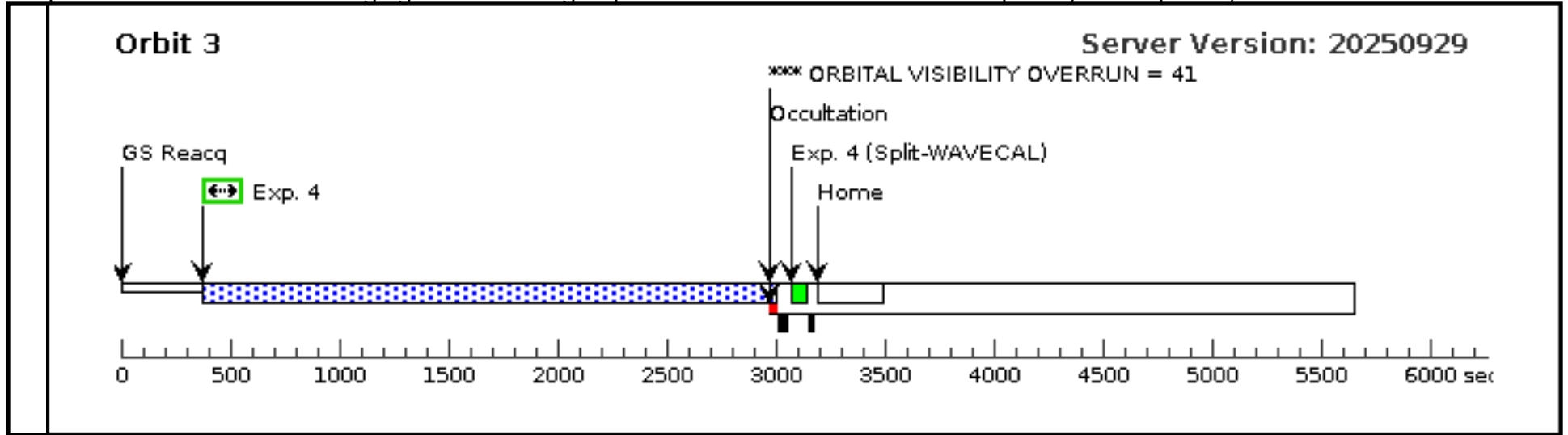


# Proposal 17711 - Visit 06 - Imaging a Giant Intragroup Filament associated with a Damped Lyman-alpha System

Thu Apr 09 16:00:18 GMT 2026

Visit	<b>Proposal 17711, Visit 06, failed</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: COS/FUV, COS/NUV Special Requirements: (none)																																																											
Diagnostics	(Visit 06) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions at a given COS cenwave (or 2 positions for certain exception cases). See extended explanation in the diagnostic browser. (Visit 06) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (Visit 06) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (Visit 06) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN																																																											
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# Proposal 17711 - HOPR-93506 (6A) - Imaging a Giant Intragroup Filament associated with a Damped Lyman-alpha System

Thu Apr 09 16:00:18 GMT 2026

<b>Visit</b>	<b>Proposal 17711, HOPR-93506 (6A)</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: COS/FUV, COS/NUV Special Requirements: (none)
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<b>Diagnostics</b>	(HOPR-93506 (6A)) Warning (Form): For the best data quality, it is generally required to use all four FP-POS positions at a given COS cenwave (or 2 positions for certain exception cases). See extended explanation in the diagnostic browser.
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2	(COS.sp.193 1188)	(3) QSO-J1130-1449	COS/FUV, TIME-TAG, PSA	G160M 1533 A	BUFFER-TIME=10 690; SEGMENT=BOTH; FP-POS=2				1900 Secs (2105 Secs) [=>2105.0 Secs]	[1]

