



14167 - Draining the Local Void

Cycle: 23, Proposal Category: GO

(Availability Mode: SUPPORTED)

INVESTIGATORS

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VISITS

<i>Visit</i>	<i>Targets used in Visit</i>	<i>Configurations used in Visit</i>	<i>Orbits Used</i>	<i>Last Orbit Planner Run</i>	<i>OP Current with Visit?</i>
01	(1) ALFAZOAJ1952+1428	ACS/WFC	4	23-Sep-2015 21:13:01.0	yes
02	(2) ESO-461-36	WFC3/IR	1	23-Sep-2015 21:13:04.0	yes

5 Total Orbits Used

ABSTRACT

From the theory of the growth of structure it is anticipated that material rushes away from the centers of voids at velocities that depend on the cosmological parameters Ω_m and H_0 , how empty the void is, and the radius from the center. If dark energy has a variable equation of state it may pool in voids and add to outflow velocities. The Local Group resides on the boundary of the very large Local Void and it has been determined that we have a peculiar motion of 260 km/s away from the void. Though the Local Void is mostly empty, it does contain a few lonely galaxies. For those that are nearby, accurate distances can be determined from resolved images through identification of the Tip of the Red Giant Branch. Accurate distances allow the determination of accurate peculiar velocities. Serendipitously, one galaxy in the void has been studied and it has a

peculiar velocity of 300 km/s away from the void center. An Arecibo Telescope survey recently discovered an excellent target in the Local Void. This interesting galaxy will be studied with this program to affirm if void galaxies systematically have large velocities of expansion from the void center and, incidentally, to investigate the star formation and metallicity properties of this isolated galaxy. The important void expansion test of the theory of the formation of large scale structure can only be made locally, where peculiar velocities dominate Hubble velocities. It is fortuitous that we live adjacent a very large void.

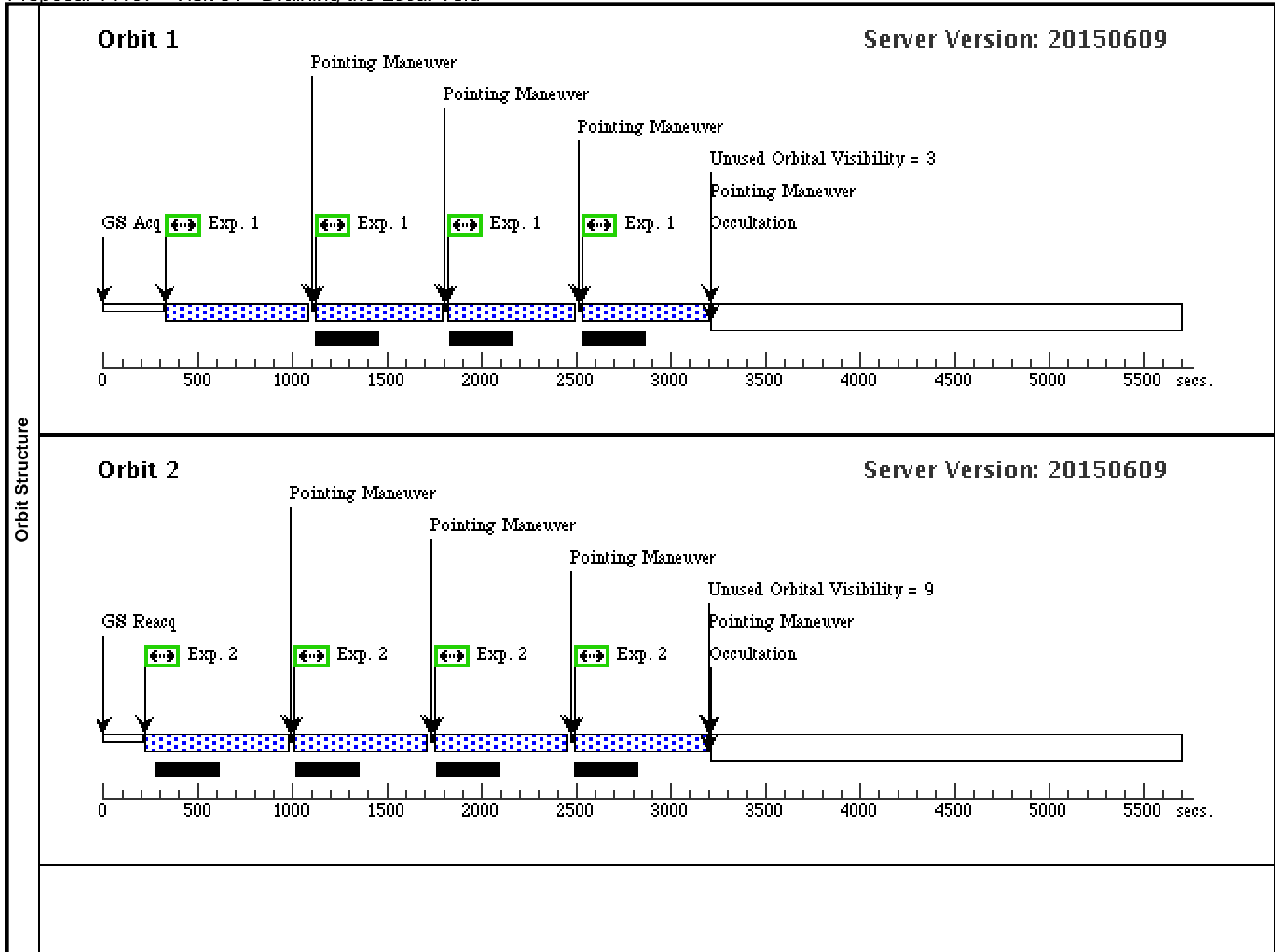
OBSERVING DESCRIPTION

We will use one orbit to observe KK246 = ESO 461-36 with WFC3/IR in the F110W and F160W filters. We will observe ALFAZ0AJ1952+1428 with ACS in the F606W filter for two orbits and in the F814W filter for two orbits using a box pattern.

Proposal 14167 - Visit 01 - Draining the Local Void

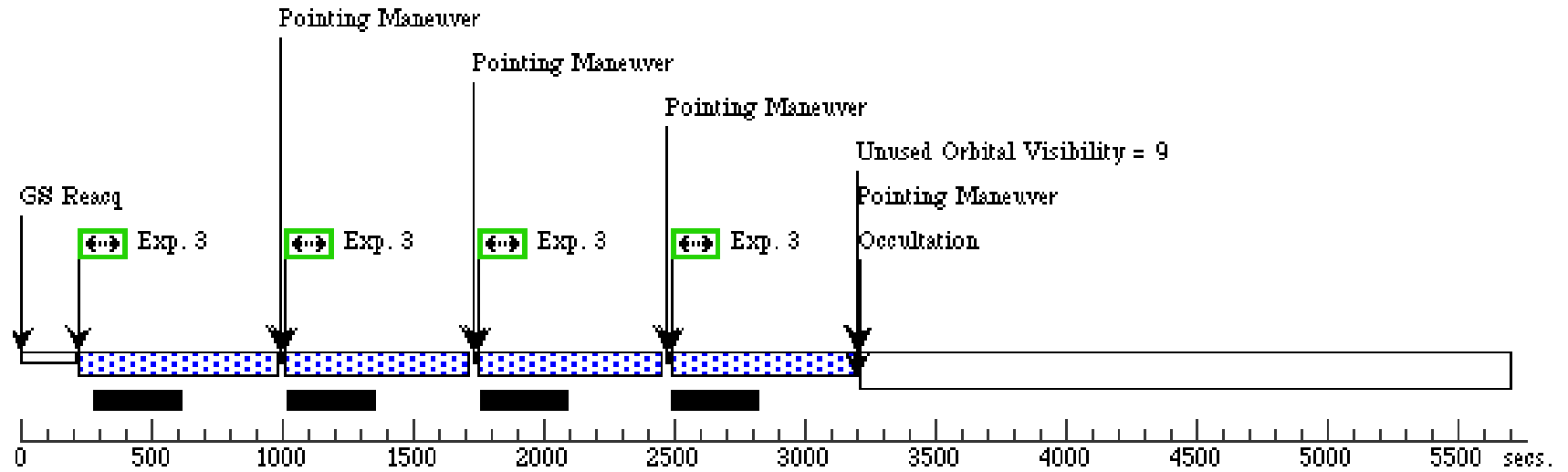
Thu Sep 24 01:13:05 GMT 2015

Visit	Proposal 14167, Visit 01, scheduled Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: (none)									
	Patterns	#	Primary Pattern	Secondary Pattern	Exposures					
	(1)	Pattern Type=ACS-WFC-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.265 Line Spacing=0.187	Coordinate Frame=POS-TARG Pattern Orientation=20.67 Angle Between Sides=69.05 Center Pattern=false		(1), (2), (3), (4)					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(1)	ALFAZOAJ1952+1428	RA: 19 52 11.8000 (298.0491667d) Dec: +14 28 24.00 (14.47333d) Equinox: J2000		V=22	Reference Frame: J2000				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(1) ALFAZOAJ1952+1428	ACS/WFC, ACCUM, WFC1	F814W			Pattern 1, Exps 1-1 in Visit 01 (1)	500 Secs (2188 Secs) [==>547.0 Secs (Pattern 1)] [==>547.0 Secs (Pattern 2)] [==>547.0 Secs (Pattern 3)] [==>547.0 Secs (Pattern 4)]	[1]
	2		(1) ALFAZOAJ1952+1428	ACS/WFC, ACCUM, WFC1	F606W			Pattern 1, Exps 2-2 in Visit 01 (1)	0 Secs (2320 Secs) [==>580.0 Secs (Pattern 1)] [==>580.0 Secs (Pattern 2)] [==>580.0 Secs (Pattern 3)] [==>580.0 Secs (Pattern 4)]	[2]
	3		(1) ALFAZOAJ1952+1428	ACS/WFC, ACCUM, WFC1	F814W			Pattern 1, Exps 3-3 in Visit 01 (1)	580 Secs (2320 Secs) [==>580 Secs (Pattern 1)] [==>580 Secs (Pattern 2)] [==>580 Secs (Pattern 3)] [==>580 Secs (Pattern 4)]	[3]
	4		(1) ALFAZOAJ1952+1428	ACS/WFC, ACCUM, WFC1	F606W			Pattern 1, Exps 4-4 in Visit 01 (1)	580 Secs (2320 Secs) [==>580 Secs (Pattern 1)] [==>580 Secs (Pattern 2)] [==>580 Secs (Pattern 3)] [==>580 Secs (Pattern 4)]	[4]



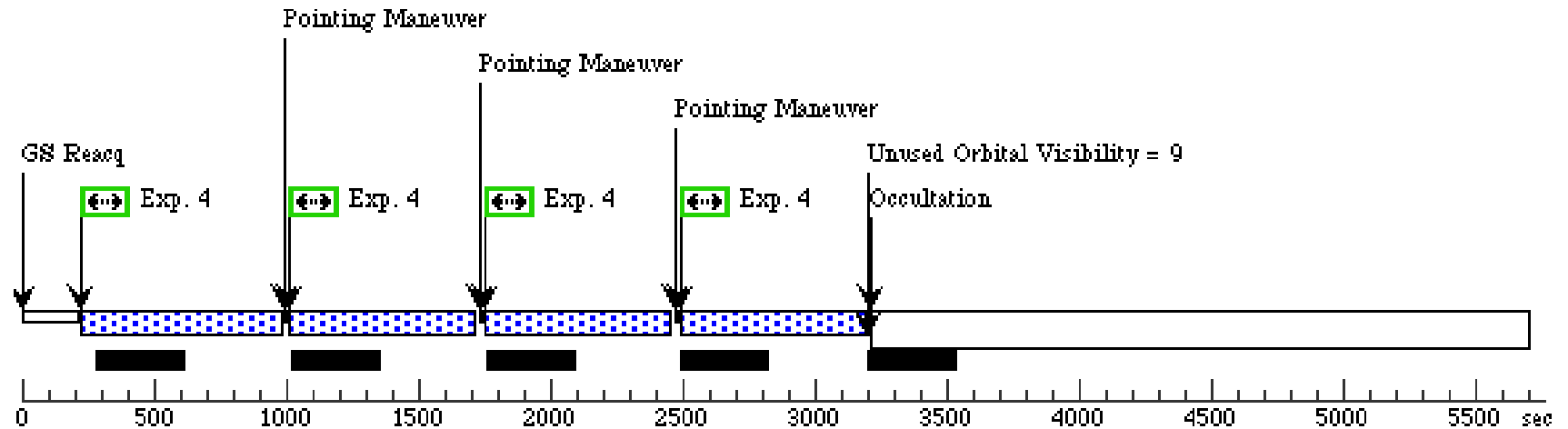
Orbit 3

Server Version: 20150609



Orbit 4

Server Version: 20150609



Proposal 14167 - Visit 02 - Draining the Local Void

Thu Sep 24 01:13:06 GMT 2015

Visit	Proposal 14167, Visit 02, implementation		
	Diagnostic Status: No Diagnostics		
	Scientific Instruments: WFC3/IR		
	Special Requirements: (none)		

Patterns	#	Primary Pattern	Secondary Pattern	Exposures
	(2)	Pattern Type=WFC3-IR-DITHER-BLOB Purpose=DITHER Number Of Points=2 Point Spacing=5.183 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.859 Angle Between Sides= Center Pattern=true	(1-2)

Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(2)	ESO-461-36	RA: 20 03 57.4000 (300.9891667d) Dec: -31 40 53.00 (-31.68139d) Equinox: J2000		V=22	Reference Frame: J2000
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i>						

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(2) ESO-461-36	WFC3/IR, MULTIACCUM, IR-FIX	F110W	NSAMP=14; SAMP-SEQ=SPAR S50		Pattern 2, Exps 1-2 in Visit 02 (2)	652.938154 Secs (1305.876 Secs) [=>(Pattern 1)] [=>(Pattern 2)]	[1]
	2		(2) ESO-461-36	WFC3/IR, MULTIACCUM, IR-FIX	F160W	NSAMP=14; SAMP-SEQ=SPAR S50		Pattern 2, Exps 1-2 in Visit 02 (2)	652.938154 Secs (1305.876 Secs) [=>(Pattern 1)] [=>(Pattern 2)]	[1]

