



14259 - Resolved halo substructures beyond the Local Group: the assembly histories of NGC 253 and NGC 5128

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) NGC-5128-S1 ANY	ACS/WFC WFC3/UVIS	2	29-Jul-2016 13:26:15.0	yes
02	(2) NGC-5128-S2 ANY	ACS/WFC WFC3/UVIS	2	29-Jul-2016 13:26:16.0	yes
03	(3) NGC-5128-S3 ANY	ACS/WFC WFC3/UVIS	2	29-Jul-2016 13:26:18.0	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	(4) NGC-5128-S4 ANY	ACS/WFC WFC3/UVIS	2	29-Jul-2016 13:26:20.0	yes
05	(5) NGC-5128-S5 ANY	ACS/WFC WFC3/UVIS	2	29-Jul-2016 13:26:21.0	yes
06	(6) NGC-5128-S6 ANY	ACS/WFC WFC3/UVIS	2	29-Jul-2016 13:26:23.0	yes
07	(7) NGC-253-S1 ANY	ACS/WFC WFC3/UVIS	2	29-Jul-2016 13:26:24.0	yes
08	(8) NGC-253-S2 ANY	ACS/WFC WFC3/UVIS	2	29-Jul-2016 13:26:26.0	yes
09	(9) NGC-253-S3 ANY	ACS/WFC WFC3/UVIS	2	29-Jul-2016 13:26:28.0	yes
10	(10) NGC-253-S4 ANY	ACS/WFC WFC3/UVIS	2	29-Jul-2016 13:26:29.0	yes
11	(10) NGC-253-S4 ANY	ACS/WFC WFC3/UVIS	2	29-Jul-2016 13:26:31.0	yes

22 Total Orbits Used

ABSTRACT

We request HST/ACS imaging to follow up the 10 most prominent newly discovered substructures in the halos of NGC 253 and NGC 5128 (both at $D=3.8$ Mpc, and the dominant galaxies of their respective groups, Sculptor and Centaurus A). The substructures were found via our ongoing ground-based (Magellan/Megacam) survey out to 150 kpc for each galaxy, and include stunning disrupting satellites, streams and shells. Current Cold Dark Matter based simulations provide testable predictions for the physical properties (e.g ages and metallicities) of in-situ/accreted components, but the lack of a robust observational census of outer halos for a wide range of galaxies beyond the Local Group prevents robust conclusions. Our proposed observations of the halo substructures in NGC 253 and NGC 5128 will confirm their distance, group membership, and allow for an accurate derivation of their luminosities, metallicities, and star formation histories: for the first time, substructures around Milky Way-sized halos beyond the Local Group will be characterized in great detail. The substructures' properties will be compared to those of the smooth halo, as derived from our wide-field imaging as well as from extant HST halo observations, and to similar substructures in the halos of the Milky Way and M31. This program

will constitute a critical observational test to cosmological predictions of the hierarchical assembly process.

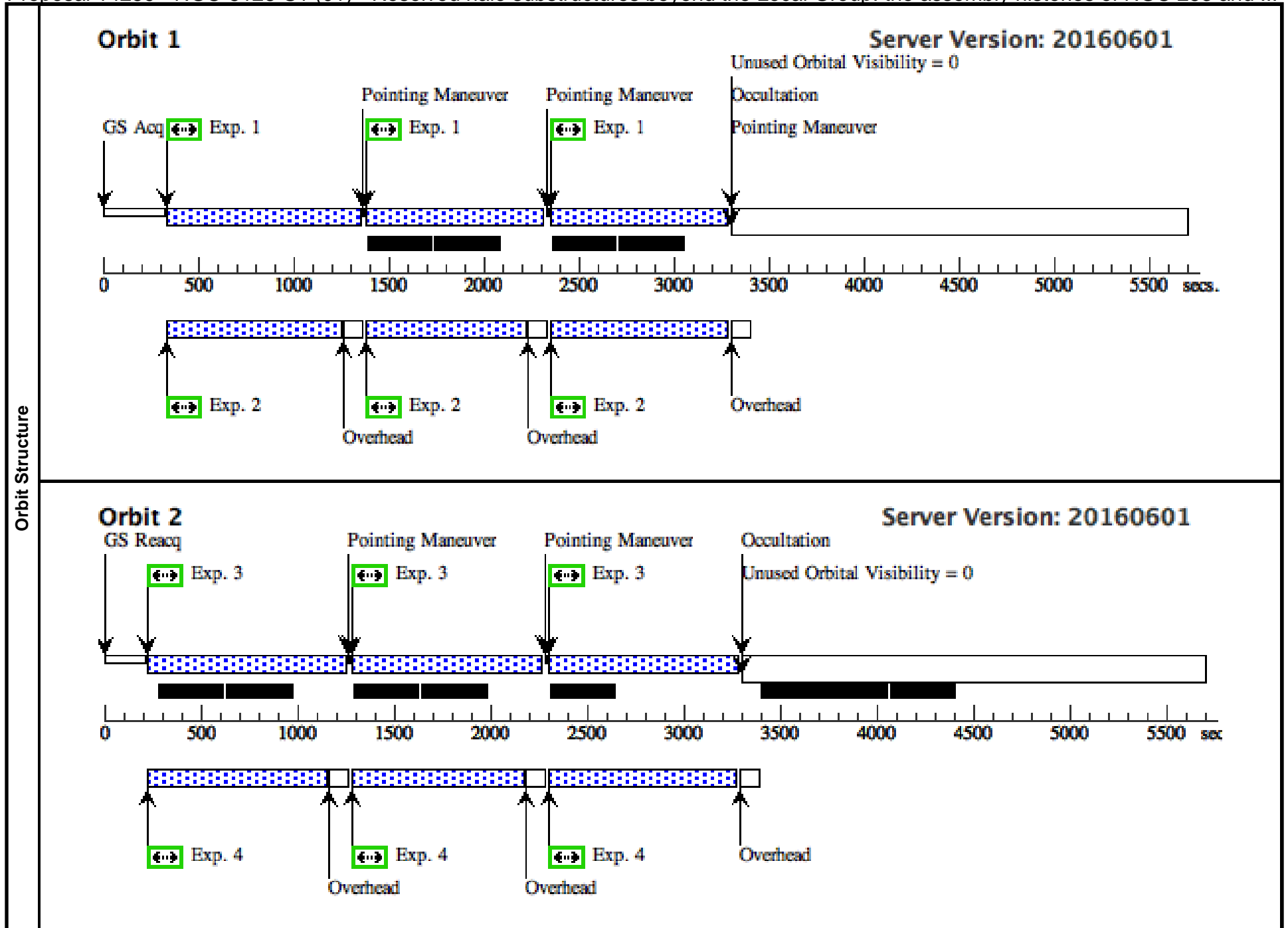
OBSERVING DESCRIPTION

The observations are going to be performed with ACS/WFC (primary) and WFC3/UVIS (parallel), and target streams and substructures in the extended haloes of two nearby galaxies, NGC5128 and NGC253. We request imaging in F606W and F814W filters (broad V and I) for both instruments, in order to compute accurate TRGB distances for our targets and characterize their stellar content (star formation histories and metallicities), while optimizing the exposure times. The parallel pointings will allow us to observe a field region next to our targets, which are extended and completely fill the ACS field of view. This will enable a comparison between the stellar populations of the galaxies' smooth halo and those of their substructures.

To achieve our goal, we need to obtain a minimum SNR of 10 at ~ 1.5 mag below the TRGB in I band, the TRGB having $M_I = -4.0$ and $M_V = -2.5$ (assuming metal-poor populations with an average $V-I=1.5$), or $I \sim 24$ and $V \sim 25.5$ at the distance of the target galaxies (~ 3.7 Mpc). This requires ~ 2250 sec in the F606W filter and ~ 2100 sec in the F814W filter, which nicely fit into one orbit per filter after taking into account overheads, and subdividing the exposures into three dithered observations to remove detector defects. We combine the two orbits per target into one visit in order to maintain the same orientation, and restrict the orientation range when needed in order to obtain substructure-free field regions.

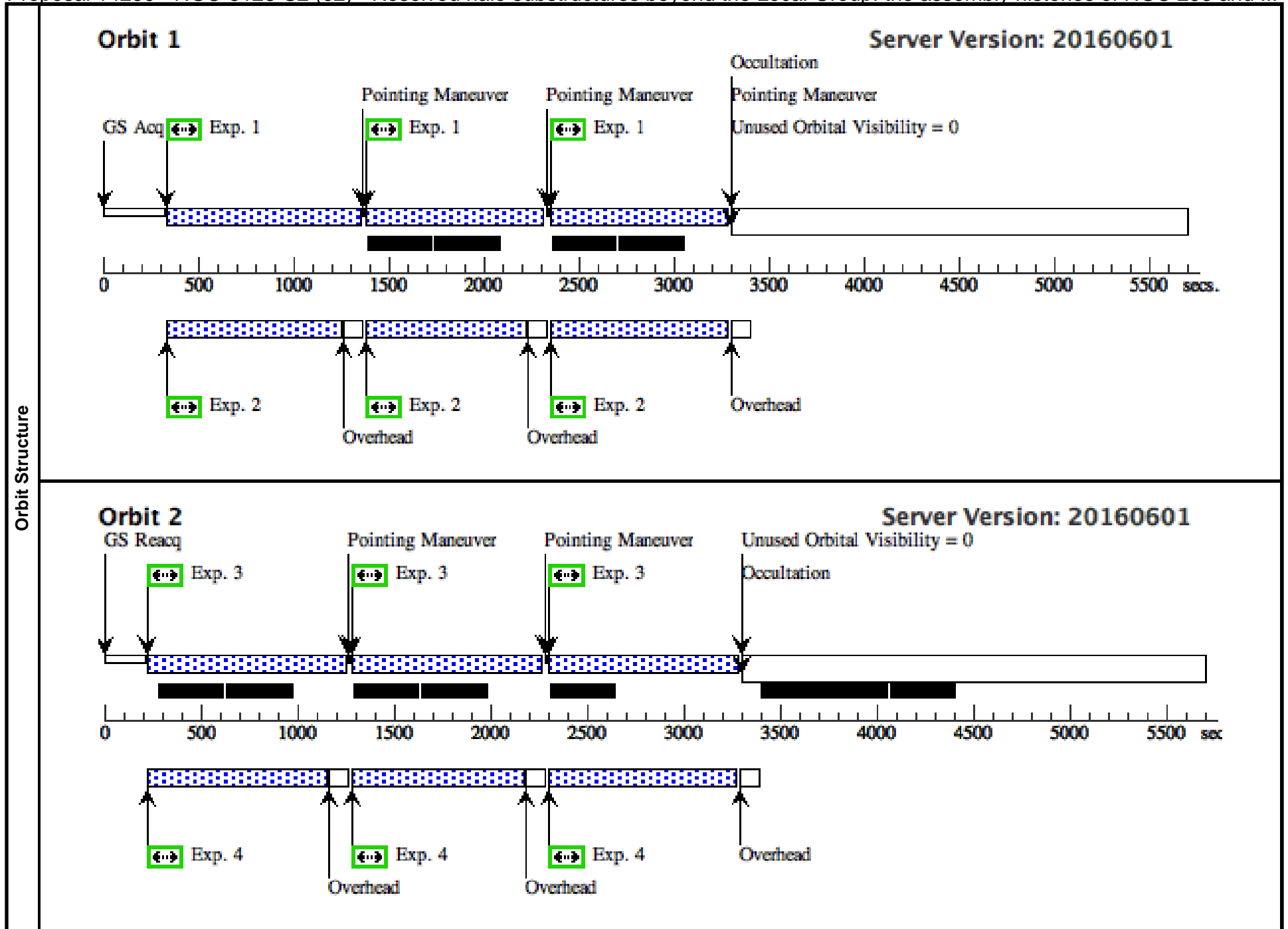
Proposal 14259 - NGC-5128-S1 (01) - Resolved halo substructures beyond the Local Group: the assembly histories of NGC 253 and ...

Visit	Proposal 14259, NGC-5128-S1 (01), completed Fri Jul 29 17:26:32 GMT 2016 Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS, ACS/WFC Special Requirements: ORIENT 60D TO 130 D; ORIENT 240D TO 270 D									
	Patterns	#	Primary Pattern	Secondary Pattern	Exposures					
	(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=3 Point Spacing=3.011 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.28 Angle Between Sides= Center Pattern=false		(1-2), (3-4)					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(1)	NGC-5128-S1	RA: 13 30 24.0000 (202.6000000d) Dec: -42 11 24.00 (-42.19000d) Equinox: J2000		V=25+/-0.5	Reference Frame: ICRS				
<i>Comments: estimated TRGB magnitude</i>										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	F814W ACS	(1) NGC-5128-S1	ACS/WFC, ACCUM, WFC	F814W			Pattern 1, Exps 1-2 in NGC-5128-S1 (01) (1) Prime + Parallel Group 1-2 in Pattern 1, Exps 1-2 in NGC-5128-S1 (01)	1200 Secs (2430 Secs) [==>810.0 Secs (Pattern 1)] [==>810.0 Secs (Pattern 2)] [==>810.0 Secs (Pattern 3)]	[1]
	2	F814W WF C3	ANY	WFC3/UVIS, ACCUM, UVIS1	F814W			Pattern 1, Exps 1-2 in NGC-5128-S1 (01) (1) Prime + Parallel Group 1-2 in Pattern 1, Exps 1-2 in NGC-5128-S1 (01)	1200 Secs (2660 Secs) [==>890.0 Secs (Pattern 1)] [==>840.0 Secs (Pattern 2)] [==>930.0 Secs (Pattern 3)]	[1]
	3	F606W ACS	(1) NGC-5128-S1	ACS/WFC, ACCUM, WFC	F606W			Pattern 1, Exps 3-4 in NGC-5128-S1 (01) (1) Prime + Parallel Group 3-4 in Pattern 1, Exps 3-4 in NGC-5128-S1 (01)	900 Secs (2568 Secs) [==>848.0 Secs (Pattern 1)] [==>860.0 Secs (Pattern 2)] [==>860 Secs (Pattern 3)]	[2]
	4	F606W WF C3	ANY	WFC3/UVIS, ACCUM, UVIS1	F606W			Pattern 1, Exps 3-4 in NGC-5128-S1 (01) (1) Prime + Parallel Group 3-4 in Pattern 1, Exps 3-4 in NGC-5128-S1 (01)	900 Secs (2770 Secs) [==>910.0 Secs (Pattern 1)] [==>890.0 Secs (Pattern 2)] [==>970.0 Secs (Pattern 3)]	[2]



Proposal 14259 - NGC-5128-S2 (02) - Resolved halo substructures beyond the Local Group: the assembly histories of NGC 253 and ...

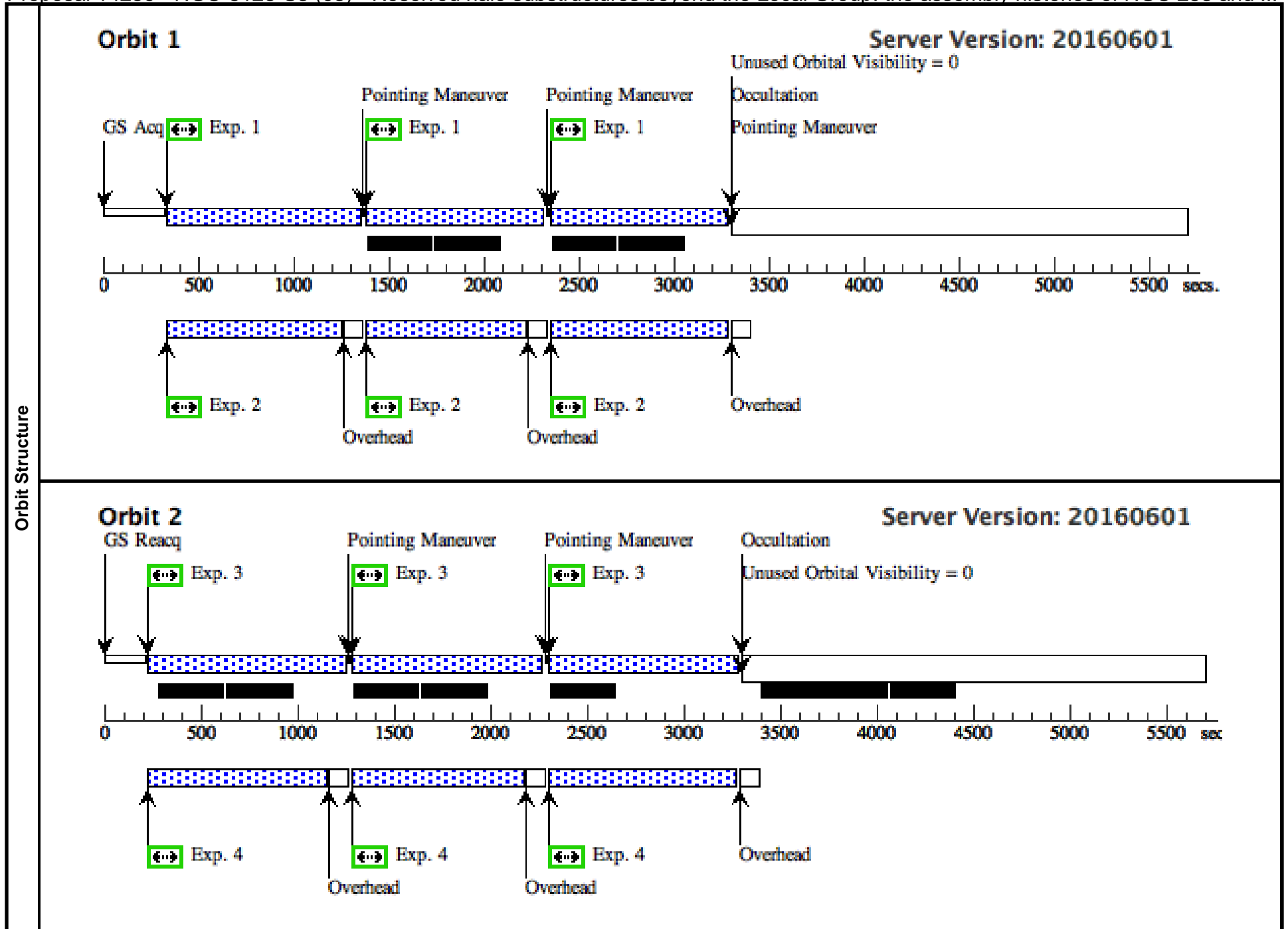
Visit		Proposal 14259, NGC-5128-S2 (02), scheduling Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS, ACS/WFC Special Requirements: ORIENT 130D TO 200 D					Fri Jul 29 17:26:32 GMT 2016			
Patterns	#	Primary Pattern		Secondary Pattern		Exposures				
	(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=3 Point Spacing=3.011 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.28 Angle Between Sides= Center Pattern=false			(1-2), (3-4)				
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(2)	NGC-5128-S2	RA: 13 30 55.2000 (202.7300000d) Dec: -42 25 48.00 (-42.43000d) Equinox: J2000 Comments: estimated TRGB magnitude		V=25+/-0.5	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	F814W ACS	(2) NGC-5128-S2	ACS/WFC, ACCUM, WFC	F814W			Pattern 1, Exps 1-2 in NGC-5128-S2 (02) (1) Prime + Parallel Group 1-2 in Pattern 1, Exps 1-2 in NGC-5128-S2 (02)	1200 Secs (2430 Secs) [==>810.0 Secs (Pattern 1)] [==>810.0 Secs (Pattern 2)] [==>810.0 Secs (Pattern 3)]	[1]
	2	F814W WF C3	ANY	WFC3/UVIS, ACCUM, UVIS1	F814W			Pattern 1, Exps 1-2 in NGC-5128-S2 (02) (1) Prime + Parallel Group 1-2 in Pattern 1, Exps 1-2 in NGC-5128-S2 (02)	1200 Secs (2660 Secs) [==>890.0 Secs (Pattern 1)] [==>840.0 Secs (Pattern 2)] [==>930.0 Secs (Pattern 3)]	[1]
	3	F606W ACS	(2) NGC-5128-S2	ACS/WFC, ACCUM, WFC	F606W			Pattern 1, Exps 3-4 in NGC-5128-S2 (02) (1) Prime + Parallel Group 3-4 in Pattern 1, Exps 3-4 in NGC-5128-S2 (02)	900 Secs (2568 Secs) [==>848.0 Secs (Pattern 1)] [==>860.0 Secs (Pattern 2)] [==>860 Secs (Pattern 3)]	[2]
	4	F606W WF C3	ANY	WFC3/UVIS, ACCUM, UVIS1	F606W			Pattern 1, Exps 3-4 in NGC-5128-S2 (02) (1) Prime + Parallel Group 3-4 in Pattern 1, Exps 3-4 in NGC-5128-S2 (02)	900 Secs (2770 Secs) [==>910.0 Secs (Pattern 1)] [==>890.0 Secs (Pattern 2)] [==>970.0 Secs (Pattern 3)]	[2]



Proposal 14259 - NGC-5128-S3 (03) - Resolved halo substructures beyond the Local Group: the assembly histories of NGC 253 and ...

Fri Jul 29 17:26:32 GMT 2016

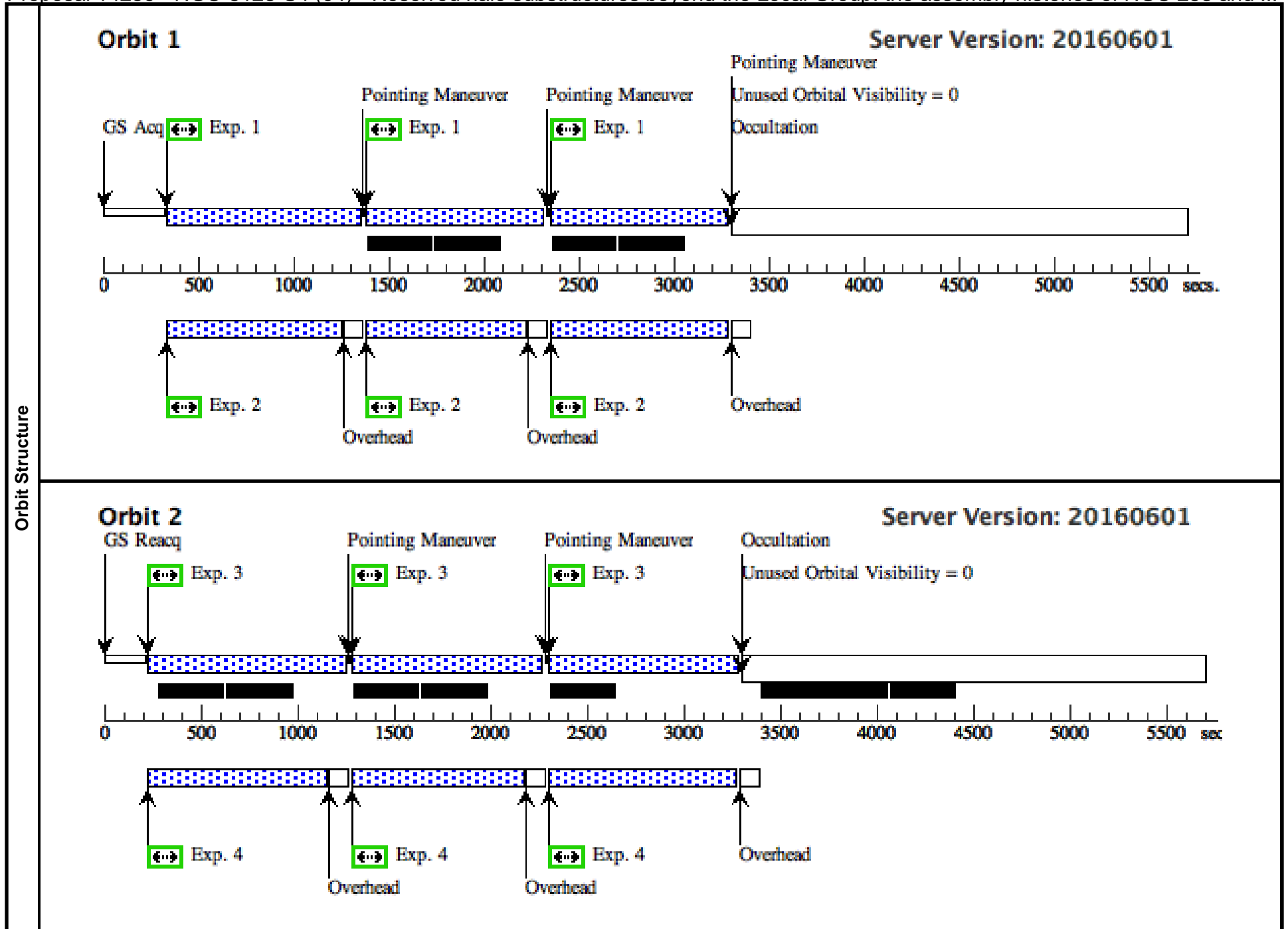
Visit	Proposal 14259, NGC-5128-S3 (03), completed Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS, ACS/WFC Special Requirements: ORIENT 250D TO 300 D									
	Patterns	#	Primary Pattern	Secondary Pattern	Exposures					
		(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=3 Point Spacing=3.011 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.28 Angle Between Sides= Center Pattern=false		(1-2), (3-4)				
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(3)	NGC-5128-S3	RA: 13 31 57.6000 (202.9900000d) Dec: -42 51 0.00 (-42.85000d) Equinox: J2000 Comments: estimated TRGB magnitude		V=25+/-0.5	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	F814W ACS	(3) NGC-5128-S3	ACS/WFC, ACCUM, WFC	F814W			Pattern 1, Exps 1-2 in NGC-5128-S3 (03) (1) Prime + Parallel Group 1-2 in Pattern 1, Exps 1-2 in NGC-5128-S3 (03)	1200 Secs (2430 Secs) [==>810.0 Secs (Pattern 1)] [==>810.0 Secs (Pattern 2)] [==>810.0 Secs (Pattern 3)]	[1]
	2	F814W WF C3	ANY	WFC3/UVIS, ACCUM, UVIS1	F814W			Pattern 1, Exps 1-2 in NGC-5128-S3 (03) (1) Prime + Parallel Group 1-2 in Pattern 1, Exps 1-2 in NGC-5128-S3 (03)	1200 Secs (2660 Secs) [==>890.0 Secs (Pattern 1)] [==>840.0 Secs (Pattern 2)] [==>930.0 Secs (Pattern 3)]	[1]
	3	F606W ACS	(3) NGC-5128-S3	ACS/WFC, ACCUM, WFC	F606W			Pattern 1, Exps 3-4 in NGC-5128-S3 (03) (1) Prime + Parallel Group 3-4 in Pattern 1, Exps 3-4 in NGC-5128-S3 (03)	900 Secs (2568 Secs) [==>848.0 Secs (Pattern 1)] [==>860.0 Secs (Pattern 2)] [==>860 Secs (Pattern 3)]	[2]
	4	F606W WF C3	ANY	WFC3/UVIS, ACCUM, UVIS1	F606W			Pattern 1, Exps 3-4 in NGC-5128-S3 (03) (1) Prime + Parallel Group 3-4 in Pattern 1, Exps 3-4 in NGC-5128-S3 (03)	900 Secs (2770 Secs) [==>910.0 Secs (Pattern 1)] [==>890.0 Secs (Pattern 2)] [==>970.0 Secs (Pattern 3)]	[2]



Proposal 14259 - NGC-5128-S4 (04) - Resolved halo substructures beyond the Local Group: the assembly histories of NGC 253 and ...

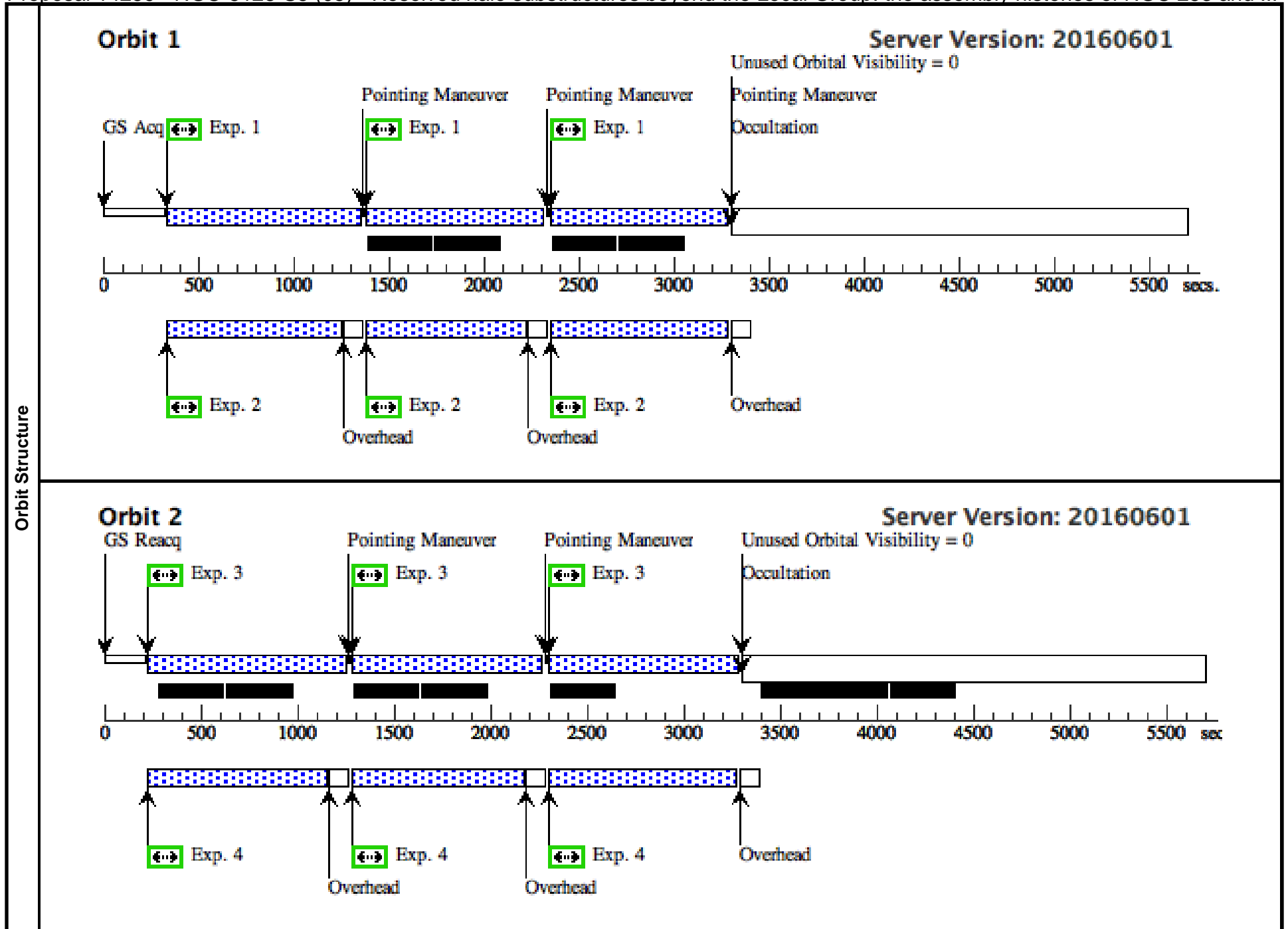
Fri Jul 29 17:26:32 GMT 2016

Visit	Proposal 14259, NGC-5128-S4 (04), scheduling Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS, ACS/WFC Special Requirements: ORIENT 140D TO 270 D									
	Patterns	#	Primary Pattern	Secondary Pattern	Exposures					
	(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=3 Point Spacing=3.011 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.28 Angle Between Sides= Center Pattern=false		(1-2), (3-4)					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(4)	NGC-5128-S4	RA: 13 23 19.2000 (200.8300000d) Dec: -43 15 0.00 (-43.25000d) Equinox: J2000 Comments: estimated TRGB magnitude		V=25+/-0.5	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	F814W ACS	(4) NGC-5128-S4	ACS/WFC, ACCUM, WFC	F814W			Pattern 1, Exps 1-2 in NGC-5128-S4 (04) (1) Prime + Parallel Group 1-2 in Pattern 1, Exps 1-2 in NGC-5128-S4 (04)	1200 Secs (2430 Secs) [==>810.0 Secs (Pattern 1)] [==>810.0 Secs (Pattern 2)] [==>810.0 Secs (Pattern 3)]	[1]
	2	F814W WF C3	ANY	WFC3/UVIS, ACCUM, UVIS1	F814W			Pattern 1, Exps 1-2 in NGC-5128-S4 (04) (1) Prime + Parallel Group 1-2 in Pattern 1, Exps 1-2 in NGC-5128-S4 (04)	1200 Secs (2660 Secs) [==>890.0 Secs (Pattern 1)] [==>840.0 Secs (Pattern 2)] [==>930.0 Secs (Pattern 3)]	[1]
	3	F606W ACS	(4) NGC-5128-S4	ACS/WFC, ACCUM, WFC	F606W			Pattern 1, Exps 3-4 in NGC-5128-S4 (04) (1) Prime + Parallel Group 3-4 in Pattern 1, Exps 3-4 in NGC-5128-S4 (04)	900 Secs (2568 Secs) [==>848.0 Secs (Pattern 1)] [==>860.0 Secs (Pattern 2)] [==>860 Secs (Pattern 3)]	[2]
	4	F606W WF C3	ANY	WFC3/UVIS, ACCUM, UVIS1	F606W			Pattern 1, Exps 3-4 in NGC-5128-S4 (04) (1) Prime + Parallel Group 3-4 in Pattern 1, Exps 3-4 in NGC-5128-S4 (04)	900 Secs (2770 Secs) [==>910.0 Secs (Pattern 1)] [==>890.0 Secs (Pattern 2)] [==>970.0 Secs (Pattern 3)]	[2]



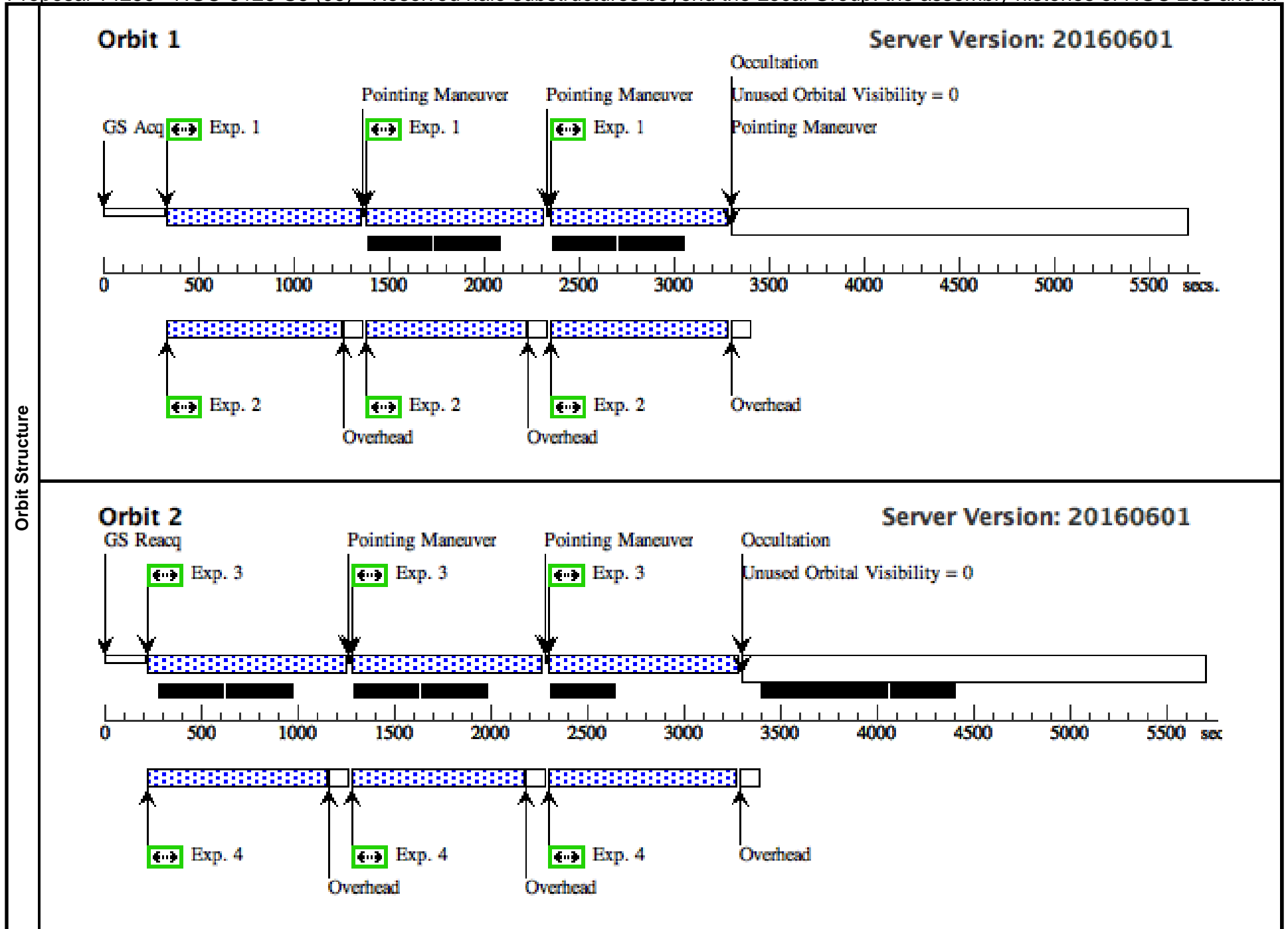
Proposal 14259 - NGC-5128-S5 (05) - Resolved halo substructures beyond the Local Group: the assembly histories of NGC 253 and ...

Visit		Proposal 14259, NGC-5128-S5 (05), completed Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS, ACS/WFC Special Requirements: ORIENT 280D TO 45 D; ORIENT 110D TO 120 D					Fri Jul 29 17:26:32 GMT 2016			
Patterns	#	Primary Pattern		Secondary Pattern		Exposures				
	(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=3 Point Spacing=3.011 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.28 Angle Between Sides= Center Pattern=false			(1-2), (3-4)				
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(5)	NGC-5128-S5	RA: 13 23 55.2000 (200.9800000d) Dec: -41 44 42.00 (-41.74500d) Equinox: J2000 Comments: estimated TRGB magnitude		V=25+/-0.5	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	F814W ACS (5)	NGC-5128-S5	ACS/WFC, ACCUM, WFC	F814W			Pattern 1, Exps 1-2 in NGC-5128-S5 (05) (1) Prime + Parallel Group 1-2 in Pattern 1, Exps 1-2 in NGC-5128-S5 (05)	1200 Secs (2430 Secs) [==>810.0 Secs (Pattern 1)] [==>810.0 Secs (Pattern 2)] [==>810.0 Secs (Pattern 3)]	[1]
	2	F814W WF C3	ANY	WFC3/UVIS, ACCUM, UVIS1	F814W			Pattern 1, Exps 1-2 in NGC-5128-S5 (05) (1) Prime + Parallel Group 1-2 in Pattern 1, Exps 1-2 in NGC-5128-S5 (05)	1200 Secs (2660 Secs) [==>890.0 Secs (Pattern 1)] [==>840.0 Secs (Pattern 2)] [==>930.0 Secs (Pattern 3)]	[1]
	3	F606W ACS (5)	NGC-5128-S5	ACS/WFC, ACCUM, WFC	F606W			Pattern 1, Exps 3-4 in NGC-5128-S5 (05) (1) Prime + Parallel Group 3-4 in Pattern 1, Exps 3-4 in NGC-5128-S5 (05)	900 Secs (2568 Secs) [==>848.0 Secs (Pattern 1)] [==>860.0 Secs (Pattern 2)] [==>860 Secs (Pattern 3)]	[2]
	4	F606W WF C3	ANY	WFC3/UVIS, ACCUM, UVIS1	F606W			Pattern 1, Exps 3-4 in NGC-5128-S5 (05) (1) Prime + Parallel Group 3-4 in Pattern 1, Exps 3-4 in NGC-5128-S5 (05)	900 Secs (2770 Secs) [==>910.0 Secs (Pattern 1)] [==>890.0 Secs (Pattern 2)] [==>970.0 Secs (Pattern 3)]	[2]



Proposal 14259 - NGC-5128-S6 (06) - Resolved halo substructures beyond the Local Group: the assembly histories of NGC 253 and ...

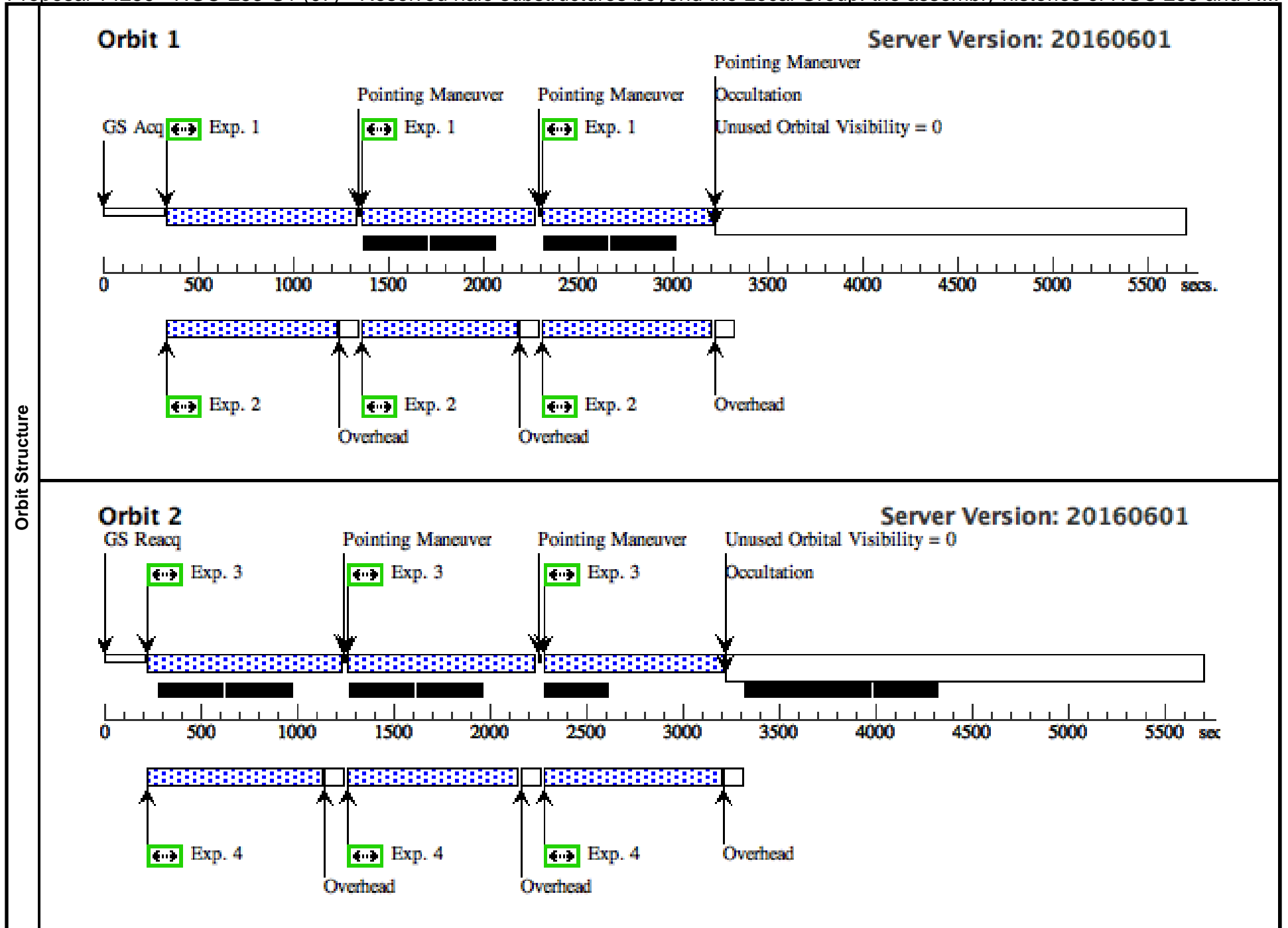
Visit		Proposal 14259, NGC-5128-S6 (06), scheduling Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS, ACS/WFC Special Requirements: ORIENT 280D TO 10 D					Fri Jul 29 17:26:32 GMT 2016			
Patterns	#	Primary Pattern		Secondary Pattern		Exposures				
	(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=3 Point Spacing=3.011 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.28 Angle Between Sides= Center Pattern=false			(1-2), (3-4)				
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(6)	NGC-5128-S6	RA: 13 26 52.8000 (201.7200000d) Dec: -42 23 24.00 (-42.39000d) Equinox: J2000 Comments: estimated TRGB magnitude		V=25+/-0.5	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	F814W ACS (6)	NGC-5128-S6	ACS/WFC, ACCUM, WFC	F814W			Pattern 1, Exps 1-2 in NGC-5128-S6 (06) (1) Prime + Parallel Group 1-2 in Pattern 1, Exps 1-2 in NGC-5128-S6 (06)	1200 Secs (2430 Secs) [==>810.0 Secs (Pattern 1)] [==>810.0 Secs (Pattern 2)] [==>810.0 Secs (Pattern 3)]	[1]
	2	F814W WF C3	ANY	WFC3/UVIS, ACCUM, UVIS1	F814W			Pattern 1, Exps 1-2 in NGC-5128-S6 (06) (1) Prime + Parallel Group 1-2 in Pattern 1, Exps 1-2 in NGC-5128-S6 (06)	1200 Secs (2660 Secs) [==>890.0 Secs (Pattern 1)] [==>840.0 Secs (Pattern 2)] [==>930.0 Secs (Pattern 3)]	[1]
	3	F606W ACS (6)	NGC-5128-S6	ACS/WFC, ACCUM, WFC	F606W			Pattern 1, Exps 3-4 in NGC-5128-S6 (06) (1) Prime + Parallel Group 3-4 in Pattern 1, Exps 3-4 in NGC-5128-S6 (06)	900 Secs (2568 Secs) [==>848.0 Secs (Pattern 1)] [==>860.0 Secs (Pattern 2)] [==>860 Secs (Pattern 3)]	[2]
	4	F606W WF C3	ANY	WFC3/UVIS, ACCUM, UVIS1	F606W			Pattern 1, Exps 3-4 in NGC-5128-S6 (06) (1) Prime + Parallel Group 3-4 in Pattern 1, Exps 3-4 in NGC-5128-S6 (06)	900 Secs (2770 Secs) [==>910.0 Secs (Pattern 1)] [==>890.0 Secs (Pattern 2)] [==>970.0 Secs (Pattern 3)]	[2]



Proposal 14259 - NGC-253-S1 (07) - Resolved halo substructures beyond the Local Group: the assembly histories of NGC 253 and N...

Fri Jul 29 17:26:33 GMT 2016

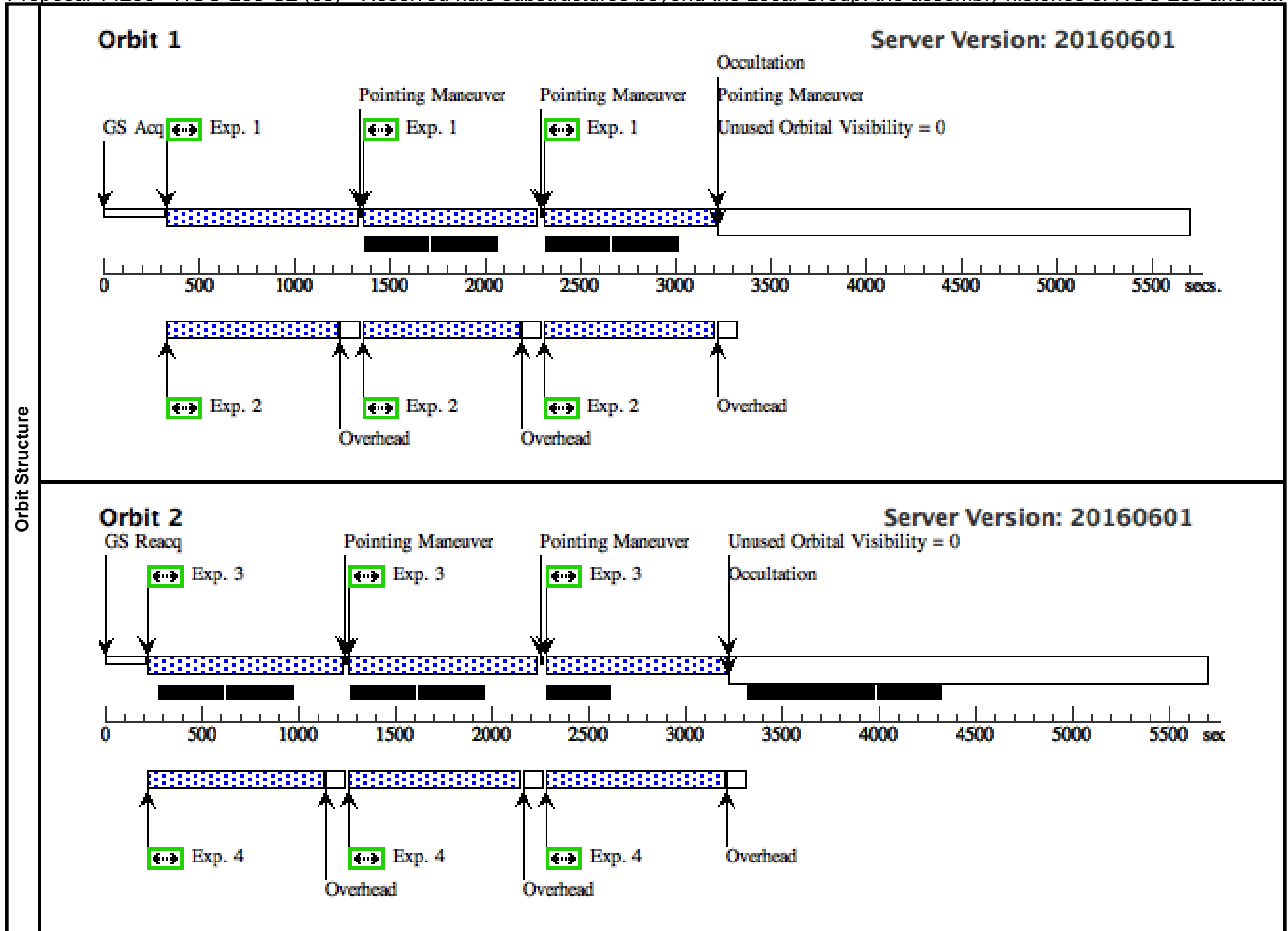
Visit	Proposal 14259, NGC-253-S1 (07), completed Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS, ACS/WFC Special Requirements: ORIENT 0D TO 240 D									
	Patterns	#	Primary Pattern	Secondary Pattern	Exposures					
		(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=3 Point Spacing=3.011 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.28 Angle Between Sides= Center Pattern=false		(1-2), (3-4)				
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(7)	NGC-253-S1	RA: 00 47 16.8000 (11.8200000d) Dec: -25 36 0.00 (-25.600000d) Equinox: J2000 Comments: estimated TRGB magnitude		V=25+/-0.5	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	F814W ACS	(7) NGC-253-S1	ACS/WFC, ACCUM, WFC	F814W			Pattern 1, Exps 1-2 in NGC-253-S1 (07) (1) Prime + Parallel Group 1-2 in Pattern 1, Exps 1-2 in NGC-253-S1 (07)	1200 Secs (2352 Secs) [==>790.0 Secs (Pattern 1)] [==>790.0 Secs (Pattern 2)] [==>772.0 Secs (Pattern 3)]	[1]
	2	F814W WF C3	ANY	WFC3/UVIS, ACCUM, UVIS1	F814W			Pattern 1, Exps 1-2 in NGC-253-S1 (07) (1) Prime + Parallel Group 1-2 in Pattern 1, Exps 1-2 in NGC-253-S1 (07)	1200 Secs (2580 Secs) [==>870.0 Secs (Pattern 1)] [==>820.0 Secs (Pattern 2)] [==>890.0 Secs (Pattern 3)]	[1]
	3	F606W ACS	(7) NGC-253-S1	ACS/WFC, ACCUM, WFC	F606W			Pattern 1, Exps 3-4 in NGC-253-S1 (07) (1) Prime + Parallel Group 3-4 in Pattern 1, Exps 3-4 in NGC-253-S1 (07)	900 Secs (2490 Secs) [==>830.0 Secs (Pattern 1)] [==>850.0 Secs (Pattern 2)] [==>810.0 Secs (Pattern 3)]	[2]
	4	F606W WF C3	ANY	WFC3/UVIS, ACCUM, UVIS1	F606W			Pattern 1, Exps 3-4 in NGC-253-S1 (07) (1) Prime + Parallel Group 3-4 in Pattern 1, Exps 3-4 in NGC-253-S1 (07)	900 Secs (2690 Secs) [==>890.0 Secs (Pattern 1)] [==>880.0 Secs (Pattern 2)] [==>920.0 Secs (Pattern 3)]	[2]



Proposal 14259 - NGC-253-S2 (08) - Resolved halo substructures beyond the Local Group: the assembly histories of NGC 253 and N...

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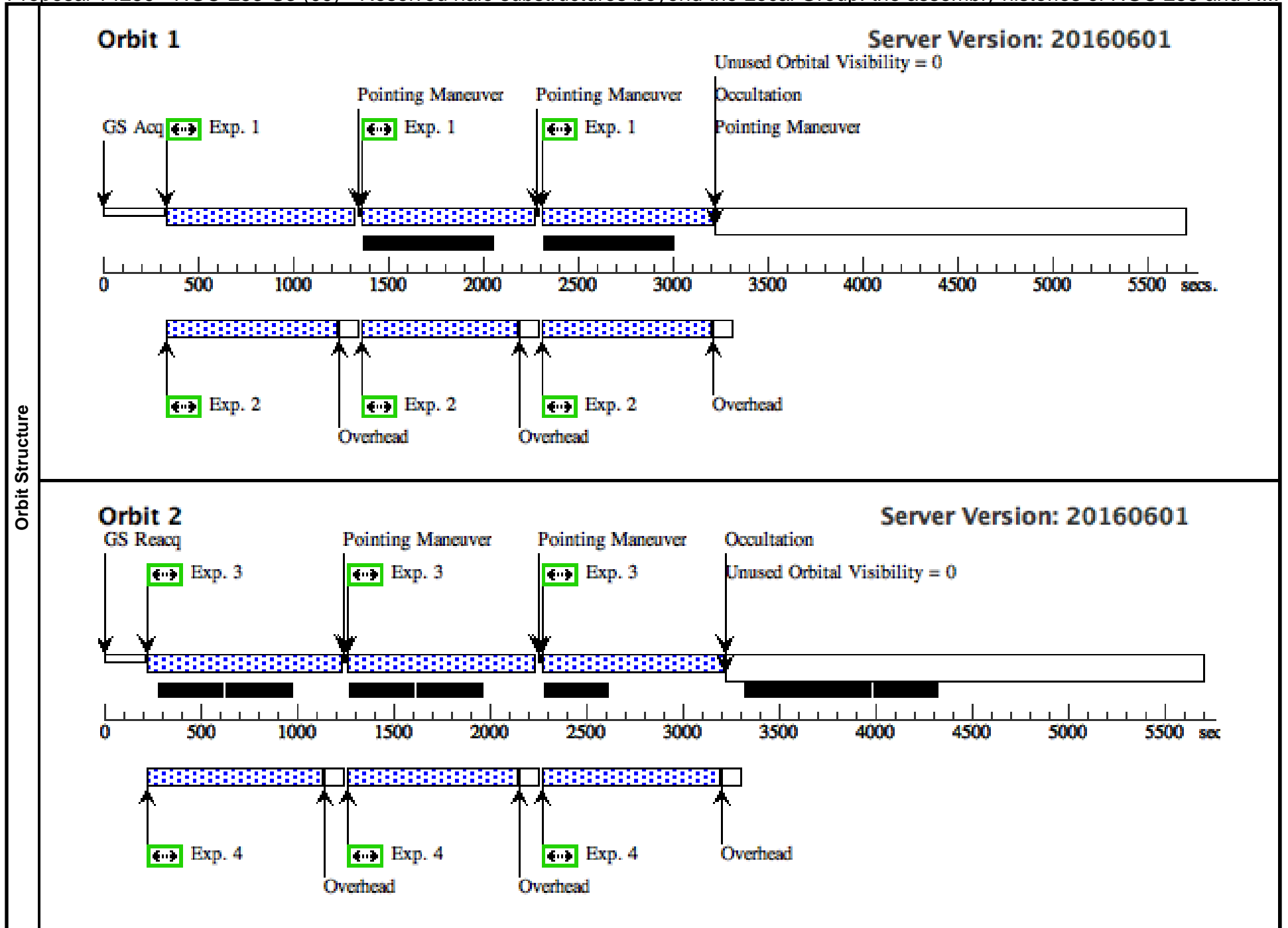
Visit	Proposal 14259, NGC-253-S2 (08), completed Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS, ACS/WFC Special Requirements: ORIENT 180D TO 320 D									
	Patterns	#	Primary Pattern	Secondary Pattern	Exposures					
	(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=3 Point Spacing=3.011 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.28 Angle Between Sides= Center Pattern=false		(1-2), (3-4)					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(8)	NGC-253-S2	RA: 00 46 6.0000 (11.5250000d) Dec: -25 19 48.00 (-25.33000d) Equinox: J2000 Comments: estimated TRGB magnitude		V=25+/-0.5	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	F814W ACS	(8) NGC-253-S2	ACS/WFC, ACCUM, WFC	F814W			Pattern 1, Exps 1-2 in NGC-253-S2 (08) (1) Prime + Parallel Group 1-2 in Pattern 1, Exps 1-2 in NGC-253-S2 (08)	1200 Secs (2352 Secs) [==>790.0 Secs (Pattern 1)] [==>790.0 Secs (Pattern 2)] [==>772.0 Secs (Pattern 3)]	[1]
	2	F814W WF C3	ANY	WFC3/UVIS, ACCUM, UVIS1	F814W			Pattern 1, Exps 1-2 in NGC-253-S2 (08) (1) Prime + Parallel Group 1-2 in Pattern 1, Exps 1-2 in NGC-253-S2 (08)	1200 Secs (2580 Secs) [==>870.0 Secs (Pattern 1)] [==>820.0 Secs (Pattern 2)] [==>890.0 Secs (Pattern 3)]	[1]
	3	F606W ACS	(8) NGC-253-S2	ACS/WFC, ACCUM, WFC	F606W			Pattern 1, Exps 3-4 in NGC-253-S2 (08) (1) Prime + Parallel Group 3-4 in Pattern 1, Exps 3-4 in NGC-253-S2 (08)	900 Secs (2490 Secs) [==>830.0 Secs (Pattern 1)] [==>850.0 Secs (Pattern 2)] [==>810.0 Secs (Pattern 3)]	[2]
	4	F606W WF C3	ANY	WFC3/UVIS, ACCUM, UVIS1	F606W			Pattern 1, Exps 3-4 in NGC-253-S2 (08) (1) Prime + Parallel Group 3-4 in Pattern 1, Exps 3-4 in NGC-253-S2 (08)	900 Secs (2690 Secs) [==>890.0 Secs (Pattern 1)] [==>880.0 Secs (Pattern 2)] [==>920.0 Secs (Pattern 3)]	[2]



Proposal 14259 - NGC-253-S3 (09) - Resolved halo substructures beyond the Local Group: the assembly histories of NGC 253 and N...

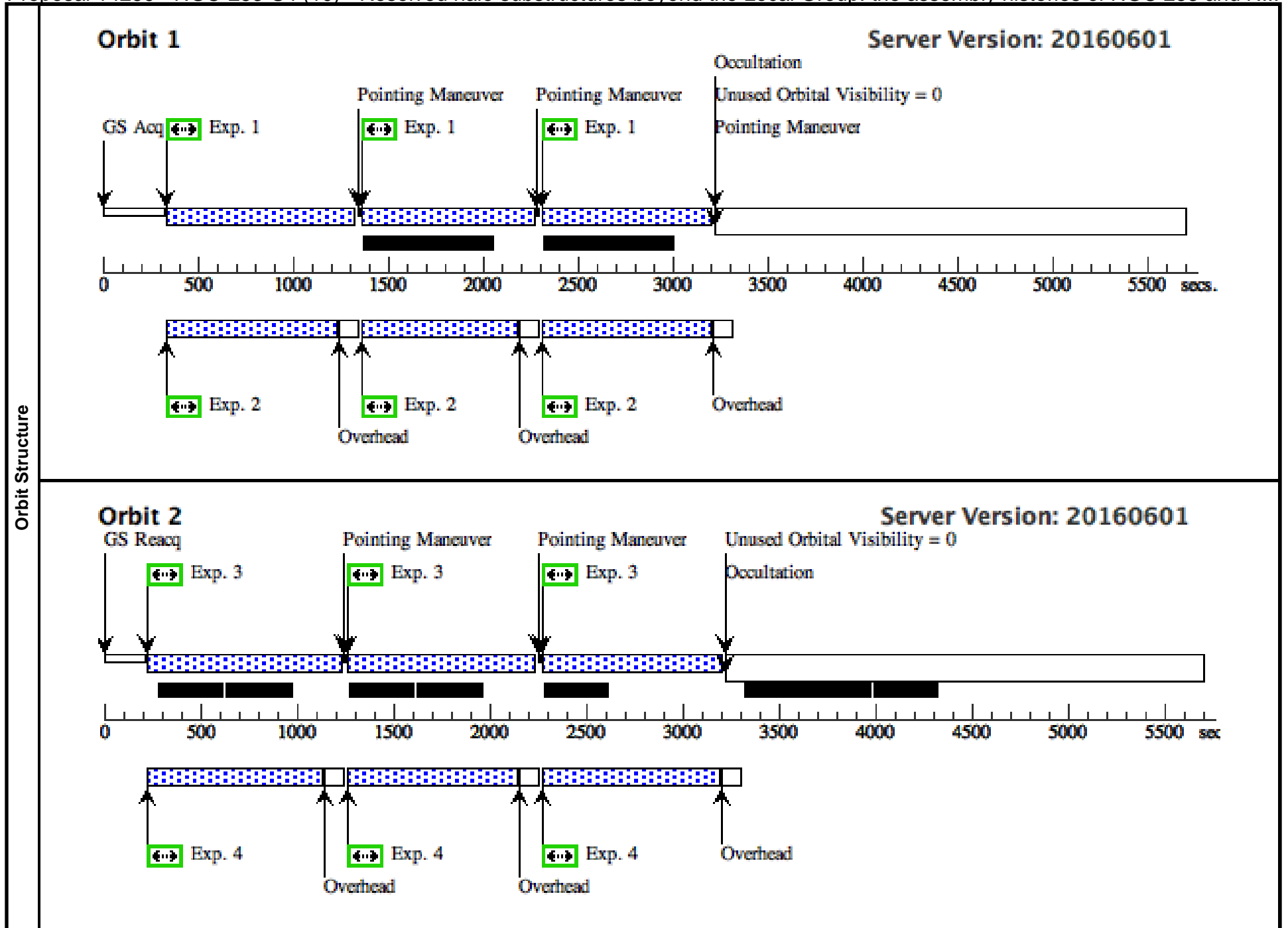
Fri Jul 29 17:26:33 GMT 2016

Visit	Proposal 14259, NGC-253-S3 (09), scheduling Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS, ACS/WFC Special Requirements: ORIENT 180D TO 30 D									
	Patterns	#	Primary Pattern	Secondary Pattern	Exposures					
	(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=3 Point Spacing=3.011 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.28 Angle Between Sides= Center Pattern=false		(1-2), (3-4)					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(9)	NGC-253-S3	RA: 00 47 48.0000 (11.9500000d) Dec: -25 01 12.00 (-25.02000d) Equinox: J2000 <i>Comments: estimated TRGB magnitude</i>		V=25+/-0.5	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	F814W ACS (9)	NGC-253-S3	ACS/WFC, ACCUM, WFC	F814W			Pattern 1, Exps 1-2 in NGC-253-S3 (09) (1) Prime + Parallel Group 1-2 in Pattern 1, Exps 1-2 in NGC-253-S3 (09)	1200 Secs (2352 Secs) [==>787.0 Secs (Pattern 1)] [==>787.0 Secs (Pattern 2)] [==>778.0 Secs (Pattern 3)]	[1]
	2	F814W WF C3	ANY	WFC3/UVIS, ACCUM, UVIS1	F814W			Pattern 1, Exps 1-2 in NGC-253-S3 (09) (1) Prime + Parallel Group 1-2 in Pattern 1, Exps 1-2 in NGC-253-S3 (09)	1200 Secs (2580 Secs) [==>870.0 Secs (Pattern 1)] [==>820.0 Secs (Pattern 2)] [==>890.0 Secs (Pattern 3)]	[1]
	3	F606W ACS (9)	NGC-253-S3	ACS/WFC, ACCUM, WFC	F606W			Pattern 1, Exps 3-4 in NGC-253-S3 (09) (1) Prime + Parallel Group 3-4 in Pattern 1, Exps 3-4 in NGC-253-S3 (09)	900 Secs (2490 Secs) [==>827.0 Secs (Pattern 1)] [==>847.0 Secs (Pattern 2)] [==>816.0 Secs (Pattern 3)]	[2]
	4	F606W WF C3	ANY	WFC3/UVIS, ACCUM, UVIS1	F606W			Pattern 1, Exps 3-4 in NGC-253-S3 (09) (1) Prime + Parallel Group 3-4 in Pattern 1, Exps 3-4 in NGC-253-S3 (09)	900 Secs (2690 Secs) [==>890.0 Secs (Pattern 1)] [==>880.0 Secs (Pattern 2)] [==>920.0 Secs (Pattern 3)]	[2]



Proposal 14259 - NGC-253-S4 (10) - Resolved halo substructures beyond the Local Group: the assembly histories of NGC 253 and N...

Visit	Proposal 14259, NGC-253-S4 (10), completed Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS, ACS/WFC Special Requirements: ORIENT 20D TO 100 D; ORIENT 210D TO 280 D					Fri Jul 29 17:26:33 GMT 2016				
Patterns	#	Primary Pattern	Secondary Pattern	Exposures						
	(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=3 Point Spacing=3.011 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.28 Angle Between Sides= Center Pattern=false	(1-2), (3-4)						
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(10)	NGC-253-S4	RA: 00 50 16.8000 (12.5700000d)		V=25+/-0.5	Reference Frame: ICRS				
		Alt Name1: SCL-MM-DW2	Dec: -24 44 24.00 (-24.74000d)							
		Alt Name2: SCL-DW-005021-244312	Equinox: J2000							
	<i>Comments: estimated TRGB magnitude</i>									
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	F814W ACS	(10) NGC-253-S4	ACS/WFC, ACCUM, WFC	F814W			Pattern 1, Exps 1-2 in NGC-253-S4 (10) (1) Prime + Parallel Group 1-2 in Pattern 1, Exps 1-2 in NGC-253-S4 (10)	1200 Secs (2345 Secs) [==>787.0 Secs (Pattern 1)] [==>787.0 Secs (Pattern 2)] [==>771.0 Secs (Pattern 3)]	[1]
	2	F814W WF C3	ANY	WFC3/UVIS, ACCUM, UVIS1	F814W			Pattern 1, Exps 1-2 in NGC-253-S4 (10) (1) Prime + Parallel Group 1-2 in Pattern 1, Exps 1-2 in NGC-253-S4 (10)	1200 Secs (2580 Secs) [==>870.0 Secs (Pattern 1)] [==>820.0 Secs (Pattern 2)] [==>890.0 Secs (Pattern 3)]	[1]
	3	F606W ACS	(10) NGC-253-S4	ACS/WFC, ACCUM, WFC	F606W			Pattern 1, Exps 3-4 in NGC-253-S4 (10) (1) Prime + Parallel Group 3-4 in Pattern 1, Exps 3-4 in NGC-253-S4 (10)	900 Secs (2483 Secs) [==>827.0 Secs (Pattern 1)] [==>847.0 Secs (Pattern 2)] [==>809.0 Secs (Pattern 3)]	[2]
	4	F606W WF C3	ANY	WFC3/UVIS, ACCUM, UVIS1	F606W			Pattern 1, Exps 3-4 in NGC-253-S4 (10) (1) Prime + Parallel Group 3-4 in Pattern 1, Exps 3-4 in NGC-253-S4 (10)	900 Secs (2690 Secs) [==>890.0 Secs (Pattern 1)] [==>880.0 Secs (Pattern 2)] [==>920.0 Secs (Pattern 3)]	[2]



Proposal 14259 - NGC-253-S4 (11) - Resolved halo substructures beyond the Local Group: the assembly histories of NGC 253 and N...

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Visit	Proposal 14259, NGC-253-S4 (11) Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS, ACS/WFC Special Requirements: ORIENT 20D TO 100 D; ORIENT 210D TO 280 D Comments: HOPR repeat of visit 10									
	Patterns	#	Primary Pattern	Secondary Pattern	Exposures					
		(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=3 Point Spacing=3.011 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.28 Angle Between Sides= Center Pattern=false		(1-2), (3-4)				
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(10)	NGC-253-S4	RA: 00 50 16.8000 (12.5700000d)		V=25+/-0.5	Reference Frame: ICRS				
		Alt Name1: SCL-MM-DW2	Dec: -24 44 24.00 (-24.74000d)							
		Alt Name2: SCL-DW-005021-244312	Equinox: J2000							
	Comments: estimated TRGB magnitude									
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	F814W ACS	(10) NGC-253-S4	ACS/WFC, ACCUM, WFC	F814W			Pattern 1, Exps 1-2 in NGC-253-S4 (11) (1) Prime + Parallel Group 1-2 in Pattern 1, Exps 1-2 in NGC-253-S4 (11)	1200 Secs (2345 Secs) [==>787.0 Secs (Pattern 1)] [==>787.0 Secs (Pattern 2)] [==>771.0 Secs (Pattern 3)]	[1]
	2	F814W WF C3	ANY	WFC3/UVIS, ACCUM, UVIS1	F814W			Pattern 1, Exps 1-2 in NGC-253-S4 (11) (1) Prime + Parallel Group 1-2 in Pattern 1, Exps 1-2 in NGC-253-S4 (11)	1200 Secs (2580 Secs) [==>870.0 Secs (Pattern 1)] [==>820.0 Secs (Pattern 2)] [==>890.0 Secs (Pattern 3)]	[1]
	3	F606W ACS	(10) NGC-253-S4	ACS/WFC, ACCUM, WFC	F606W			Pattern 1, Exps 3-4 in NGC-253-S4 (11) (1) Prime + Parallel Group 3-4 in Pattern 1, Exps 3-4 in NGC-253-S4 (11)	900 Secs (2483 Secs) [==>827.0 Secs (Pattern 1)] [==>847.0 Secs (Pattern 2)] [==>809.0 Secs (Pattern 3)]	[2]
	4	F606W WF C3	ANY	WFC3/UVIS, ACCUM, UVIS1	F606W			Pattern 1, Exps 3-4 in NGC-253-S4 (11) (1) Prime + Parallel Group 3-4 in Pattern 1, Exps 3-4 in NGC-253-S4 (11)	900 Secs (2690 Secs) [==>890.0 Secs (Pattern 1)] [==>880.0 Secs (Pattern 2)] [==>920.0 Secs (Pattern 3)]	[2]

