



15186 - Enabling HST UV Exploration of the Low Surface Brightness Universe: A Pilot Study with the WFC3 X Filter Set

Cycle: 25, Proposal Category: GO

(UV Initiative)

(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) HOLMBERG-I	WFC3/UVIS	2	11-Apr-2018 13:00:34.0	yes
55	(3) UGC9024	WFC3/UVIS	2	11-Apr-2018 13:00:36.0	yes
56	(3) UGC9024	WFC3/UVIS	2	11-Apr-2018 13:00:37.0	yes
57	(5) MALIN-2	WFC3/UVIS	2	11-Apr-2018 13:00:39.0	yes
58	(5) MALIN-2	WFC3/UVIS	2	11-Apr-2018 13:00:40.0	yes
02	(2) NGC628XUV	WFC3/UVIS	3	11-Apr-2018 13:00:42.0	yes
04	(4) UGC1382	WFC3/UVIS	4	11-Apr-2018 13:00:44.0	yes
54	(4) UGC1382	WFC3/UVIS	4	11-Apr-2018 13:00:47.0	yes

21 Total Orbits Used

ABSTRACT

We request 17 orbits to conduct a pilot study to examine the effectiveness of the WFC3/UVIS F300X filter for studying fundamental problems in star formation in the low density regime. In principle, the broader bandpass and higher throughput of F300X can halve the required observing time relative to F275W, the filter of choice for studying young stellar populations in nearby galaxies. Together with F475W and F600LP, this X filter set may be as effective as standard UVIS broadband filters for characterizing the physical properties of such populations. We will observe 5 low surface brightness targets with a range of properties to test potential issues with F300X: the red tail to 4000Å and a red leak beyond, ghosts, and the wider bandpass. Masses and ages of massive stars, young star clusters, and clumps derived from photometry from the X filter set will be compared with corresponding measurements from standard filters. Beyond testing, our program will provide the first sample spanning a range of LSB galaxy properties for which HST UV imaging will be obtained, and a glimpse into the ensemble properties of the quanta of star formation in these strange environments. The increased observing efficiency would make more tractable programs which require several tens to hundreds of orbits to aggregate sufficient numbers of massive stars, young star clusters, and clumps to build statistical samples. We are hopeful that our pilot observations will broadly enable high-resolution UV imaging exploration of the low density frontier of star formation while HST is still in good health.

OBSERVING DESCRIPTION

To demonstrate the utility of imaging with the HST X filter set for exploring star formation in low surface brightness (LSB) environments, we select 5 archetypal LSB targets. Our sample spans a range of distances to test the technique for studying young stars and star clusters in the outskirts of the

nearest galaxies, as well as for studying clumps in massive LSB disk galaxies such as Malin 1 which can only be found at larger distances. The resolved star formation "unit" will thus span a range of physical scales.

In order of increasing distance, our targets are: Holmberg I (UGC 5139) - dwarf irregular galaxy at 4 Mpc; NGC 628 - outer disk at 9.5 Mpc; UGC 9024 - archetypal LSB disk at 24 Mpc; UGC 1382 - ETG-XUV at 80 Mpc; and Malin 2 - giant LSB disk galaxy at 192 Mpc.

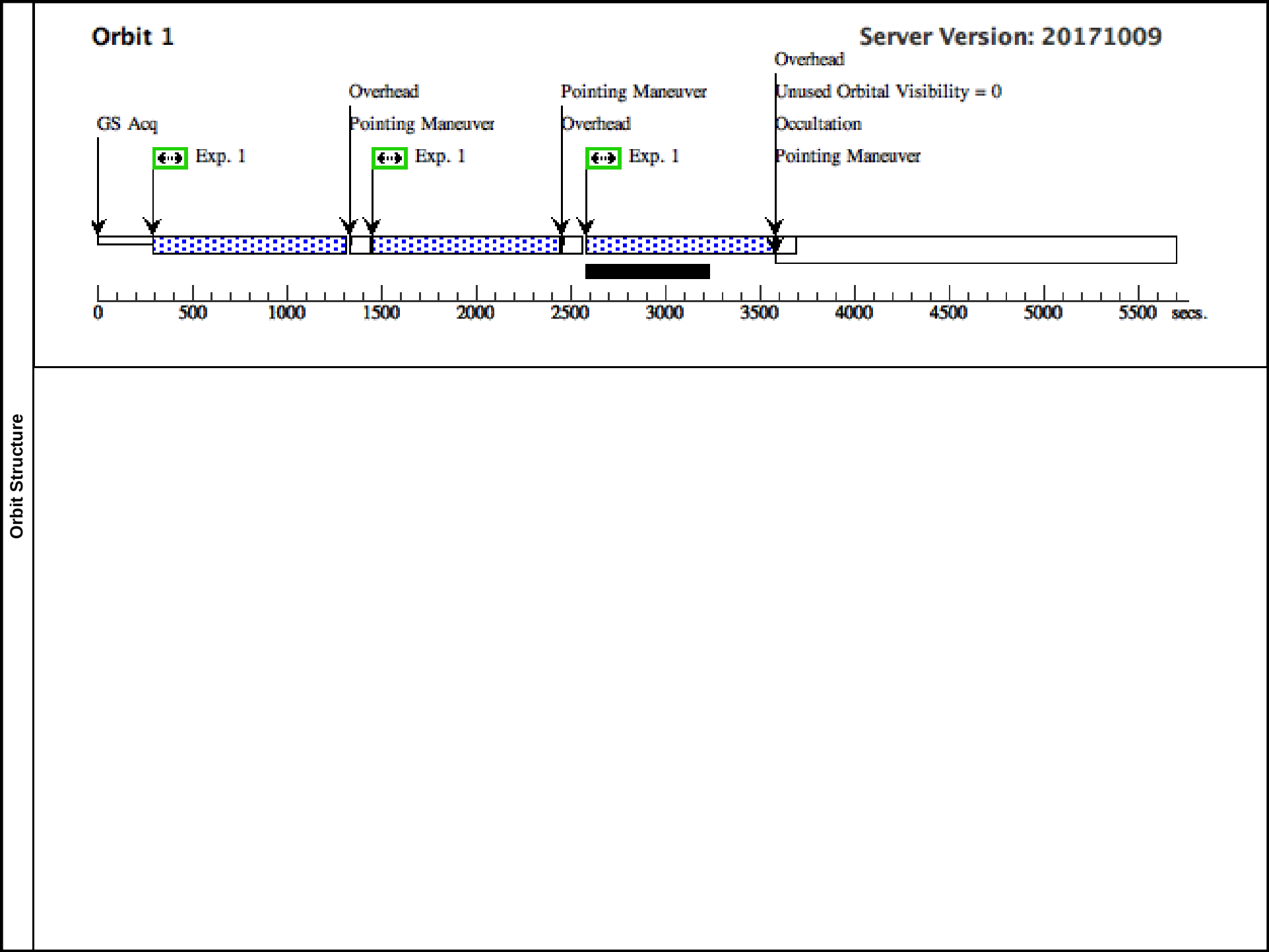
Coverage of the SED at three points across the NUV, blue and red bands is needed to constrain ages and masses of clusters and clumps. Filters F300X and F475W straddle the 4000Å break (for age) and stellar mass is probed with F600LP. Age/extinction degeneracy is a concern but extinction is generally low in LSB environments, and any strong dust features should be readily apparent in multi-color images from our observations, helping us to recognize which sources may be of increased concern regarding dust.

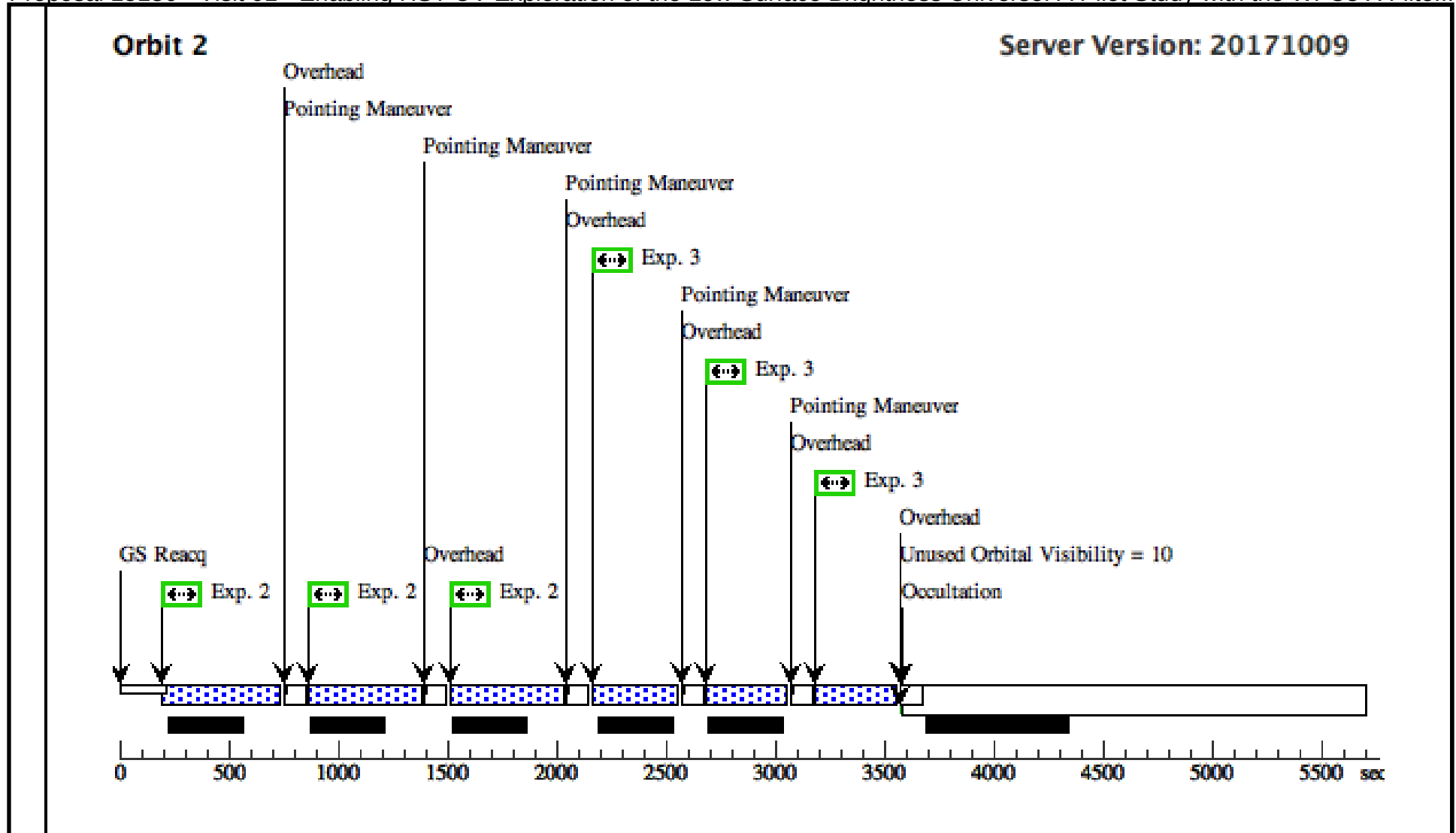
All but one of our targets will be observed with a visit of 3 or 4 orbits duration, devoted to WFC3/UVIS (F300X, F475X, F600LP) X-filter imaging during two orbits and standard filter imaging during either one or two orbits. Holmberg I already has enough archival (standard band) data for our purposes so we request only 2 orbits. For the NGC628 (XUV-disk) field we do not need F438W data (as data is already from LEGUS parallel imaging). We do require F275W imaging for testing against F300X in NGC 628 for CMD analyses. In this case, we will expose F275W for the same duration as F300X (full orbit). In the remaining 3 targets (UGC9024, UGC1382 and Malin 2) we will acquire the X-filter imaging as for the 2 other targets, and then devote the third and fourth orbits for F275W, F438W, and F814W. This clearly implies standard W bands will not be as deep as our X filter data, but we will focus on the brighter end of the detected cluster and clump population for testing.

We plan three dithered exposures per target in F300X and F475X. Two exposures will be taken per target with F600LP. Post-flash of a minimal number of electrons will be used for F300X and F275W, respectively, and for other bands as needed. We will employ LA-cosmic to flag and repair cosmic rays in the two exposure datasets before drizzling. We plan 2600s, 1600s and 850s total exposure respectively for F300X, F475X, F600LP (allowing for overheads of GS acquisition, dithering, filter wheel, and readout). Standard filter imaging time will split within orbits by filter to mimic our relative depth between ultra-wide filters.

Proposal 15186 - Visit 01 - Enabling HST UV Exploration of the Low Surface Brightness Universe: A Pilot Study with the WFC3 X Filte...

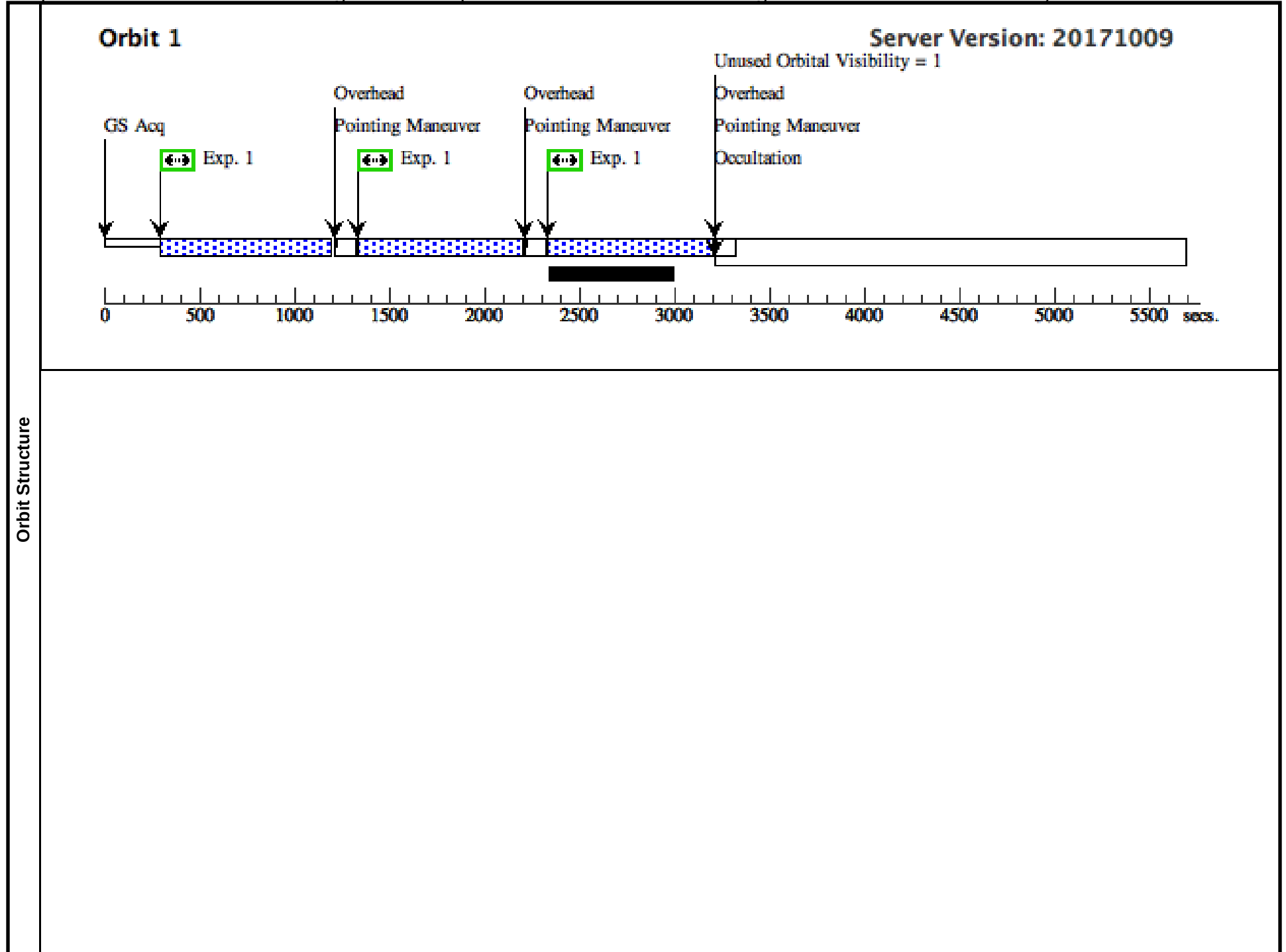
Visit	Proposal 15186, Visit 01, implementation										Wed Apr 11 17:00:49 GMT 2018
	Diagnostic Status: No Diagnostics										
	Scientific Instruments: WFC3/UVIS										
	Special Requirements: ORIENT 343D TO 353 D; ORIENT 163D TO 173 D; ORIENT 73D TO 83 D; ORIENT 253D TO 263 D										
Patterns	#	Primary Pattern					Secondary Pattern				Exposures
	(1)	Pattern Type=WFC3-UVIS-DITHER- LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.135 Line Spacing= Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false									(1), (2), (3)
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(1)	HOLMBERG-I	RA: 09 40 32.4216 (145.1350900d) Dec: +71 11 6.36 (71.18510d) Equinox: J2000				V=14.5		Reference Frame: NED		
	Comments: This object was generated by the targetselector and retrieved from the NED database.										
	Category=GALAXY Description=[LSB]										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit
	1		(1) HOLMBERG-I	WFC3/UVIS, ACCUM, UVIS-CENTER	F300X	FLASH=8		Pattern 1, Exps 1-1 i n Visit 01 (1)	900 Secs (2976 Secs)		
									[==>992.0 Secs (Pattern 1)] [==>992.0 Secs (Pattern 2)] [==>992.0 Secs (Pattern 3)]		[1]
	2		(1) HOLMBERG-I	WFC3/UVIS, ACCUM, UVIS-CENTER	F475X			Pattern 1, Exps 2-2 i n Visit 01 (1)	520 Secs (1560 Secs)		
									[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]		[2]
	3		(1) HOLMBERG-I	WFC3/UVIS, ACCUM, UVIS-CENTER	F600LP			Pattern 1, Exps 3-3 i n Visit 01 (1)	374 Secs (1122 Secs)		
									[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]		[2]

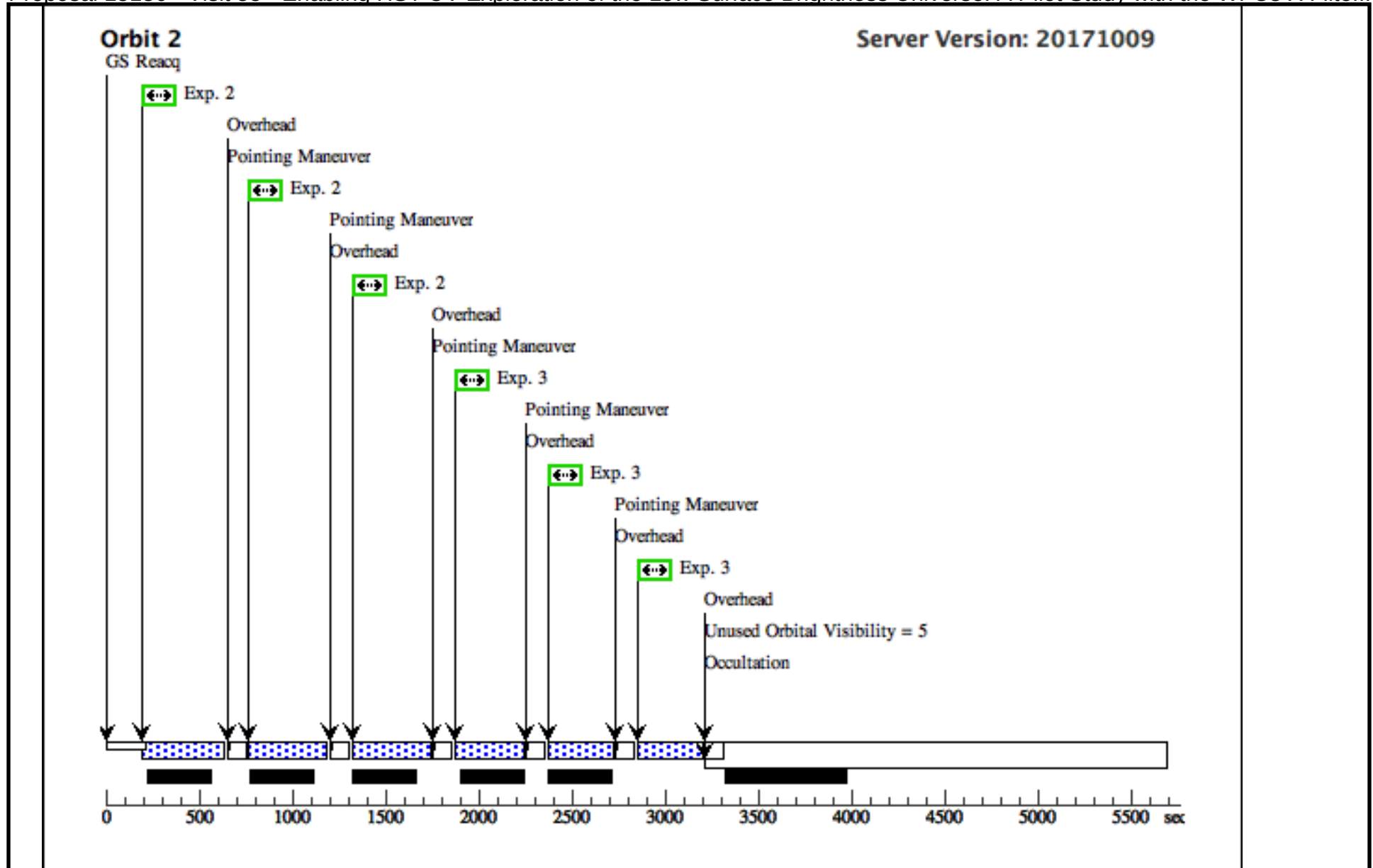




Proposal 15186 - Visit 55 - Enabling HST UV Exploration of the Low Surface Brightness Universe: A Pilot Study with the WFC3 X Filte...

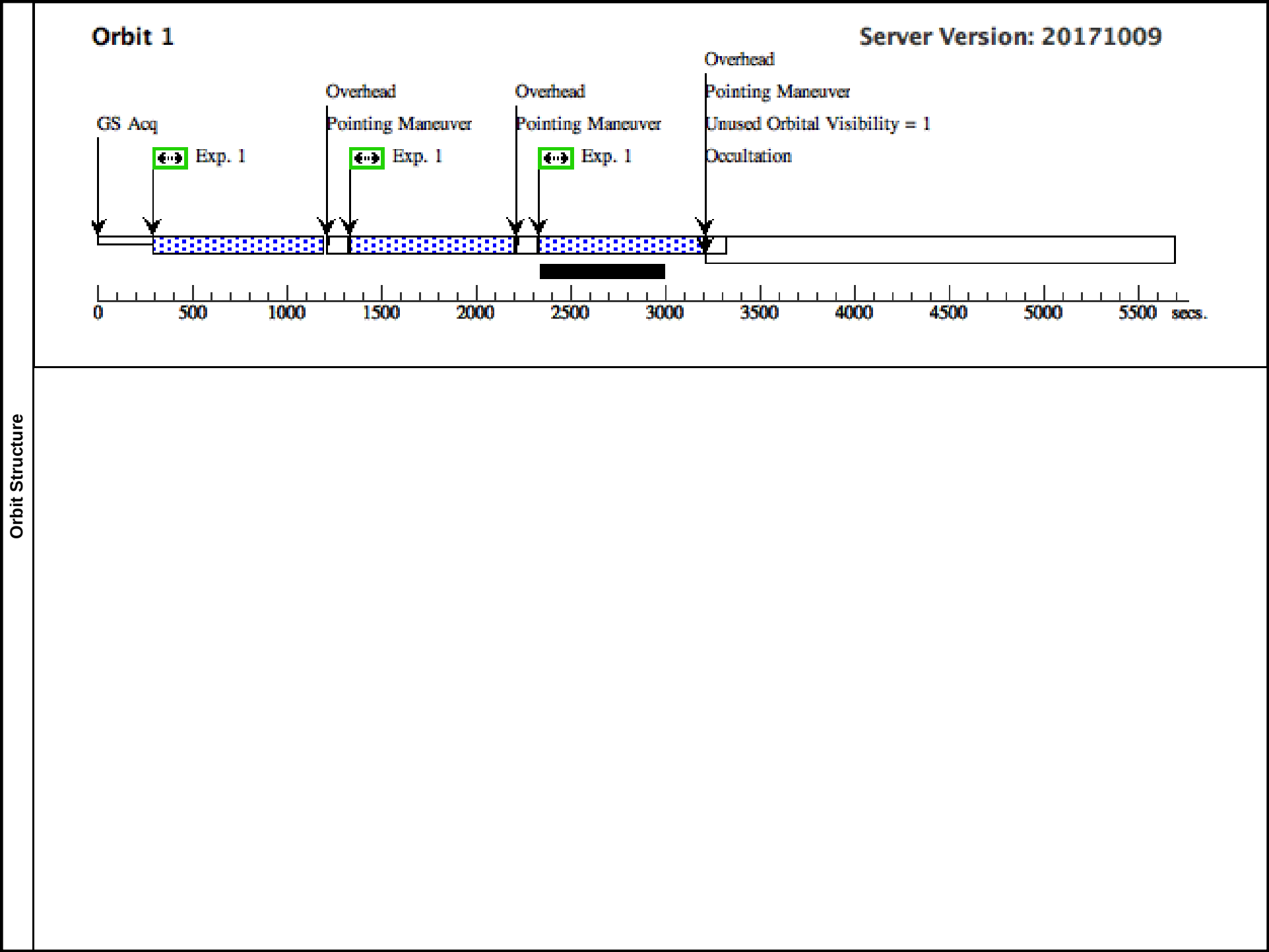
Visit	Proposal 15186, Visit 55										Wed Apr 11 17:00:49 GMT 2018	
	Diagnostic Status: No Diagnostics											
	Scientific Instruments: WFC3/UVIS											
	Special Requirements: (none)											
Patterns	#	Primary Pattern					Secondary Pattern				Exposures	
	(1)	Pattern Type=WFC3-UVIS-DITHER- LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.135 Line Spacing= Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false									(1), (2), (3)	
Fixed Targets	#	Name		Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(3)	UGC9024		RA: 14 06 40.5380 (211.6689083d) Dec: +22 04 12.38 (22.07011d) Equinox: J2000				V=16		Reference Frame: NED		
	Comments:											
	Category=GALAXY											
Description=[LSB]												
Exposures	#	Label	Target	Config,Mode,Aperture		Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit
	1		(3) UGC9024	WFC3/UVIS, ACCUM, UVIS-FIX		F300X	FLASH=8		Pattern 1, Exps 1-1 i n Visit 55 (1)	869 Secs (2607 Secs)		
										[=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)]		[1]
	2		(3) UGC9024	WFC3/UVIS, ACCUM, UVIS-FIX		F475X			Pattern 1, Exps 2-2 i n Visit 55 (1)	423 Secs (1269 Secs)		
										[=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)]		[2]
	3		(3) UGC9024	WFC3/UVIS, ACCUM, UVIS-FIX		F600LP			Pattern 1, Exps 3-3 i n Visit 55 (1)	350 Secs (1050 Secs)		
										[=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)]		[2]



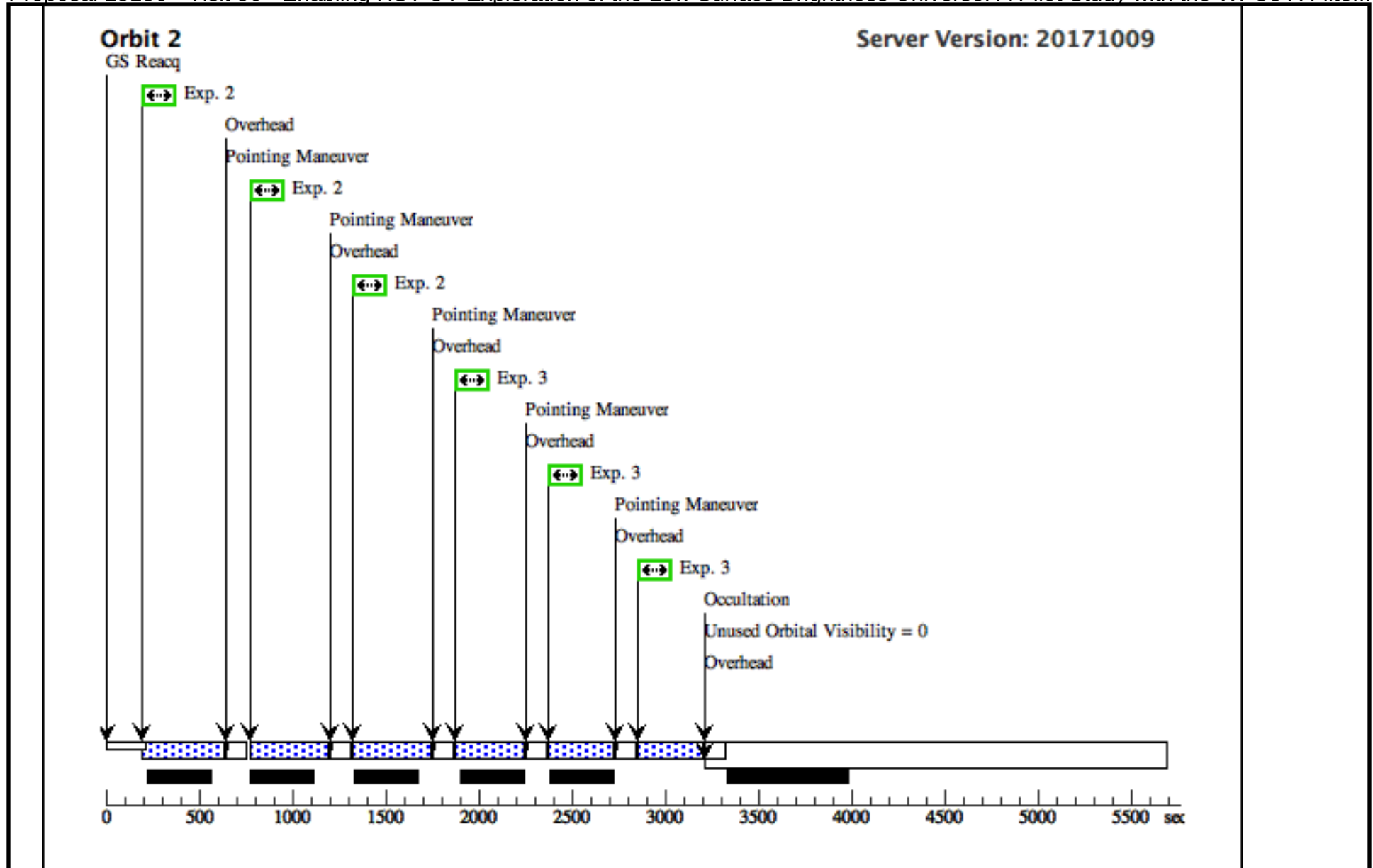


Proposal 15186 - Visit 56 - Enabling HST UV Exploration of the Low Surface Brightness Universe: A Pilot Study with the WFC3 X Filte...

Visit	Proposal 15186, Visit 56										Wed Apr 11 17:00:49 GMT 2018	
	Diagnostic Status: No Diagnostics											
	Scientific Instruments: WFC3/UVIS											
	Special Requirements: SAME ORIENT AS 55											
Patterns	#	Primary Pattern					Secondary Pattern				Exposures	
	(1)	Pattern Type=WFC3-UVIS-DITHER-LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.135 Line Spacing=			Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false						(1), (2), (3)	
Fixed Targets	#	Name		Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(3)	UGC9024		RA: 14 06 40.5380 (211.6689083d) Dec: +22 04 12.38 (22.07011d) Equinox: J2000				V=16		Reference Frame: NED		
	Comments: Category=GALAXY Description=[LSB]											
Exposures	#	Label	Target	Config,Mode,Aperture		Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit
	1		(3) UGC9024	WFC3/UVIS, ACCUM, UVIS-FIX		F275W	FLASH=9		Pattern 1, Exps 1-1 i n Visit 56 (1)	869 Secs (2607 Secs)		
										[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]		[1]
	2		(3) UGC9024	WFC3/UVIS, ACCUM, UVIS-FIX		F438W	FLASH=8		Pattern 1, Exps 2-2 i n Visit 56 (1)	419 Secs (1257 Secs)		
										[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]		[2]
	3		(3) UGC9024	WFC3/UVIS, ACCUM, UVIS-FIX		F814W	FLASH=4		Pattern 1, Exps 3-3 i n Visit 56 (1)	348 Secs (1044 Secs)		
										[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]		[2]

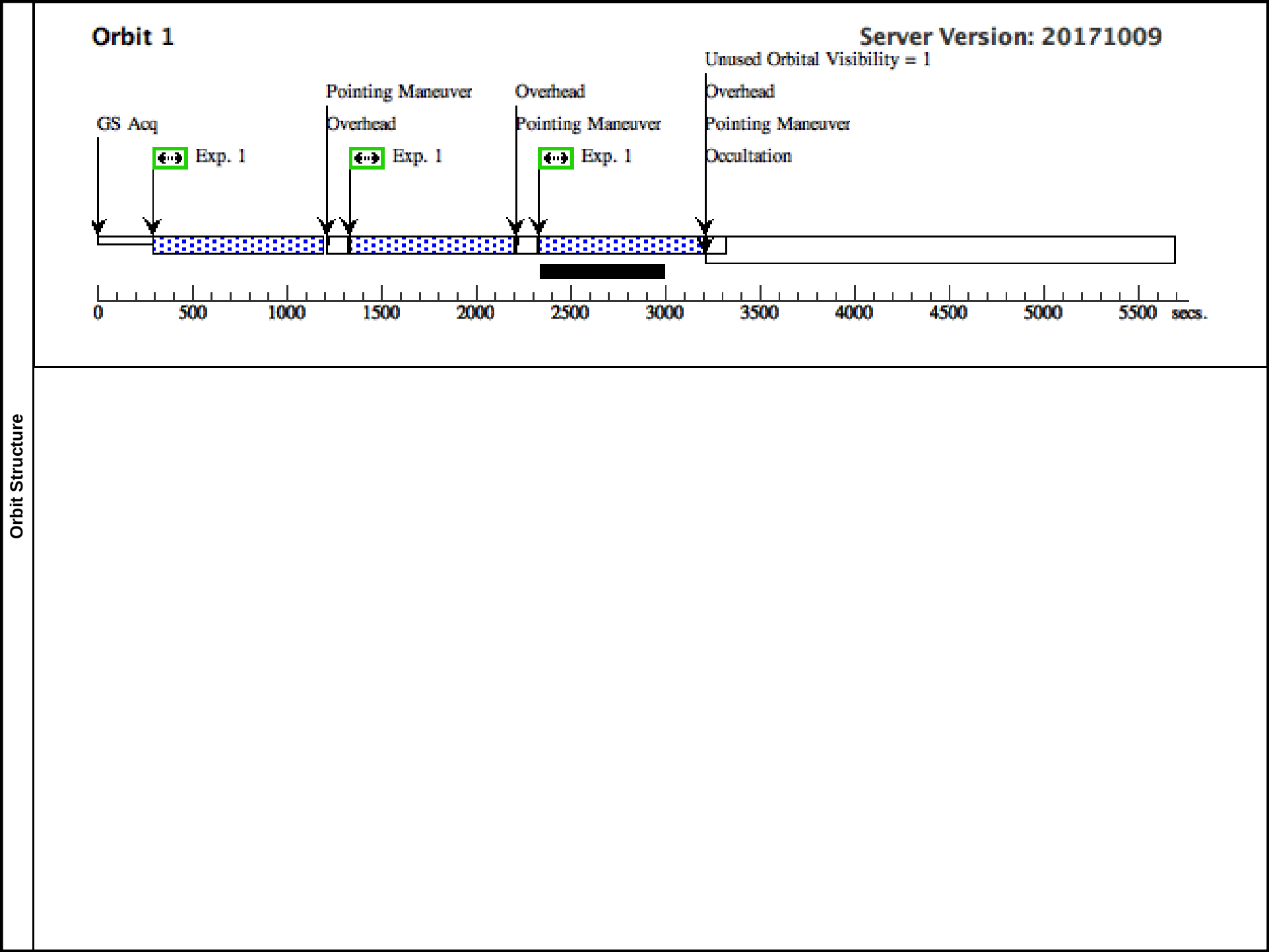


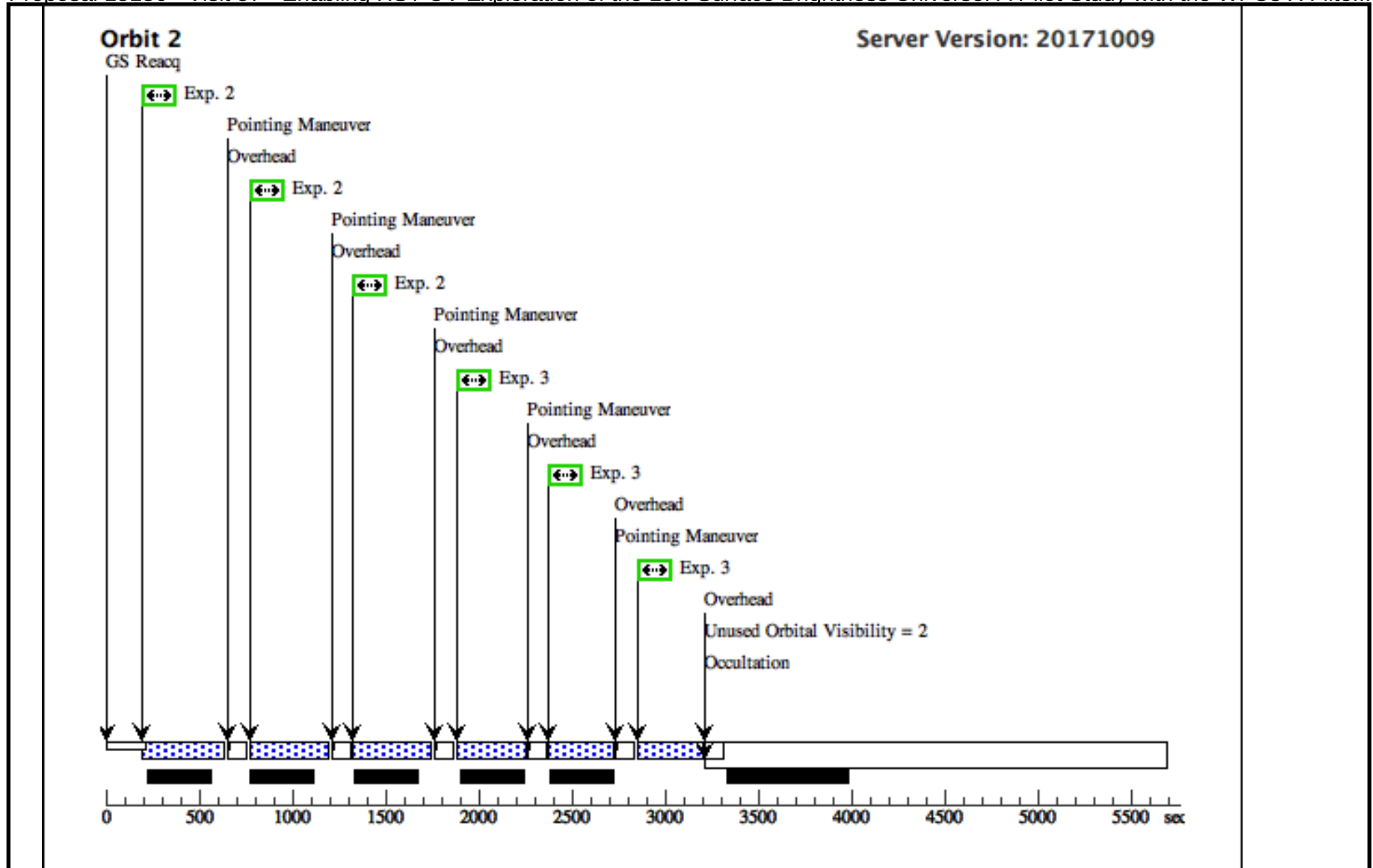
Orbit Structure



Proposal 15186 - Visit 57 - Enabling HST UV Exploration of the Low Surface Brightness Universe: A Pilot Study with the WFC3 X Filte...

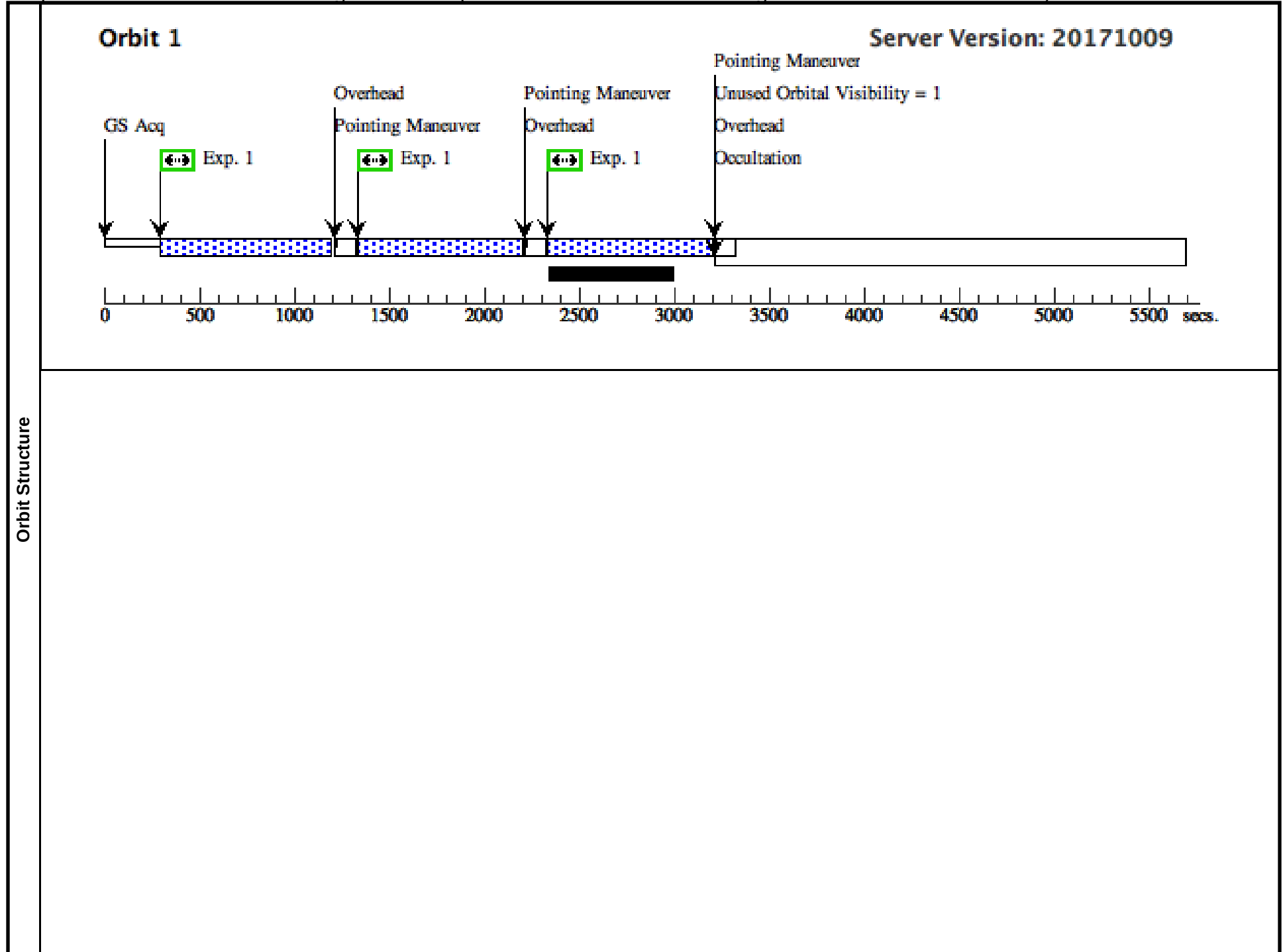
Visit	Proposal 15186, Visit 57										Wed Apr 11 17:00:50 GMT 2018	
	Diagnostic Status: No Diagnostics											
	Scientific Instruments: WFC3/UVIS											
	Special Requirements: (none)											
Patterns	#	Primary Pattern					Secondary Pattern				Exposures	
	(1)	Pattern Type=WFC3-UVIS-DITHER- LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.135 Line Spacing=					Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false				(1), (2), (3)	
Fixed Targets	#	Name		Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(5)	MALIN-2		RA: 10 39 52.4832 (159.9686800d) Dec: +20 50 49.35 (20.84704d) Equinox: J2000				V=15.2		Reference Frame: NED		
	Comments: Category=GALAXY Description=[LSB]											
Exposures	#	Label	Target	Config,Mode,Aperture		Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit
	1		(5) MALIN-2	WFC3/UVIS, ACCUM, UVIS-FIX		F300X	FLASH=8		Pattern 1, Exps 1-1 i n Visit 57 (1)	869 Secs (2607 Secs)		
										[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]		[1]
	2		(5) MALIN-2	WFC3/UVIS, ACCUM, UVIS-FIX		F475X			Pattern 1, Exps 2-2 i n Visit 57 (1)	426 Secs (1278 Secs)		
										[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]		[2]
	3		(5) MALIN-2	WFC3/UVIS, ACCUM, UVIS-FIX		F600LP			Pattern 1, Exps 3-3 i n Visit 57 (1)	348 Secs (1044 Secs)		
										[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]		[2]

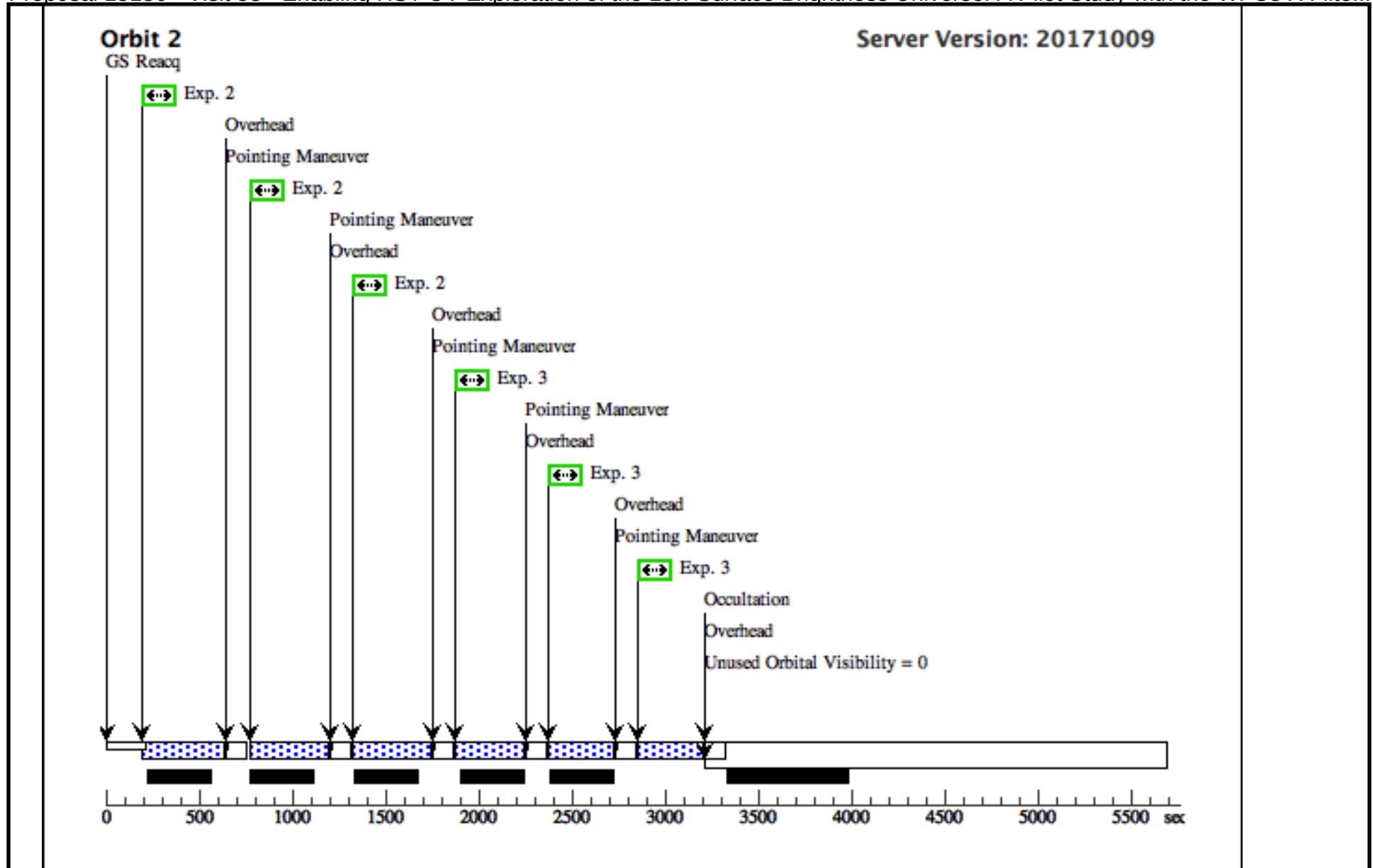




Proposal 15186 - Visit 58 - Enabling HST UV Exploration of the Low Surface Brightness Universe: A Pilot Study with the WFC3 X Filte...

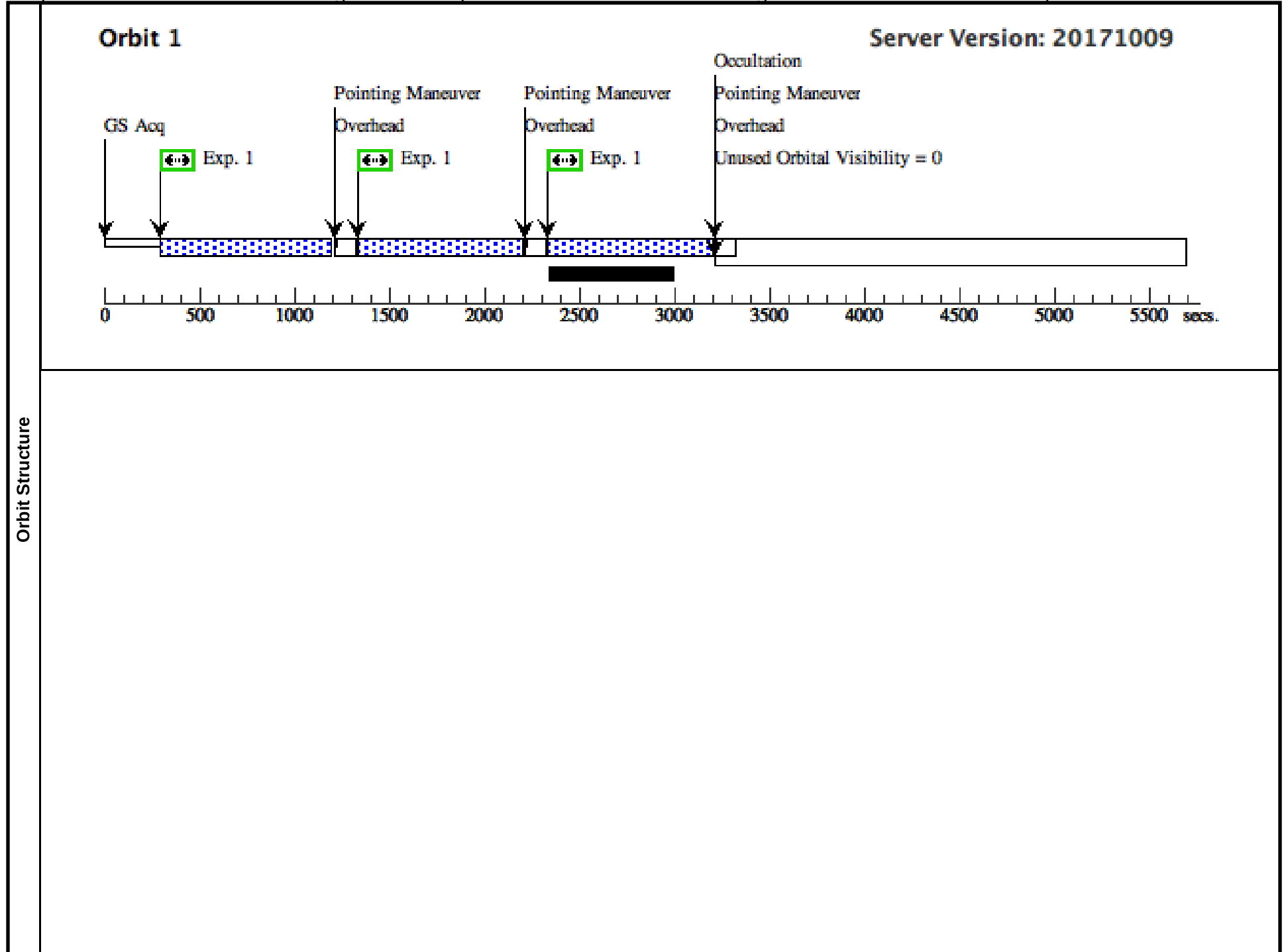
Visit	Proposal 15186, Visit 58										Wed Apr 11 17:00:50 GMT 2018	
	Diagnostic Status: No Diagnostics											
	Scientific Instruments: WFC3/UVIS											
	Special Requirements: SAME ORIENT AS 57											
Patterns	#	Primary Pattern					Secondary Pattern				Exposures	
	(1)	Pattern Type=WFC3-UVIS-DITHER-LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.135 Line Spacing=			Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false						(1), (2), (3)	
Fixed Targets	#	Name		Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(5)	MALIN-2		RA: 10 39 52.4832 (159.9686800d) Dec: +20 50 49.35 (20.84704d) Equinox: J2000				V=15.2		Reference Frame: NED		
	Comments: Category=GALAXY Description=[LSB]											
Exposures	#	Label	Target	Config,Mode,Aperture		Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit
	1		(5) MALIN-2	WFC3/UVIS, ACCUM, UVIS-FIX		F275W	FLASH=9		Pattern 1, Exps 1-1 i n Visit 58 (1)	869 Secs (2607 Secs)		
										[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]		[1]
	2		(5) MALIN-2	WFC3/UVIS, ACCUM, UVIS-FIX		F438W	FLASH=8		Pattern 1, Exps 2-2 i n Visit 58 (1)	419 Secs (1257 Secs)		
										[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]		[2]
	3		(5) MALIN-2	WFC3/UVIS, ACCUM, UVIS-FIX		F814W	FLASH=4		Pattern 1, Exps 3-3 i n Visit 58 (1)	348 Secs (1044 Secs)		
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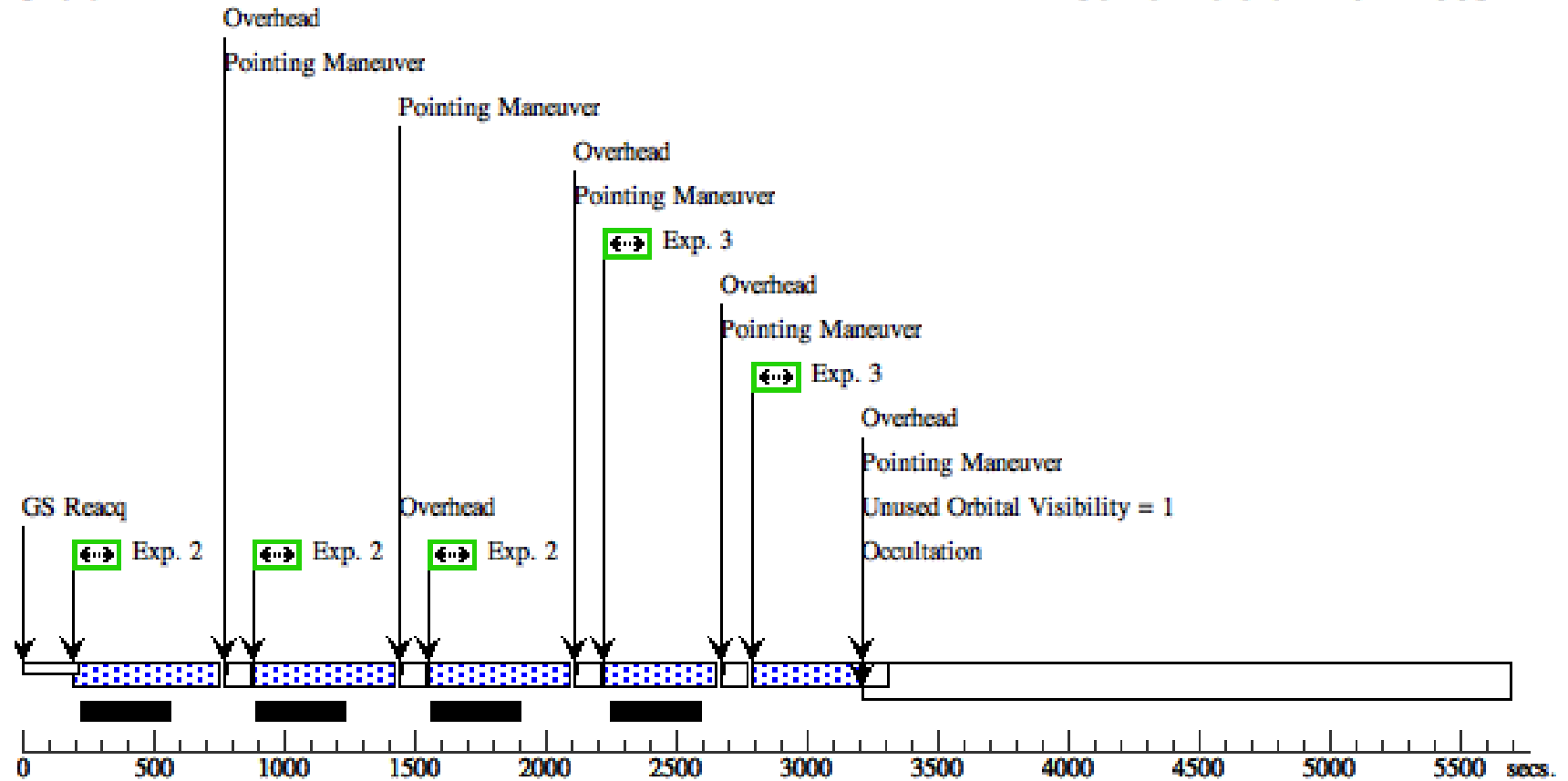
Proposal 15186 - Visit 02 - Enabling HST UV Exploration of the Low Surface Brightness Universe: A Pilot Study with the WFC3 X Filte...

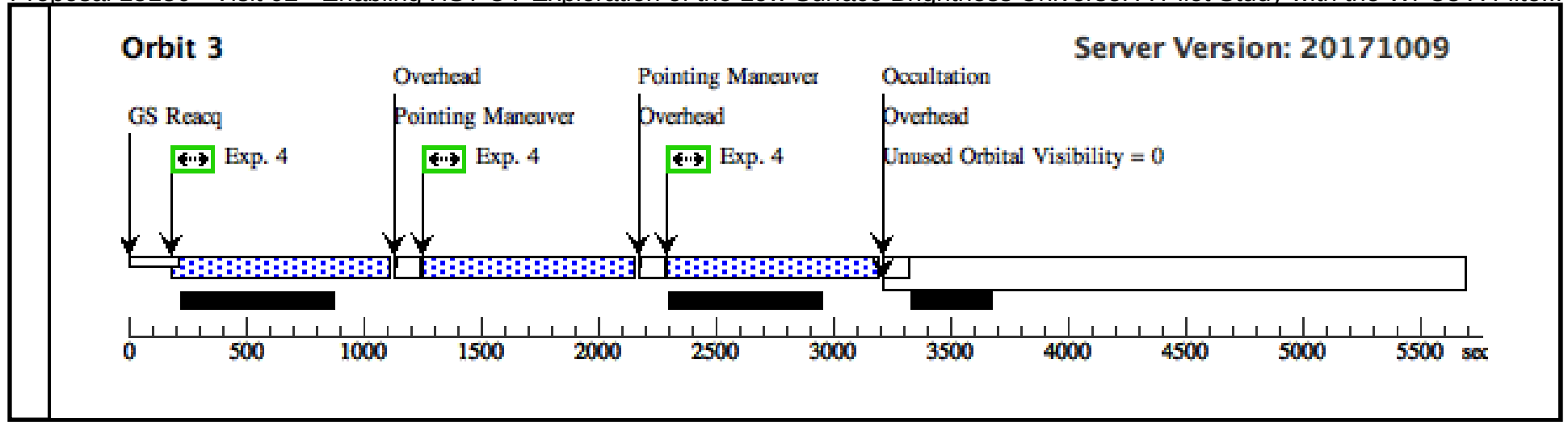
Visit	Proposal 15186, Visit 02, completed										Wed Apr 11 17:00:50 GMT 2018
	Diagnostic Status: No Diagnostics										
	Scientific Instruments: WFC3/UVIS										
	Special Requirements: ORIENT 42D TO 72 D; ORIENT 129D TO 163 D; ORIENT 222D TO 247 D; ORIENT 310D TO 345 D										
Patterns	#	Primary Pattern					Secondary Pattern				Exposures
	(1)	Pattern Type=WFC3-UVIS-DITHER-LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.135 Line Spacing=			Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false						(1), (2), (4)
	(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=			Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false						(3)
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(2)	NGC628XUV	RA: 01 37 1.2300 (24.2551250d) Dec: +15 49 44.30 (15.82897d) Equinox: J2000				V=9.2		Reference Frame: NED		
	Comments: Category=GALAXY Description=[DISK]										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit
	1		(2) NGC628XUV	WFC3/UVIS, ACCUM, UVIS-CENTER	F300X	FLASH=8		Pattern 1, Exps 1-1 i n Visit 02 (1)	750 Secs (2607 Secs)		
									[==>869.0 Secs (Pattern 1)] [==>869.0 Secs (Pattern 2)] [==>869.0 Secs (Pattern 3)]		[1]
	2		(2) NGC628XUV	WFC3/UVIS, ACCUM, UVIS-CENTER	F475X			Pattern 1, Exps 2-2 i n Visit 02 (1)	540 Secs (1626 Secs)		
									[==>542.0 Secs (Pattern 1)] [==>542.0 Secs (Pattern 2)] [==>542.0 Secs (Pattern 3)]		[2]
	3		(2) NGC628XUV	WFC3/UVIS, ACCUM, UVIS-CENTER	F600LP			Pattern 2, Exps 3-3 i n Visit 02 (2)	410 Secs (824 Secs)		
									[==>412.0 Secs (Pattern 1)] [==>412.0 Secs (Pattern 2)]		[2]
	4		(2) NGC628XUV	WFC3/UVIS, ACCUM, UVIS-CENTER	F275W	FLASH=10		Pattern 1, Exps 4-4 i n Visit 02 (1)	750 Secs (2718 Secs)		
									[==>906.0 Secs (Pattern 1)] [==>906.0 Secs (Pattern 2)] [==>906.0 Secs (Pattern 3)]		[3]



Orbit 2

Server Version: 20171009



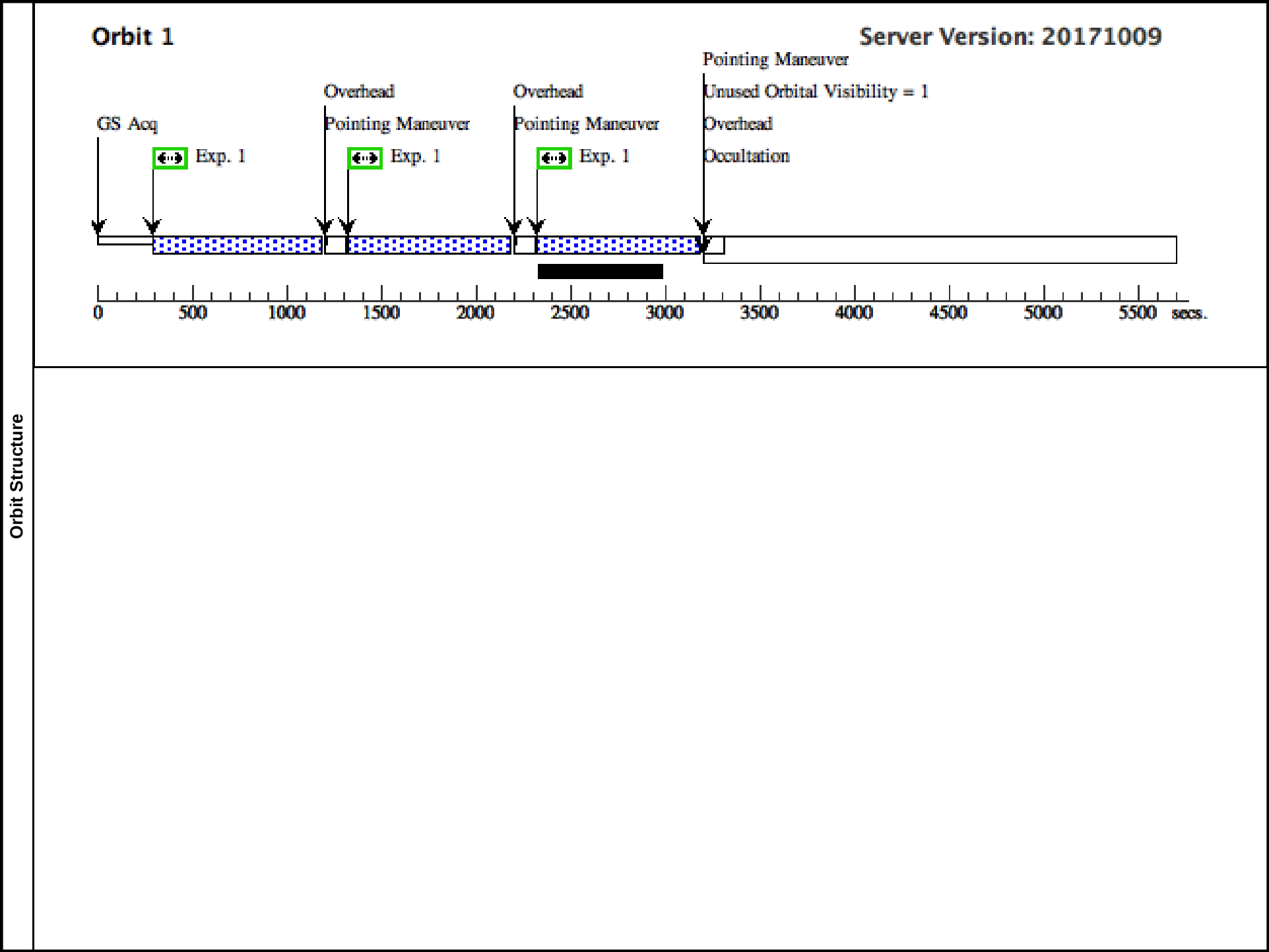


Proposal 15186 - Visit 04 - Enabling HST UV Exploration of the Low Surface Brightness Universe: A Pilot Study with the WFC3 X Filte...

Visit	Proposal 15186, Visit 04, failed Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: ORIENT 20D TO 70 D; ORIENT 245D TO 275 D					Wed Apr 11 17:00:50 GMT 2018
Patterns	#	Primary Pattern		Secondary Pattern		Exposures
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	(2)	Pattern Type=WFC3-UVIS-DITHER- LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=		Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(3), (6)
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(4)	UGC1382	RA: 01 54 41.0426 (28.6710108d) Dec: -00 08 36.03 (-.14334d) Equinox: J2000		V=14.2	Reference Frame: NED
	Comments: Category=GALAXY Description=[LSB]					

Proposal 15186 - Visit 04 - Enabling HST UV Exploration of the Low Surface Brightness Universe: A Pilot Study with the WFC3 X Filt...

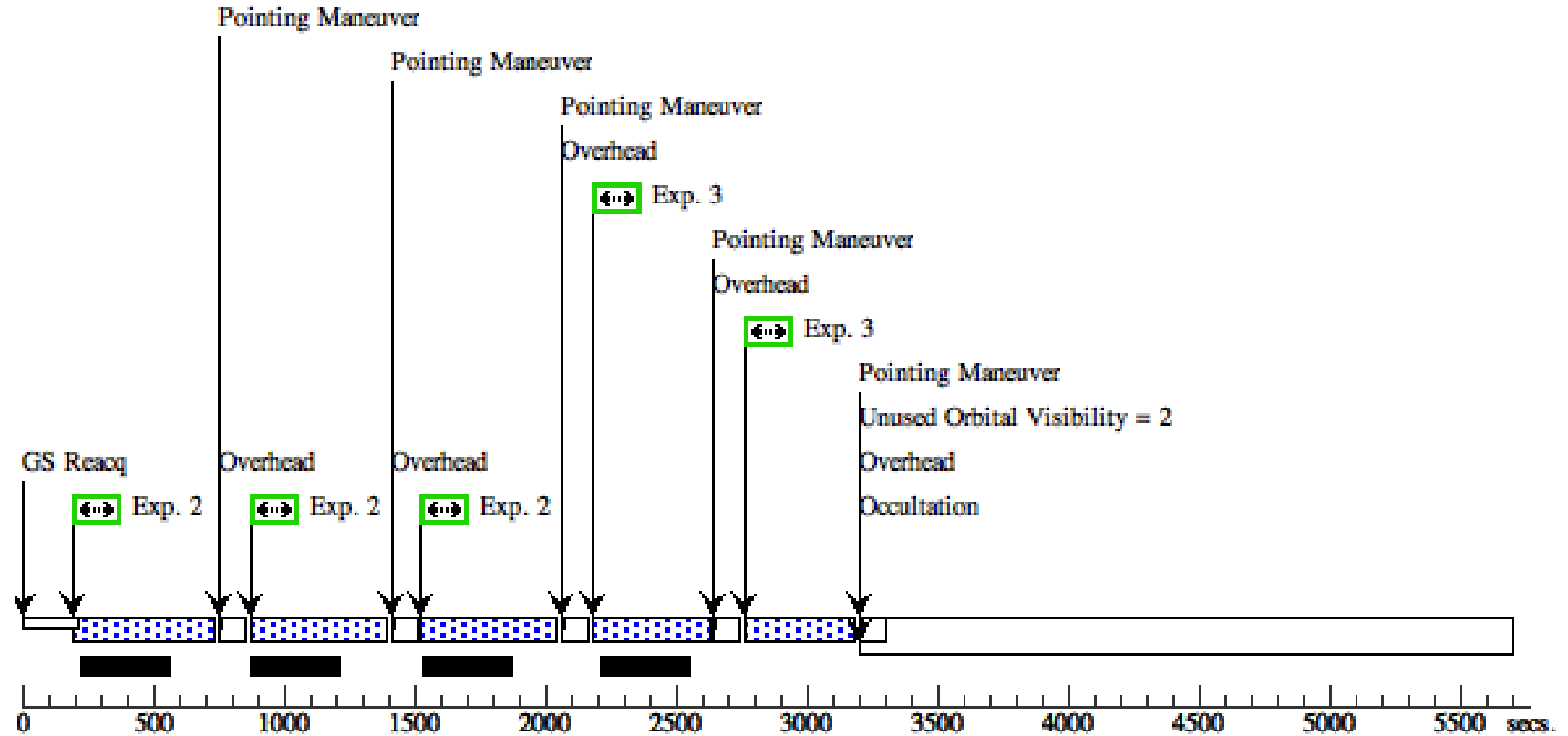
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(4) UGC1382	WFC3/UVIS, ACCUM, UVIS1	F300X	FLASH=8		Pattern 1, Exps 1-1 i n Visit 04 (1)	750 Secs (2592 Secs) [==>864.0 Secs (Pattern 1)] [==>864.0 Secs (Pattern 2)] [==>864.0 Secs (Pattern 3)]	[1]
	2		(4) UGC1382	WFC3/UVIS, ACCUM, UVIS1	F475X			Pattern 1, Exps 2-2 i n Visit 04 (1)	500 Secs (1581 Secs) [==>527.0 Secs (Pattern 1)] [==>527.0 Secs (Pattern 2)] [==>527.0 Secs (Pattern 3)]	[2]
	3		(4) UGC1382	WFC3/UVIS, ACCUM, UVIS1	F600LP			Pattern 2, Exps 3-3 i n Visit 04 (2)	400 Secs (854 Secs) [==>427.0 Secs (Pattern 1)] [==>427.0 Secs (Pattern 2)]	[2]
	4		(4) UGC1382	WFC3/UVIS, ACCUM, UVIS1	F275W	FLASH=9		Pattern 1, Exps 4-4 i n Visit 04 (1)	750 Secs (2703 Secs) [==>901.0 Secs (Pattern 1)] [==>901.0 Secs (Pattern 2)] [==>901.0 Secs (Pattern 3)]	[3]
	5		(4) UGC1382	WFC3/UVIS, ACCUM, UVIS1	F438W	FLASH=7		Pattern 1, Exps 5-5 i n Visit 04 (1)	500 Secs (1572 Secs) [==>524.0 Secs (Pattern 1)] [==>524.0 Secs (Pattern 2)] [==>524.0 Secs (Pattern 3)]	[4]
	6		(4) UGC1382	WFC3/UVIS, ACCUM, UVIS1	F814W	FLASH=2		Pattern 2, Exps 6-6 i n Visit 04 (2)	400 Secs (848 Secs) [==>424.0 Secs (Pattern 1)] [==>424.0 Secs (Pattern 2)]	[4]



Orbit Structure

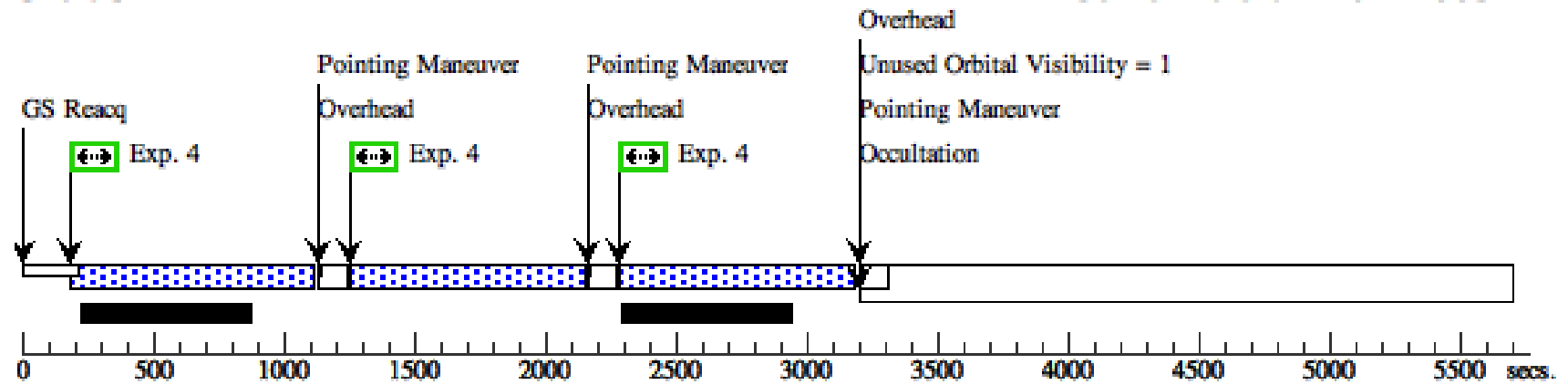
Orbit 2

Server Version: 20171009



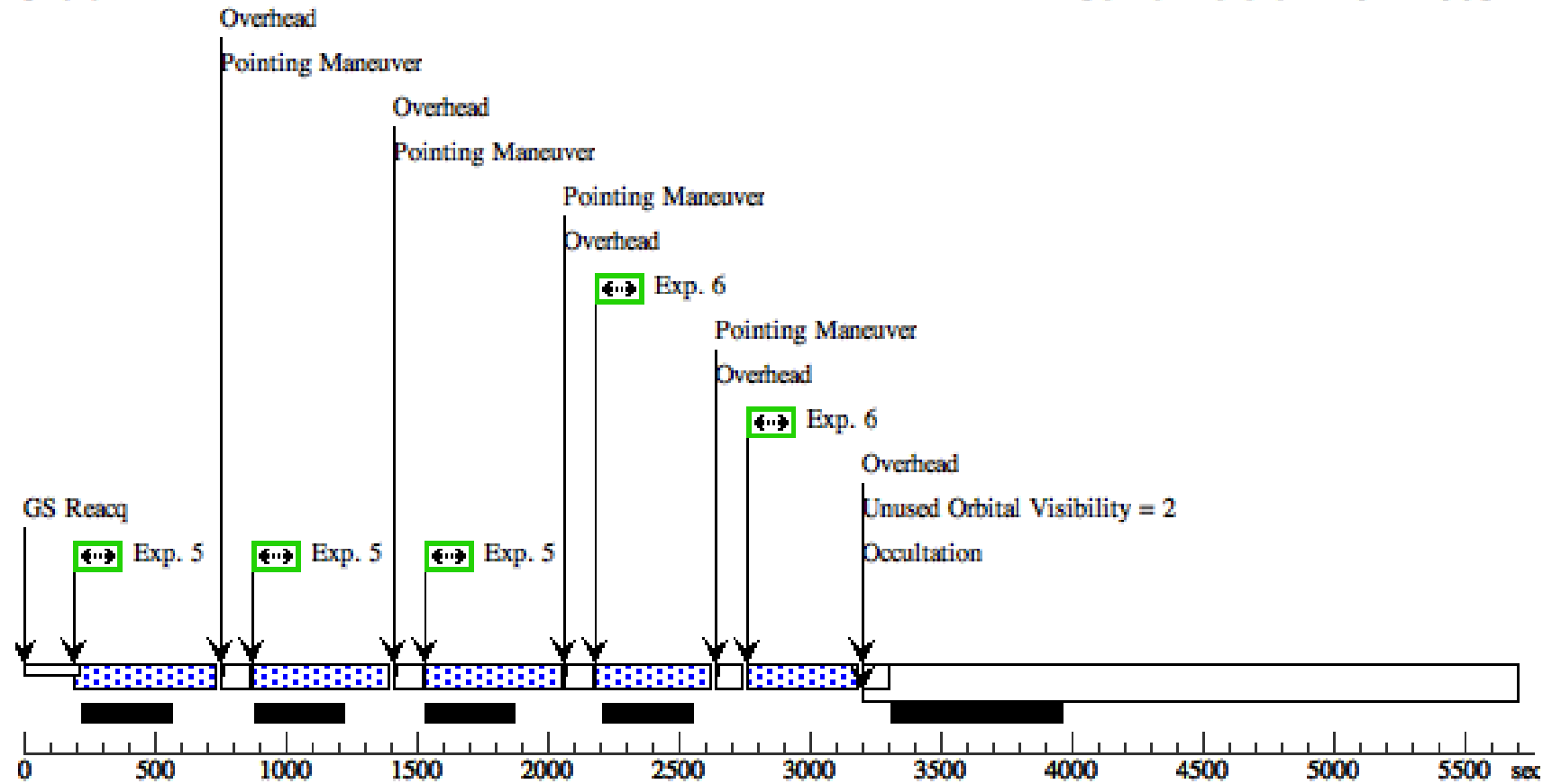
Orbit 3

Server Version: 20171009



Orbit 4

Server Version: 20171009

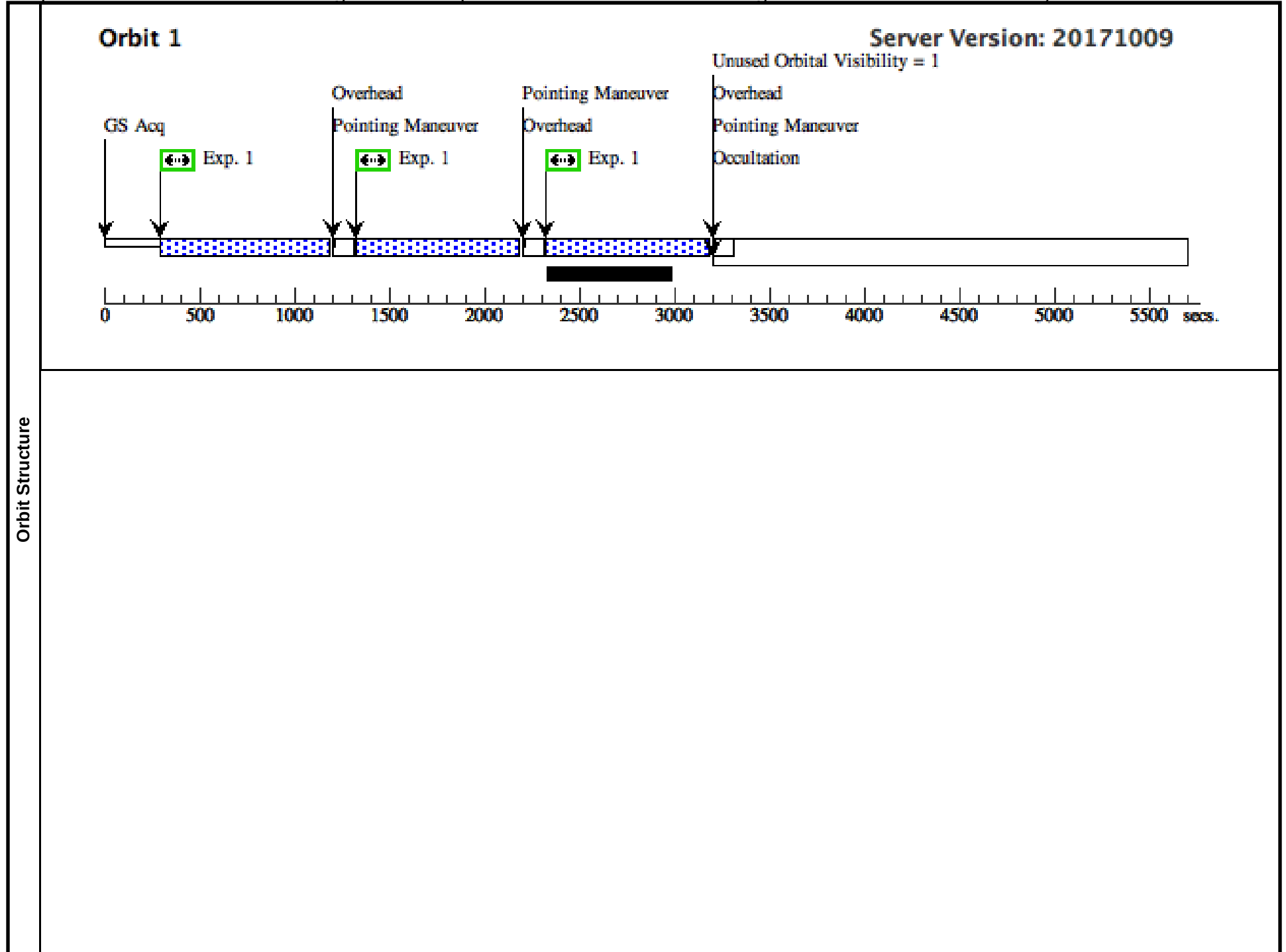


Proposal 15186 - Visit 54 - Enabling HST UV Exploration of the Low Surface Brightness Universe: A Pilot Study with the WFC3 X Filte...

Visit	Proposal 15186, Visit 54, completed Wed Apr 11 17:00:50 GMT 2018				
	Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: ORIENT 20D TO 70 D; ORIENT 245D TO 275 D				
Patterns	#	Primary Pattern		Secondary Pattern	Exposures
	(1)	Pattern Type=WFC3-UVIS-DITHER- LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.135 Line Spacing=			(1), (2), (4), (5)
	(2)	Pattern Type=WFC3-UVIS-DITHER- LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=			(3), (6)
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes
	(4)	UGC1382	RA: 01 54 41.0426 (28.6710108d) Dec: -00 08 36.03 (-.14334d) Equinox: J2000		V=14.2
Comments: Category=GALAXY Description=[LSB]					
Reference Frame: NED					

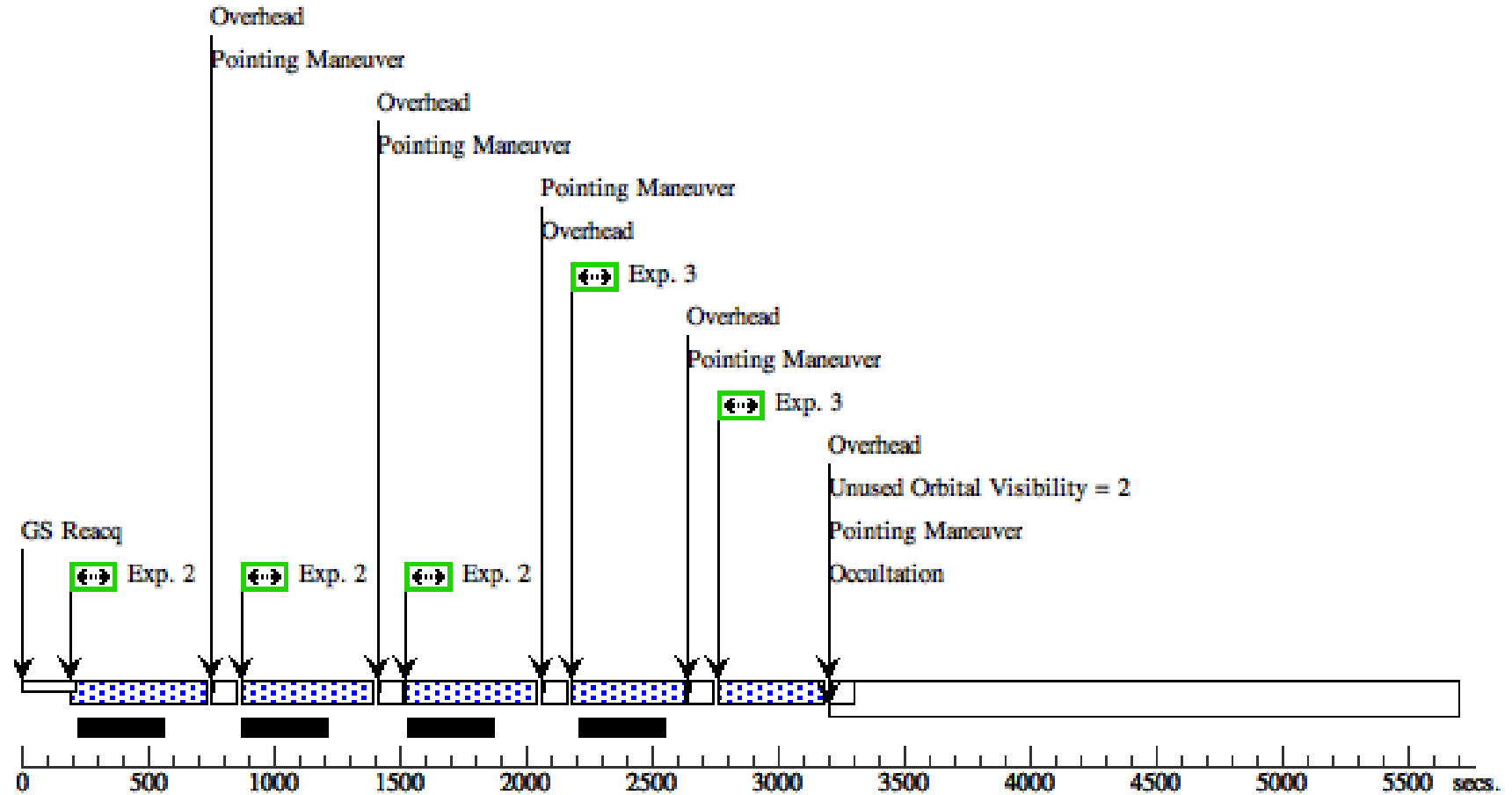
Proposal 15186 - Visit 54 - Enabling HST UV Exploration of the Low Surface Brightness Universe: A Pilot Study with the WFC3 X Filt...

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(4) UGC1382	WFC3/UVIS, ACCUM, UVIS1	F300X	FLASH=8		Pattern 1, Exps 1-1 i n Visit 54 (1)	750 Secs (2592 Secs) [=>864.0 Secs (Pattern 1)] [=>864.0 Secs (Pattern 2)] [=>864.0 Secs (Pattern 3)]	[1]
	2		(4) UGC1382	WFC3/UVIS, ACCUM, UVIS1	F475X			Pattern 1, Exps 2-2 i n Visit 54 (1)	500 Secs (1581 Secs) [=>527.0 Secs (Pattern 1)] [=>527.0 Secs (Pattern 2)] [=>527.0 Secs (Pattern 3)]	[2]
	3		(4) UGC1382	WFC3/UVIS, ACCUM, UVIS1	F600LP			Pattern 2, Exps 3-3 i n Visit 54 (2)	400 Secs (854 Secs) [=>427.0 Secs (Pattern 1)] [=>427.0 Secs (Pattern 2)]	[2]
	4		(4) UGC1382	WFC3/UVIS, ACCUM, UVIS1	F275W	FLASH=9		Pattern 1, Exps 4-4 i n Visit 54 (1)	750 Secs (2703 Secs) [=>901.0 Secs (Pattern 1)] [=>901.0 Secs (Pattern 2)] [=>901.0 Secs (Pattern 3)]	[3]
	5		(4) UGC1382	WFC3/UVIS, ACCUM, UVIS1	F438W	FLASH=7		Pattern 1, Exps 5-5 i n Visit 54 (1)	500 Secs (1572 Secs) [=>524.0 Secs (Pattern 1)] [=>524.0 Secs (Pattern 2)] [=>524.0 Secs (Pattern 3)]	[4]
	6		(4) UGC1382	WFC3/UVIS, ACCUM, UVIS1	F814W	FLASH=2		Pattern 2, Exps 6-6 i n Visit 54 (2)	400 Secs (848 Secs) [=>424.0 Secs (Pattern 1)] [=>424.0 Secs (Pattern 2)]	[4]



Orbit 2

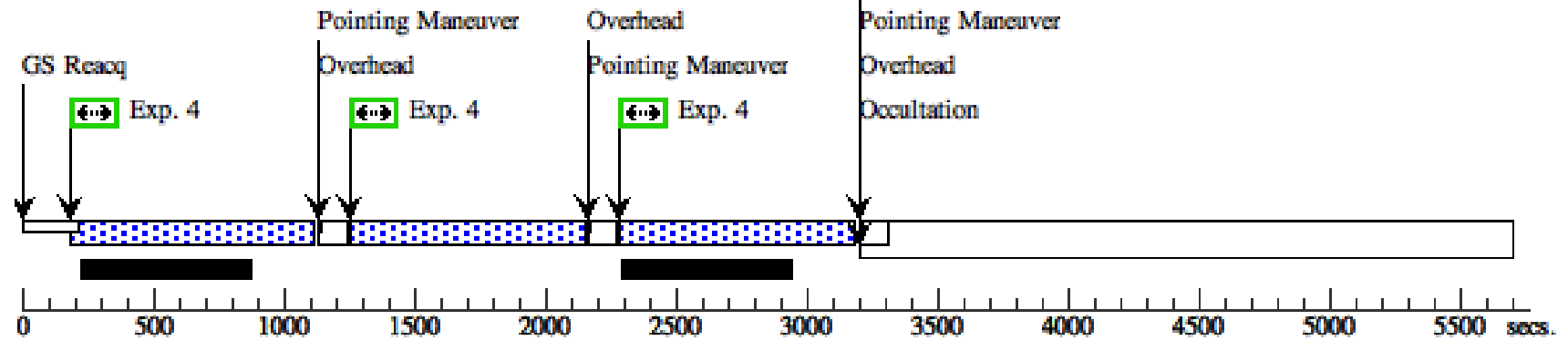
Server Version: 20171009



Orbit 3

Server Version: 20171009

Unused Orbital Visibility = 1



Orbit 4

Server Version: 20171009

