



14796 - An extremely asymmetric dwarf satellite distribution around M101

Cycle: 24, 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) M101-DW1 ANY	ACS/WFC WFC3/UVIS	1	13-Jul-2017 14:01:36.0	yes
02	(2) M101-DW2 ANY	ACS/WFC WFC3/UVIS	1	13-Jul-2017 14:01:37.0	yes
03	(3) M101-DW3 ANY	ACS/WFC WFC3/UVIS	1	13-Jul-2017 14:01:39.0	yes
53	(3) M101-DW3 ANY	ACS/WFC WFC3/UVIS	1	13-Jul-2017 14:01:40.0	yes
04	(4) M101-DW4 ANY	ACS/WFC WFC3/UVIS	1	13-Jul-2017 14:01:41.0	yes
05	(5) M101-DW5 ANY	ACS/WFC WFC3/UVIS	1	13-Jul-2017 14:01:42.0	yes

Proposal 14796 (STScI Edit Number: 0, Created: Thursday, July 13, 2017 1:02:03 PM EST) - Overview

<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>
06	(6) M101-DW6 ANY	ACS/WFC WFC3/UVIS	1	13-Jul-2017 14:01:44.0	yes
07	(7) M101-DW7 ANY	ACS/WFC WFC3/UVIS	1	13-Jul-2017 14:01:45.0	yes
08	(8) M101-DW8 ANY	ACS/WFC WFC3/UVIS	1	13-Jul-2017 14:01:46.0	yes
09	(9) M101-DW9 ANY	ACS/WFC WFC3/UVIS	1	13-Jul-2017 14:01:48.0	yes
10	(10) M101-DW10 ANY	ACS/WFC WFC3/UVIS	1	13-Jul-2017 14:01:49.0	yes
11	(11) M101-DW11 ANY	ACS/WFC WFC3/UVIS	1	13-Jul-2017 14:01:51.0	yes
12	(12) M101-DW12 ANY	ACS/WFC WFC3/UVIS	1	13-Jul-2017 14:01:52.0	yes
13	(13) M101-DW13 ANY	ACS/WFC WFC3/UVIS	1	13-Jul-2017 14:01:54.0	yes
54	(13) M101-DW13 ANY	ACS/WFC WFC3/UVIS	1	13-Jul-2017 14:01:55.0	yes
14	(14) M101-DW14 ANY	ACS/WFC WFC3/UVIS	1	13-Jul-2017 14:01:56.0	yes
15	(15) M101-DW15 ANY	ACS/WFC WFC3/UVIS	1	13-Jul-2017 14:01:57.0	yes
16	(16) M101-DW16 ANY	ACS/WFC WFC3/UVIS	1	13-Jul-2017 14:01:58.0	yes
17	(17) M101-DW17 ANY	ACS/WFC WFC3/UVIS	1	13-Jul-2017 14:01:59.0	yes
18	(18) M101-DW18 ANY	ACS/WFC WFC3/UVIS	1	13-Jul-2017 14:02:01.0	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>
19	(19) M101-DW19 ANY	ACS/WFC WFC3/UVIS	1	13-Jul-2017 14:02:02.0	yes

21 Total Orbits Used

ABSTRACT

We request HST/ACS imaging to follow up 19 new faint candidate dwarfs around the "peculiar" Milky Way analog M101 (at ~ 7 Mpc). Motivated by the recent discovery of seven diffuse candidate satellites of M101 (Merritt et al. 2014) which show a strongly asymmetric spatial distribution, we performed a systematic search of archival ground-based data (CFHT/Megacam) within a ~ 180 kpc radius around M101. Our candidate satellites extend M101's satellite luminosity function by two orders of magnitude (down to $M_V \sim -7$), but most intriguingly they confirm the spatial distribution observed in previous studies. While this is suggestive of a group of dwarfs possibly infalling onto M101, the extreme nature of the satellite distribution asymmetry around a MW analog constitutes the real mystery of this result. The observed slope of the satellite luminosity function below $M_V \sim -14$ in nearby spiral-dominated groups is at odds with Cold Dark Matter predictions: the inclusion of small-scale physics in simulations helps alleviate this tension and a substantial halo-to-halo scatter is expected, but the absence of an "intrinsic" satellite population around M101 makes this an extreme, and extremely interesting, case study. Any conclusion on the nature of M101's satellites is, however, put on hold until we can confirm their group membership. Only HST will allow us to resolve these candidate satellites into stars and obtain accurate ($\sim 20\%$) distances with the tip of the red giant branch method as well as robust luminosities, which are key to meaningfully interpret the true nature of this group of dwarfs.

OBSERVING DESCRIPTION

The observations are going to be performed with ACS/WFC (primary) and WFC3/UVIS (parallel). 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. We will thus be able to estimate more precisely the number of background/foreground contaminants present in our ACS fields.

Our goal is to obtain a SNR of ~ 5 at ~ 1 mag below the TRGB in I band, assuming that the TRGB is found at $M_I = \sim -4.0$ and $M_V = \sim -2.5$, in order to derive precise distance measurements, structural properties and average metallicities. With the requested SNR, we will obtain distance uncertainties as low as ~ 0.02 mag for our brightest targets, corresponding to ~ 80 kpc at the distance of M101. We stress that, even for the faintest of

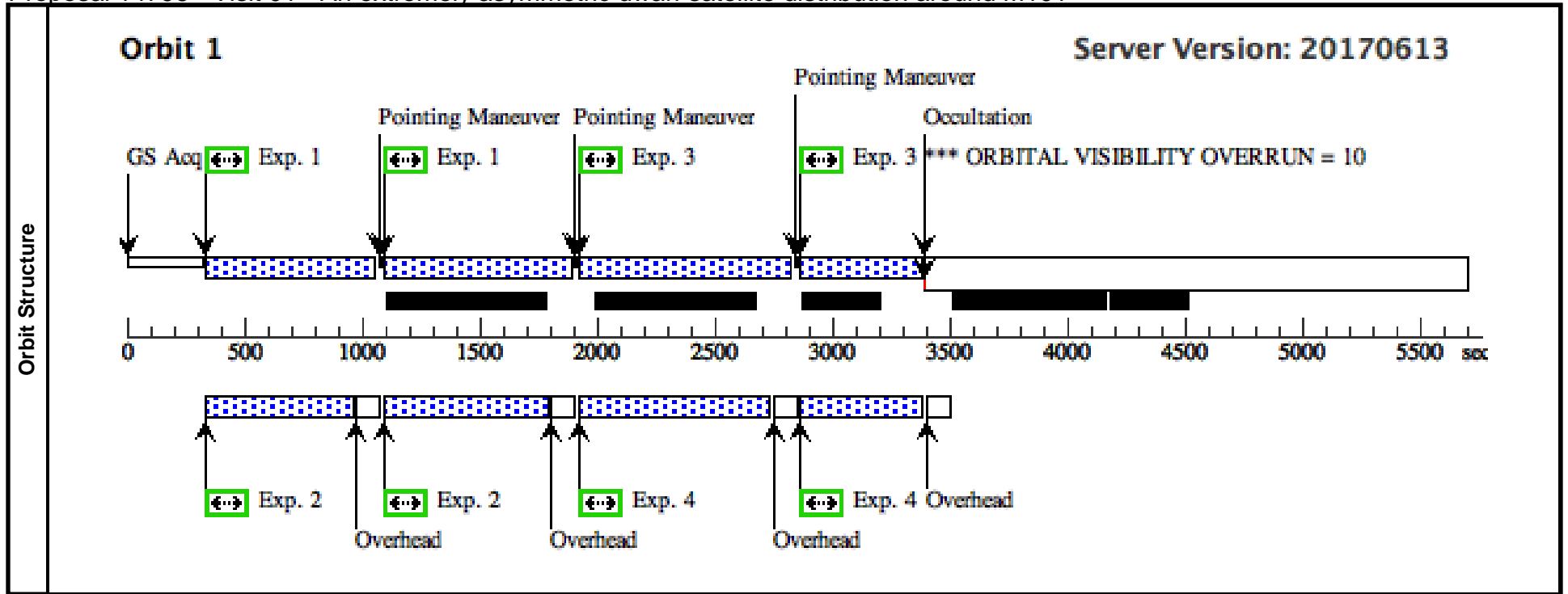
our targets we expect ~ 25 stars in the upper 1 mag below the TRGB.

Since the exact distances for our targets are unknown, the candidate M101 satellites are assumed to be at the distance of M101 (~ 7 Mpc). Given their low masses, these are expected to be metal-poor objects, thus having average colours of $V \sim I \sim 1.5$. At this distance, the TRGB is found at a magnitude of $I \sim 25.2$ and $V \sim 26.7$. The exposures to obtain the required SNR at 1 mag below the TRGB for both bands are ~ 1200 sec in F606W and ~ 900 sec in F814W (as computed with the latest version of the ACS ETC), which result in one orbit per target. Each exposure will be split in two with a dither pattern in order to subsequently remove detector defects and improve the PSF sampling. We have checked that the charge transfer efficiency losses of ACS do not significantly affect our observations (at most 10% loss of flux). Finally, where needed we have added ORIENT constraints to avoid bright stars in either of the primary ACS and parallel WFC3 pointings.

Proposal 14796 - Visit 01 - An extremely asymmetric dwarf satellite distribution around M101

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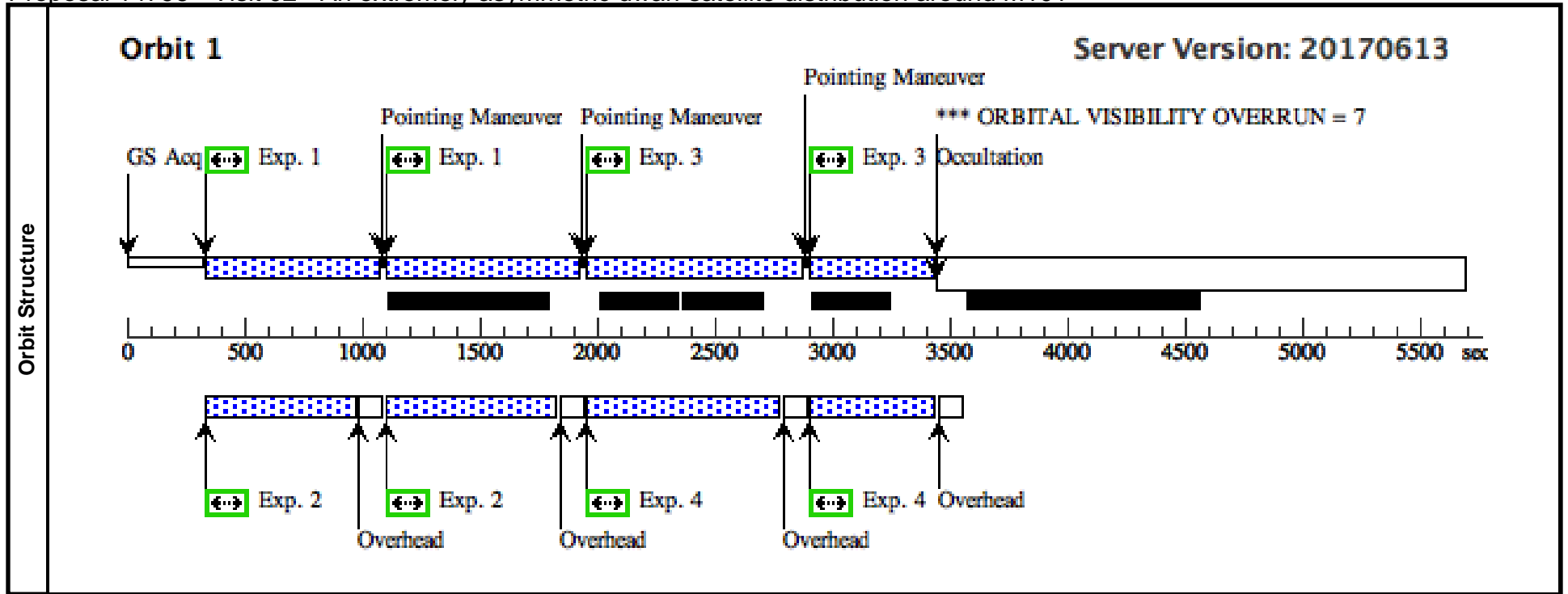
Visit	Proposal 14796, Visit 01, scheduling Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS, ACS/WFC Special Requirements: ORIENT 340D TO 20 D; ORIENT 95D TO 175 D									
	(Visit 01) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
Diagnosics										
Patterns	#	Primary Pattern	Secondary Pattern	Exposures						
	(1)	Pattern Type=ACS-WFC-DITHER- LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.364 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=47.23 Angle Between Sides= Center Pattern=false		(1-2), (3-4)					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(1)	M101-DW1	RA: 14 06 49.9560 (211.7081500d) Dec: +53 44 29.22 (53.74145d) Equinox: J2000 Comments: Extended=YES		V=19.47	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(1) M101-DW1		ACS/WFC, ACCUM, WFC1	F606W			Pattern 1, Exps 1-2 in Visit 01 (1) Prime + Parallel Group 1-2 in Pattern 1, Exps 1-2 in Visit 01	600 Secs (1193 Secs) [==>517.0 Secs (Pattern 1)] [==>676.0 Secs (Pattern 2)]	[1]
	2	ANY		WFC3/UVIS, ACCUM, UVIS1	F606W			Pattern 1, Exps 1-2 in Visit 01 (1) Prime + Parallel Group 1-2 in Pattern 1, Exps 1-2 in Visit 01	600 Secs (1300 Secs) [==>600.0 Secs (Pattern 1)] [==>700.0 Secs (Pattern 2)]	[1]
	3	(1) M101-DW1		ACS/WFC, ACCUM, WFC1	F814W			Pattern 1, Exps 3-4 in Visit 01 (1) Prime + Parallel Group 3-4 in Pattern 1, Exps 3-4 in Visit 01	450 Secs (1122 Secs) [==>725 Secs (Pattern 1)] [==>397.0 Secs (Pattern 2)]	[1]
	4	ANY		WFC3/UVIS, ACCUM, UVIS1	F814W			Pattern 1, Exps 3-4 in Visit 01 (1) Prime + Parallel Group 3-4 in Pattern 1, Exps 3-4 in Visit 01	450 Secs (1313 Secs) [==>790.0 Secs (Pattern 1)] [==>523.0 Secs (Pattern 2)]	[1]



Proposal 14796 - Visit 02 - An extremely asymmetric dwarf satellite distribution around M101

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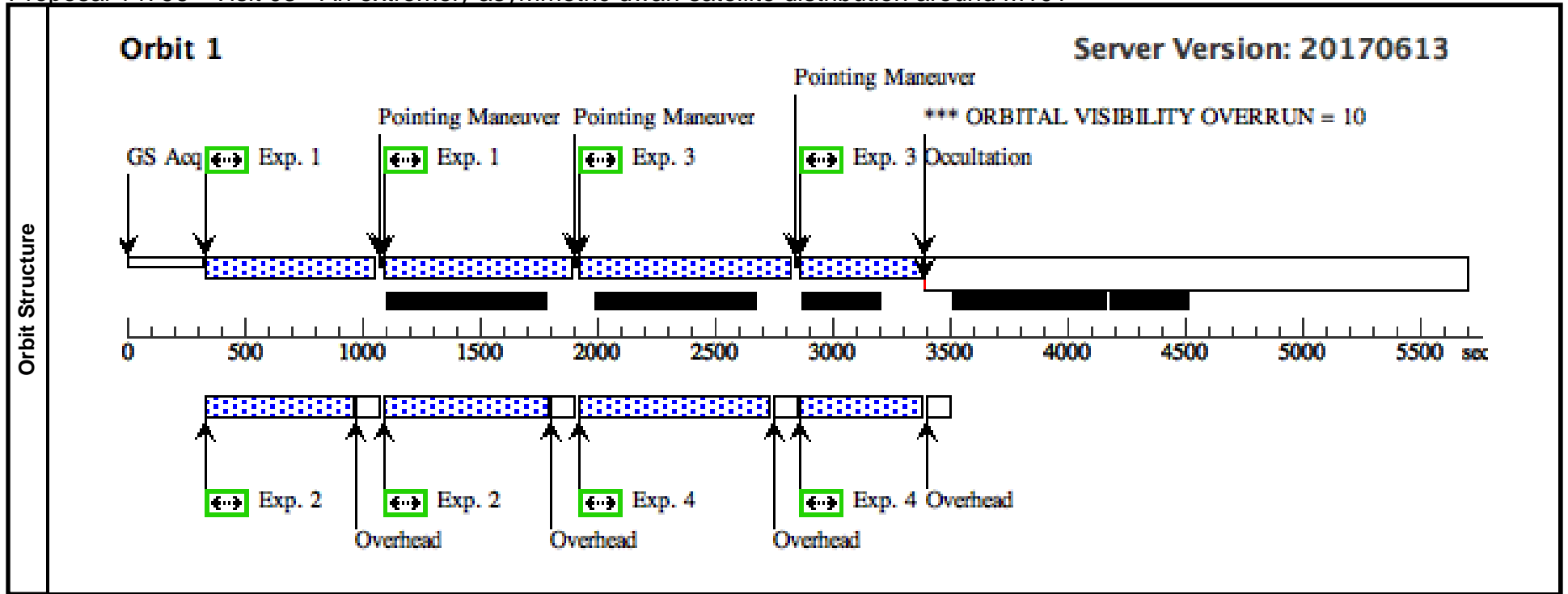
Visit	Proposal 14796, Visit 02, completed Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS, ACS/WFC Special Requirements: ORIENT 185D TO 150 D									
	(Visit 02) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
Diagnosics										
Patterns	#	Primary Pattern	Secondary Pattern	Exposures						
	(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.364 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=47.23 Angle Between Sides= Center Pattern=false		(1-2), (3-4)					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(2)	M101-DW2	RA: 14 08 43.7330 (212.1822208d) Dec: +55 10 2.28 (55.16730d) Equinox: J2000 <i>Comments: Extended=YES</i>		V=20.78	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(2) M101-DW2	ACS/WFC, ACCUM, WFC1	F606W			Pattern 1, Exps 1-2 in Visit 02 (1) Prime + Parallel Group 1-2 in Pattern 1, Exps 1-2 in Visit 02	600 Secs (1225 Secs) [==>530.0 Secs (Pattern 1)] [==>695.0 Secs (Pattern 2)]	[1]
	2		ANY	WFC3/UVIS, ACCUM, UVIS1	F606W			Pattern 1, Exps 1-2 in Visit 02 (1) Prime + Parallel Group 1-2 in Pattern 1, Exps 1-2 in Visit 02	600 Secs (1335 Secs) [==>610.0 Secs (Pattern 1)] [==>725.0 Secs (Pattern 2)]	[1]
	3		(2) M101-DW2	ACS/WFC, ACCUM, WFC1	F814W			Pattern 1, Exps 3-4 in Visit 02 (1) Prime + Parallel Group 3-4 in Pattern 1, Exps 3-4 in Visit 02	450 Secs (1149 Secs) [==>738.0 Secs (Pattern 1)] [==>411.0 Secs (Pattern 2)]	[1]
	4		ANY	WFC3/UVIS, ACCUM, UVIS1	F814W			Pattern 1, Exps 3-4 in Visit 02 (1) Prime + Parallel Group 3-4 in Pattern 1, Exps 3-4 in Visit 02	450 Secs (1335 Secs) [==>800.0 Secs (Pattern 1)] [==>535.0 Secs (Pattern 2)]	[1]



Proposal 14796 - Visit 03 - An extremely asymmetric dwarf satellite distribution around M101

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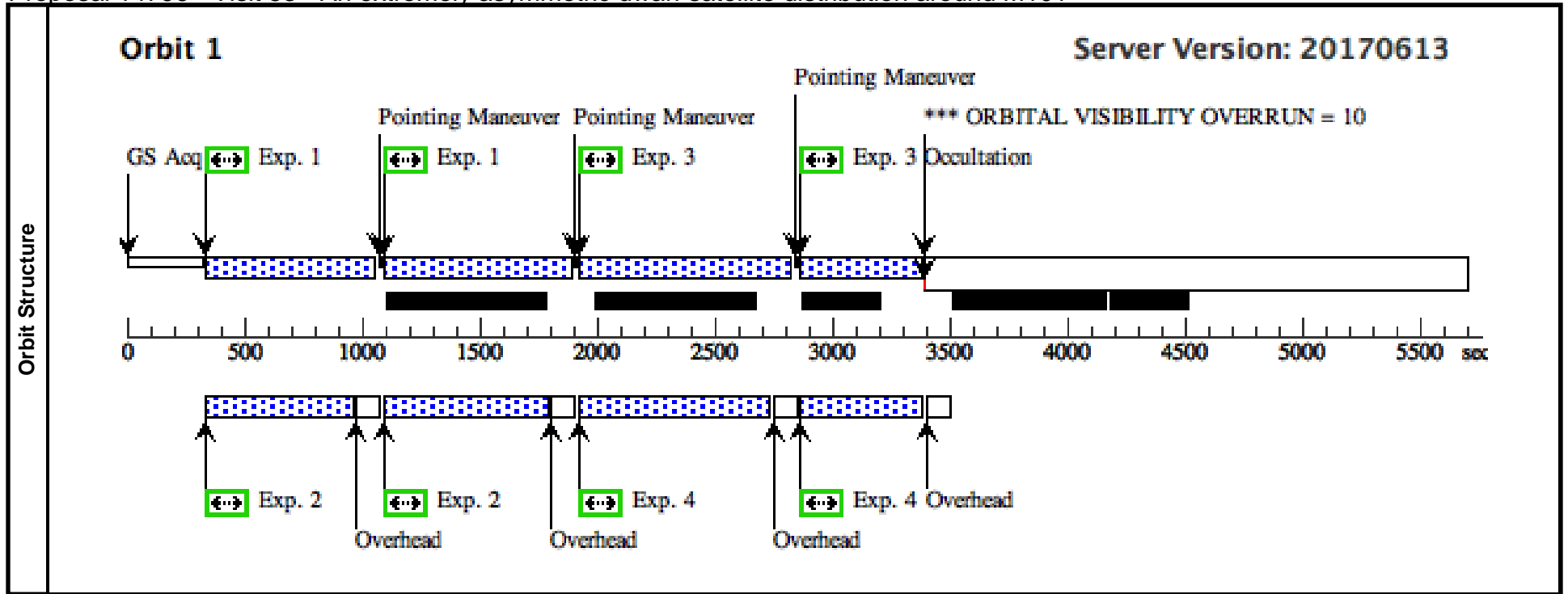
Visit	Proposal 14796, Visit 03, completed Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS, ACS/WFC Special Requirements: ORIENT 247D TO 180 D									
	(Visit 03) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
Diagnosics										
Patterns	#	Primary Pattern	Secondary Pattern	Exposures						
	(1)	Pattern Type=ACS-WFC-DITHER- LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.364 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=47.23 Angle Between Sides= Center Pattern=false		(1-2), (3-4)					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(3)	M101-DW3	RA: 14 05 18.2440 (211.3260167d) Dec: +54 53 52.44 (54.89790d) Equinox: J2000 <i>Comments: Extended=YES</i>		V=20.51	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(3) M101-DW3	ACS/WFC, ACCUM, WFC1	F606W			Pattern 1, Exps 1-2 in Visit 03 (1) Prime + Parallel Gro up 1-2 in Pattern 1, E xps 1-2 in Visit 03	600 Secs (1193 Secs) [==>517.0 Secs (Pattern 1)] [==>676.0 Secs (Pattern 2)]	[1]
	2		ANY	WFC3/UVIS, ACCUM, UVIS1	F606W			Pattern 1, Exps 1-2 in Visit 03 (1) Prime + Parallel Gro up 1-2 in Pattern 1, E xps 1-2 in Visit 03	600 Secs (1300 Secs) [==>600.0 Secs (Pattern 1)] [==>700.0 Secs (Pattern 2)]	[1]
	3		(3) M101-DW3	ACS/WFC, ACCUM, WFC1	F814W			Pattern 1, Exps 3-4 in Visit 03 (1) Prime + Parallel Gro up 3-4 in Pattern 1, E xps 3-4 in Visit 03	450 Secs (1122 Secs) [==>725.0 Secs (Pattern 1)] [==>397.0 Secs (Pattern 2)]	[1]
	4		ANY	WFC3/UVIS, ACCUM, UVIS1	F814W			Pattern 1, Exps 3-4 in Visit 03 (1) Prime + Parallel Gro up 3-4 in Pattern 1, E xps 3-4 in Visit 03	450 Secs (1313 Secs) [==>790.0 Secs (Pattern 1)] [==>523.0 Secs (Pattern 2)]	[1]



Proposal 14796 - Visit 53 - An extremely asymmetric dwarf satellite distribution around M101

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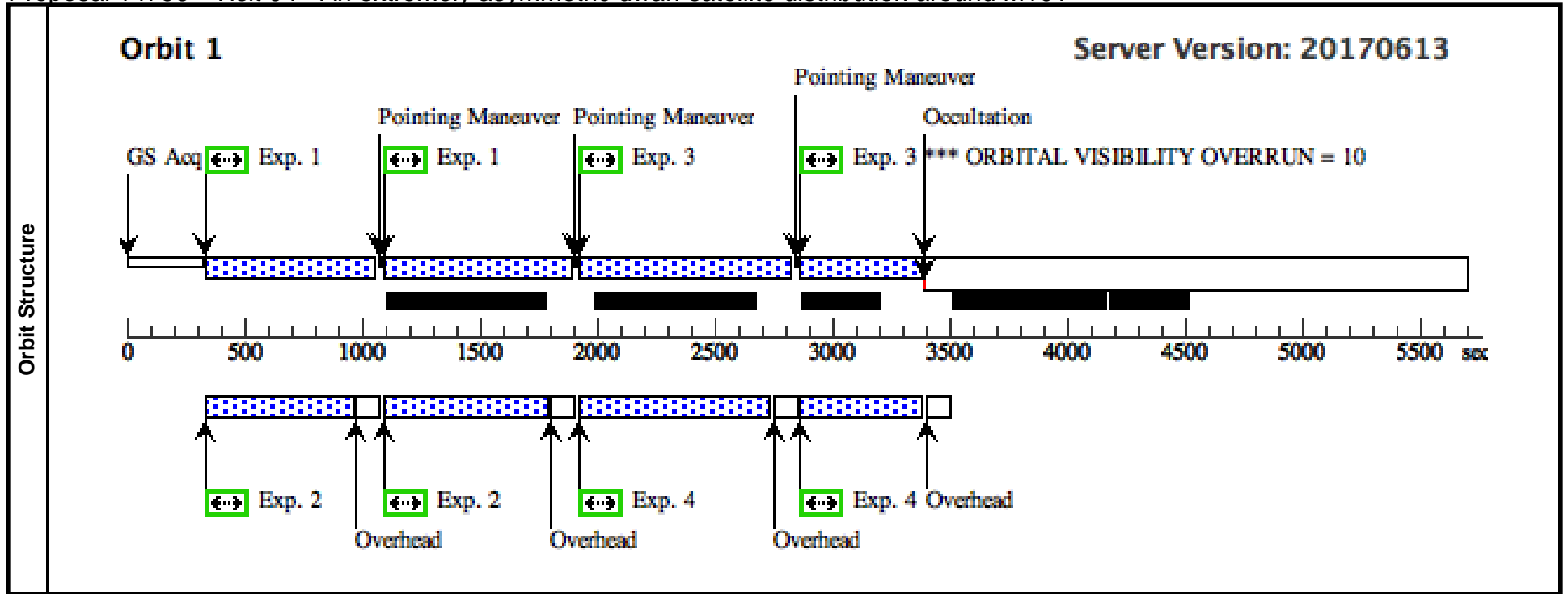
Visit	Proposal 14796, Visit 53, scheduling Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS, ACS/WFC Special Requirements: ORIENT 247D TO 180 D Comments: HOPR copy of visit 03									
	(Visit 53) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
Patterns	#	Primary Pattern	Secondary Pattern	Exposures						
	(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.364 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=47.23 Angle Between Sides= Center Pattern=false		(1-2), (3-4)					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(3)	M101-DW3	RA: 14 05 18.2440 (211.3260167d) Dec: +54 53 52.44 (54.89790d) Equinox: J2000 Comments: Extended=YES		V=20.51	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(3) M101-DW3	ACS/WFC, ACCUM, WFC1	F606W			Pattern 1, Exps 1-2 in Visit 53 (1) Prime + Parallel Group 1-2 in Pattern 1, Exps 1-2 in Visit 53	600 Secs (1193 Secs) [==>517.0 Secs (Pattern 1)] [==>676.0 Secs (Pattern 2)]	[1]
	2		ANY	WFC3/UVIS, ACCUM, UVIS1	F606W			Pattern 1, Exps 1-2 in Visit 53 (1) Prime + Parallel Group 1-2 in Pattern 1, Exps 1-2 in Visit 53	600 Secs (1300 Secs) [==>600.0 Secs (Pattern 1)] [==>700.0 Secs (Pattern 2)]	[1]
	3		(3) M101-DW3	ACS/WFC, ACCUM, WFC1	F814W			Pattern 1, Exps 3-4 in Visit 53 (1) Prime + Parallel Group 3-4 in Pattern 1, Exps 3-4 in Visit 53	450 Secs (1122 Secs) [==>725.0 Secs (Pattern 1)] [==>397.0 Secs (Pattern 2)]	[1]
4		ANY	WFC3/UVIS, ACCUM, UVIS1	F814W			Pattern 1, Exps 3-4 in Visit 53 (1) Prime + Parallel Group 3-4 in Pattern 1, Exps 3-4 in Visit 53	450 Secs (1313 Secs) [==>790.0 Secs (Pattern 1)] [==>523.0 Secs (Pattern 2)]	[1]	



Proposal 14796 - Visit 04 - An extremely asymmetric dwarf satellite distribution around M101

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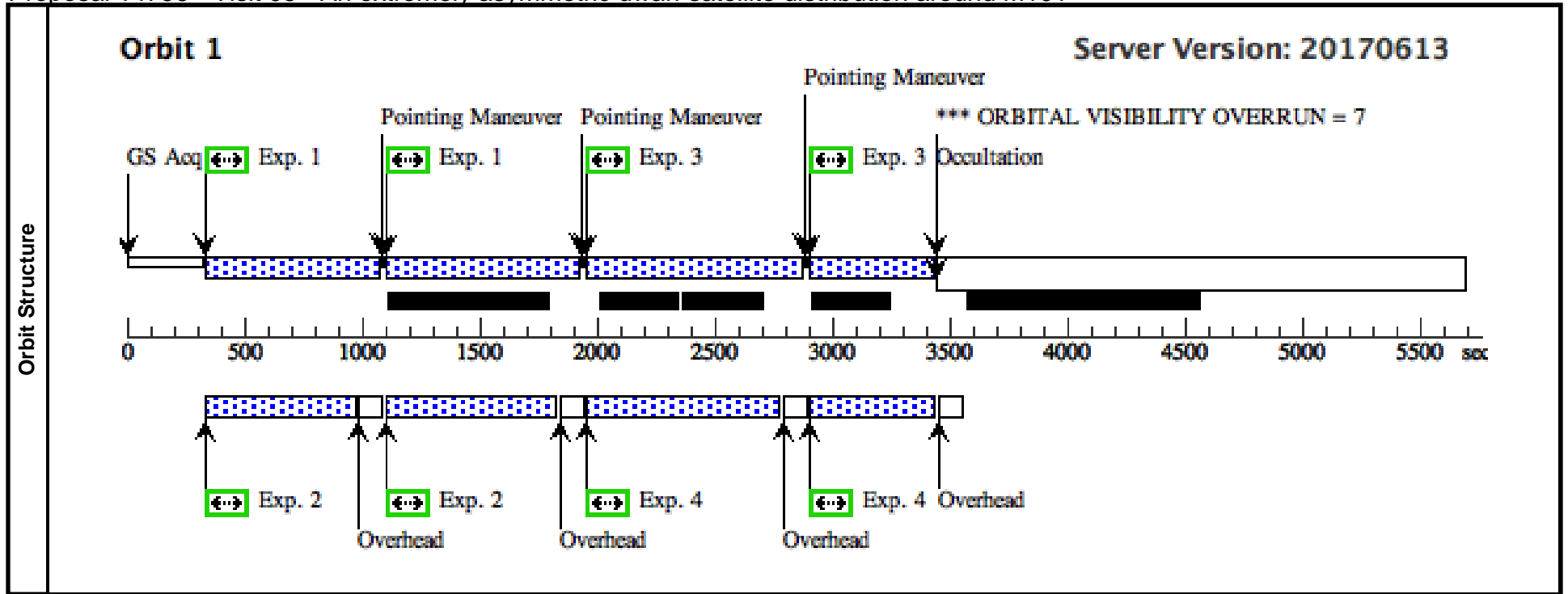
Visit	Proposal 14796, Visit 04, scheduling Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS, ACS/WFC Special Requirements: ORIENT 240D TO 140 D									
	(Visit 04) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
Diagnosics										
Patterns	#	Primary Pattern	Secondary Pattern	Exposures						
	(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.364 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=47.23 Angle Between Sides= Center Pattern=false		(1-2), (3-4)					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(4)	M101-DW4	RA: 14 04 24.7750 (211.1032292d) Dec: +53 16 10.53 (53.26959d) Equinox: J2000 <i>Comments: Extended=YES</i>		V=19.53	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(4) M101-DW4	ACS/WFC, ACCUM, WFC1	F606W			Pattern 1, Exps 1-2 in Visit 04 (1) Prime + Parallel Group 1-2 in Pattern 1, Exps 1-2 in Visit 04	600 Secs (1193 Secs) [==>517.0 Secs (Pattern 1)] [==>676.0 Secs (Pattern 2)]	[1]
	2		ANY	WFC3/UVIS, ACCUM, UVIS1	F606W			Pattern 1, Exps 1-2 in Visit 04 (1) Prime + Parallel Group 1-2 in Pattern 1, Exps 1-2 in Visit 04	600 Secs (1300 Secs) [==>600.0 Secs (Pattern 1)] [==>700.0 Secs (Pattern 2)]	[1]
	3		(4) M101-DW4	ACS/WFC, ACCUM, WFC1	F814W			Pattern 1, Exps 3-4 in Visit 04 (1) Prime + Parallel Group 3-4 in Pattern 1, Exps 3-4 in Visit 04	450 Secs (1122 Secs) [==>725.0 Secs (Pattern 1)] [==>397.0 Secs (Pattern 2)]	[1]
	4		ANY	WFC3/UVIS, ACCUM, UVIS1	F814W			Pattern 1, Exps 3-4 in Visit 04 (1) Prime + Parallel Group 3-4 in Pattern 1, Exps 3-4 in Visit 04	450 Secs (1313 Secs) [==>790.0 Secs (Pattern 1)] [==>523.0 Secs (Pattern 2)]	[1]



Proposal 14796 - Visit 05 - An extremely asymmetric dwarf satellite distribution around M101

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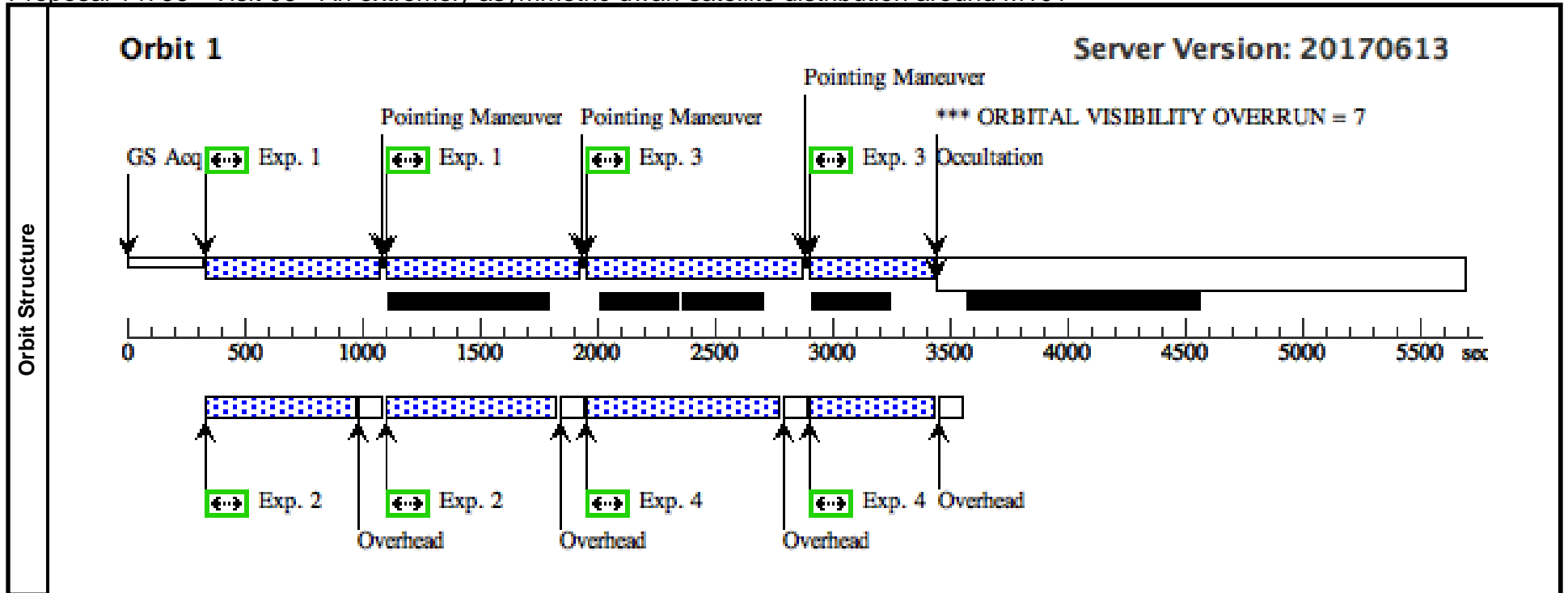
Visit	Proposal 14796, Visit 05, completed Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS, ACS/WFC Special Requirements: ORIENT 315D TO 260 D									
	(Visit 05) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
Diagnosics										
Patterns	#	Primary Pattern	Secondary Pattern	Exposures						
	(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.364 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=47.23 Angle Between Sides= Center Pattern=false		(1-2), (3-4)					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(5)	M101-DW5	RA: 14 10 59.7280 (212.7488667d) Dec: +55 53 28.21 (55.89117d) Equinox: J2000 <i>Comments: Extended=YES</i>		V=20.66	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(5) M101-DW5	ACS/WFC, ACCUM, WFC1	F606W			Pattern 1, Exps 1-2 in Visit 05 (1) Prime + Parallel Group 1-2 in Pattern 1, Exps 1-2 in Visit 05	600 Secs (1225 Secs) [==>530.0 Secs (Pattern 1)] [==>695.0 Secs (Pattern 2)]	[1]
	2		ANY	WFC3/UVIS, ACCUM, UVIS1	F606W			Pattern 1, Exps 1-2 in Visit 05 (1) Prime + Parallel Group 1-2 in Pattern 1, Exps 1-2 in Visit 05	600 Secs (1335 Secs) [==>610.0 Secs (Pattern 1)] [==>725.0 Secs (Pattern 2)]	[1]
	3		(5) M101-DW5	ACS/WFC, ACCUM, WFC1	F814W			Pattern 1, Exps 3-4 in Visit 05 (1) Prime + Parallel Group 3-4 in Pattern 1, Exps 3-4 in Visit 05	450 Secs (1149 Secs) [==>738.0 Secs (Pattern 1)] [==>411.0 Secs (Pattern 2)]	[1]
	4		ANY	WFC3/UVIS, ACCUM, UVIS1	F814W			Pattern 1, Exps 3-4 in Visit 05 (1) Prime + Parallel Group 3-4 in Pattern 1, Exps 3-4 in Visit 05	450 Secs (1335 Secs) [==>800 Secs (Pattern 1)] [==>535 Secs (Pattern 2)]	[1]



Proposal 14796 - Visit 06 - An extremely asymmetric dwarf satellite distribution around M101

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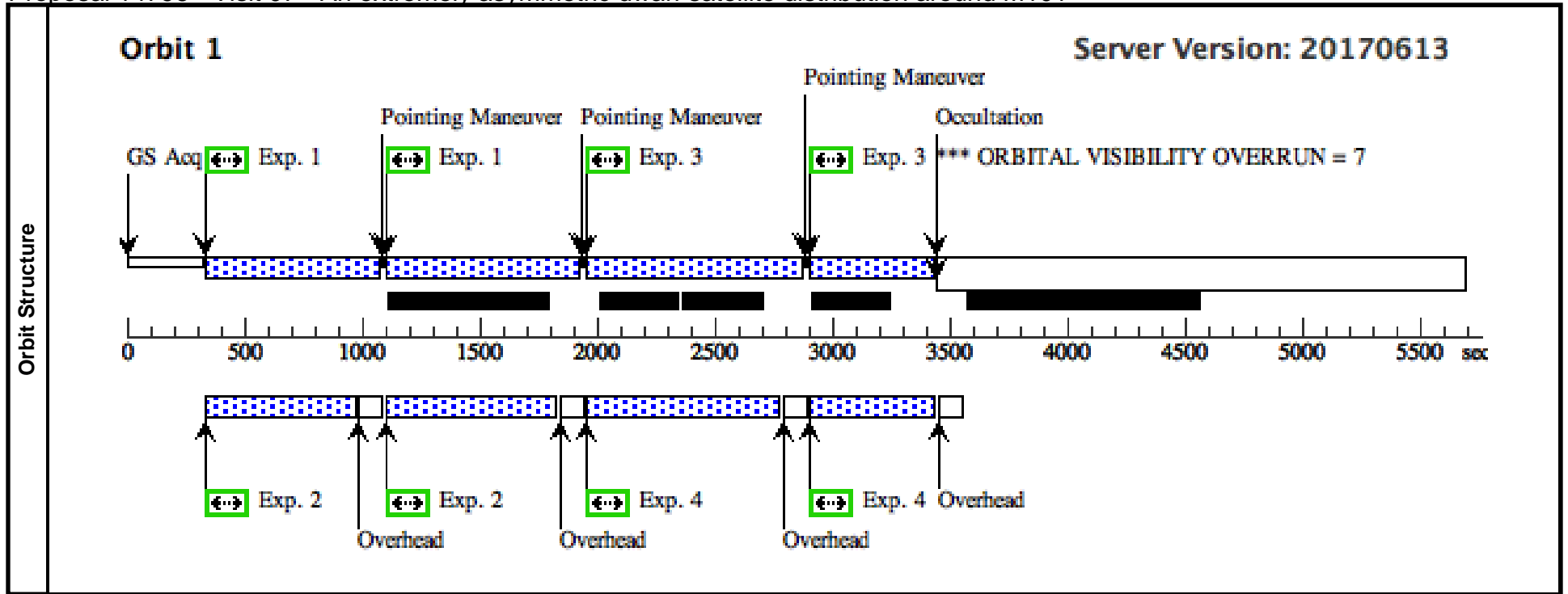
Visit	Proposal 14796, Visit 06, completed Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS, ACS/WFC Special Requirements: ORIENT 275D TO 22 D; ORIENT 90D TO 210 D									
	(Visit 06) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
Diagnosics										
Patterns	#	Primary Pattern	Secondary Pattern		Exposures					
	(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.364 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=47.23 Angle Between Sides= Center Pattern=false		(1-2), (3-4)					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(6)	M101-DW6	RA: 14 09 21.9260 (212.3413583d) Dec: +55 18 14.79 (55.30411d) Equinox: J2000 <i>Comments: Extended=YES</i>		V=20.60	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(6) M101-DW6		ACS/WFC, ACCUM, WFC1	F606W			Pattern 1, Exps 1-2 in Visit 06 (1) Prime + Parallel Group 1-2 in Pattern 1, Exps 1-2 in Visit 06	600 Secs (1225 Secs) [==>530.0 Secs (Pattern 1)] [==>695.0 Secs (Pattern 2)]	[1]
	2	ANY		WFC3/UVIS, ACCUM, UVIS1	F606W			Pattern 1, Exps 1-2 in Visit 06 (1) Prime + Parallel Group 1-2 in Pattern 1, Exps 1-2 in Visit 06	600 Secs (1335 Secs) [==>610.0 Secs (Pattern 1)] [==>725.0 Secs (Pattern 2)]	[1]
	3	(6) M101-DW6		ACS/WFC, ACCUM, WFC1	F814W			Pattern 1, Exps 3-4 in Visit 06 (1) Prime + Parallel Group 3-4 in Pattern 1, Exps 3-4 in Visit 06	450 Secs (1149 Secs) [==>738.0 Secs (Pattern 1)] [==>411.0 Secs (Pattern 2)]	[1]
	4	ANY		WFC3/UVIS, ACCUM, UVIS1	F814W			Pattern 1, Exps 3-4 in Visit 06 (1) Prime + Parallel Group 3-4 in Pattern 1, Exps 3-4 in Visit 06	450 Secs (1335 Secs) [==>800 Secs (Pattern 1)] [==>535 Secs (Pattern 2)]	[1]



Proposal 14796 - Visit 07 - An extremely asymmetric dwarf satellite distribution around M101

Thu Jul 13 18:02:03 GMT 2017

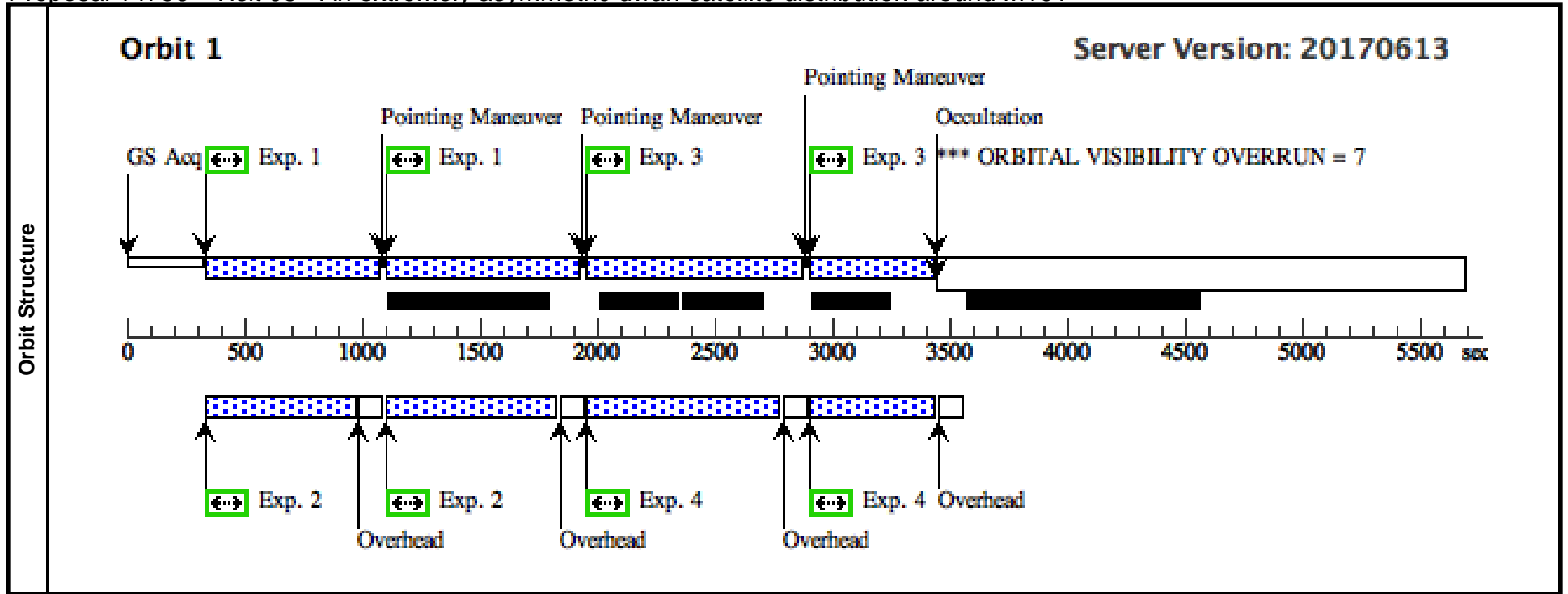
Visit	Proposal 14796, Visit 07, completed Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS, ACS/WFC Special Requirements: ORIENT 190D TO 145 D									
	(Visit 07) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
Diagnosics										
Patterns	#	Primary Pattern	Secondary Pattern	Exposures						
	(1)	Pattern Type=ACS-WFC-DITHER- LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.364 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=47.23 Angle Between Sides= Center Pattern=false		(1-2), (3-4)					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(7)	M101-DW7	RA: 14 08 45.8250 (212.1909375d) Dec: +55 17 13.05 (55.28696d) Equinox: J2000 Comments: Extended=YES		V=20.00	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(7) M101-DW7	ACS/WFC, ACCUM, WFC1	F606W			Pattern 1, Exps 1-2 in Visit 07 (1) Prime + Parallel Gro up 1-2 in Pattern 1, E xps 1-2 in Visit 07	600 Secs (1225 Secs) [==>530.0 Secs (Pattern 1)] [==>695.0 Secs (Pattern 2)]	[1]
	2		ANY	WFC3/UVIS, ACCUM, UVIS1	F606W			Pattern 1, Exps 1-2 in Visit 07 (1) Prime + Parallel Gro up 1-2 in Pattern 1, E xps 1-2 in Visit 07	600 Secs (1335 Secs) [==>610.0 Secs (Pattern 1)] [==>725.0 Secs (Pattern 2)]	[1]
	3		(7) M101-DW7	ACS/WFC, ACCUM, WFC1	F814W			Pattern 1, Exps 3-4 in Visit 07 (1) Prime + Parallel Gro up 3-4 in Pattern 1, E xps 3-4 in Visit 07	450 Secs (1149 Secs) [==>738.0 Secs (Pattern 1)] [==>411.0 Secs (Pattern 2)]	[1]
	4		ANY	WFC3/UVIS, ACCUM, UVIS1	F814W			Pattern 1, Exps 3-4 in Visit 07 (1) Prime + Parallel Gro up 3-4 in Pattern 1, E xps 3-4 in Visit 07	450 Secs (1335 Secs) [==>800 Secs (Pattern 1)] [==>535 Secs (Pattern 2)]	[1]



Proposal 14796 - Visit 08 - An extremely asymmetric dwarf satellite distribution around M101

Thu Jul 13 18:02:03 GMT 2017

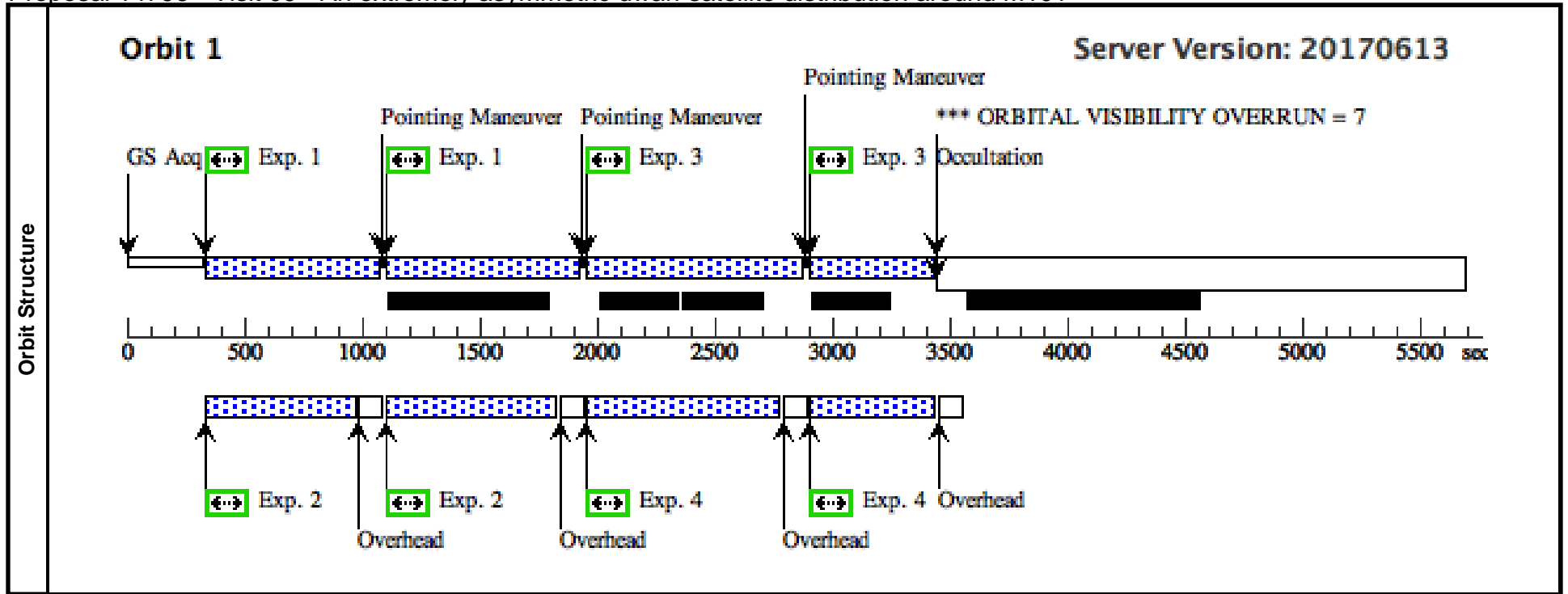
Visit	Proposal 14796, Visit 08, completed Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS, ACS/WFC Special Requirements: ORIENT 290D TO 160 D; ORIENT 230D TO 270 D									
	(Visit 08) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
Diagnosics										
Patterns	#	Primary Pattern	Secondary Pattern		Exposures					
	(1)	Pattern Type=ACS-WFC-DITHER- LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.364 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=47.23 Angle Between Sides= Center Pattern=false		(1-2), (3-4)					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(8)	M101-DW8	RA: 14 13 1.6650 (213.2569375d) Dec: +55 11 16.15 (55.18782d) Equinox: J2000 Comments: Extended=YES		V=20.13	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(8) M101-DW8		ACS/WFC, ACCUM, WFC1	F606W			Pattern 1, Exps 1-2 in Visit 08 (1) Prime + Parallel Gro up 1-2 in Pattern 1, E xps 1-2 in Visit 08	600 Secs (1225 Secs) [==>530.0 Secs (Pattern 1)] [==>695.0 Secs (Pattern 2)]	[1]
	2	ANY		WFC3/UVIS, ACCUM, UVIS1	F606W			Pattern 1, Exps 1-2 in Visit 08 (1) Prime + Parallel Gro up 1-2 in Pattern 1, E xps 1-2 in Visit 08	600 Secs (1335 Secs) [==>610.0 Secs (Pattern 1)] [==>725.0 Secs (Pattern 2)]	[1]
	3	(8) M101-DW8		ACS/WFC, ACCUM, WFC1	F814W			Pattern 1, Exps 3-4 in Visit 08 (1) Prime + Parallel Gro up 3-4 in Pattern 1, E xps 3-4 in Visit 08	450 Secs (1149 Secs) [==>738.0 Secs (Pattern 1)] [==>411.0 Secs (Pattern 2)]	[1]
	4	ANY		WFC3/UVIS, ACCUM, UVIS1	F814W			Pattern 1, Exps 3-4 in Visit 08 (1) Prime + Parallel Gro up 3-4 in Pattern 1, E xps 3-4 in Visit 08	450 Secs (1335 Secs) [==>800 Secs (Pattern 1)] [==>535 Secs (Pattern 2)]	[1]



Proposal 14796 - Visit 09 - An extremely asymmetric dwarf satellite distribution around M101

Thu Jul 13 18:02:03 GMT 2017

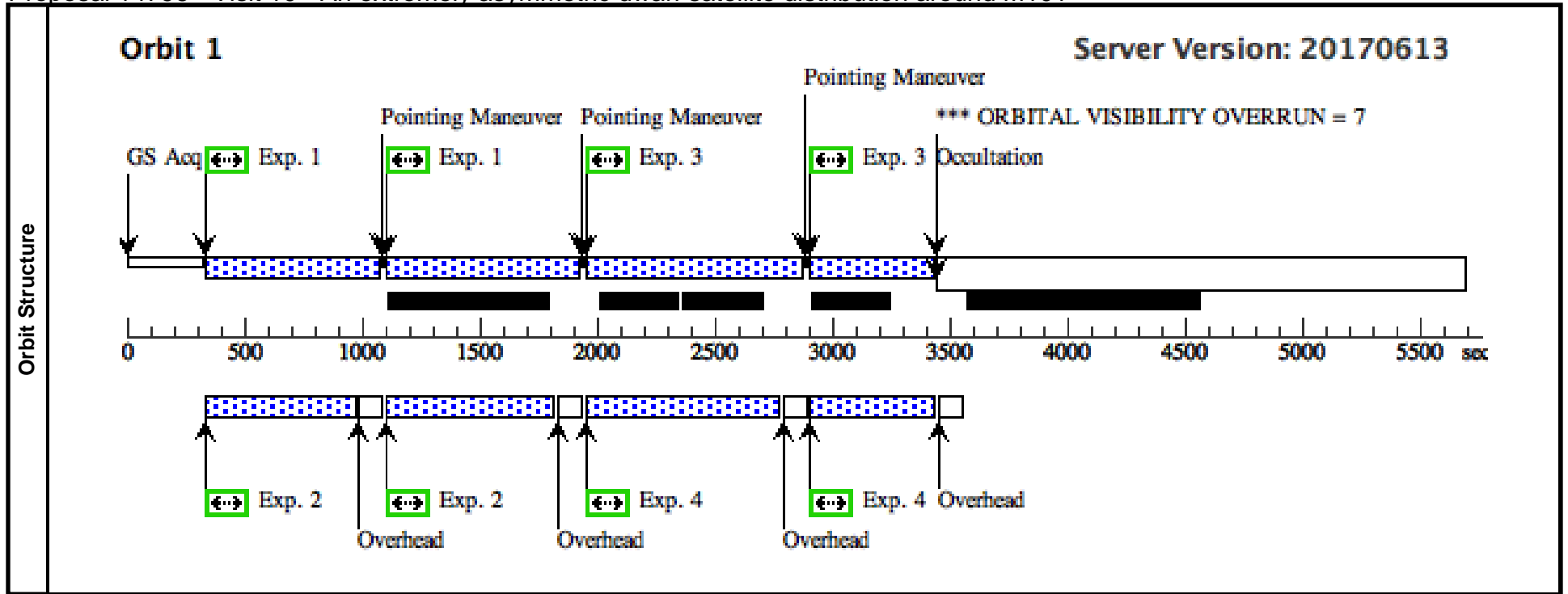
Visit	Proposal 14796, Visit 09, completed Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS, ACS/WFC Special Requirements: ORIENT 260D TO 170 D									
	(Visit 09) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
Diagnosics										
Patterns	#	Primary Pattern	Secondary Pattern	Exposures						
	(1)	Pattern Type=ACS-WFC-DITHER- LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.364 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=47.23 Angle Between Sides= Center Pattern=false		(1-2), (3-4)					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(9)	M101-DW9	RA: 14 04 13.0110 (211.0542125d) Dec: +55 43 34.40 (55.72622d) Equinox: J2000 <i>Comments: Extended=YES</i>		V=20.34	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(9) M101-DW9	ACS/WFC, ACCUM, WFC1	F606W			Pattern 1, Exps 1-2 in Visit 09 (1) Prime + Parallel Gro up 1-2 in Pattern 1, E xps 1-2 in Visit 09	600 Secs (1225 Secs) [==>530.0 Secs (Pattern 1)] [==>695.0 Secs (Pattern 2)]	[1]
	2		ANY	WFC3/UVIS, ACCUM, UVIS1	F606W			Pattern 1, Exps 1-2 in Visit 09 (1) Prime + Parallel Gro up 1-2 in Pattern 1, E xps 1-2 in Visit 09	600 Secs (1335 Secs) [==>610.0 Secs (Pattern 1)] [==>725.0 Secs (Pattern 2)]	[1]
	3		(9) M101-DW9	ACS/WFC, ACCUM, WFC1	F814W			Pattern 1, Exps 3-4 in Visit 09 (1) Prime + Parallel Gro up 3-4 in Pattern 1, E xps 3-4 in Visit 09	450 Secs (1149 Secs) [==>738.0 Secs (Pattern 1)] [==>411.0 Secs (Pattern 2)]	[1]
	4		ANY	WFC3/UVIS, ACCUM, UVIS1	F814W			Pattern 1, Exps 3-4 in Visit 09 (1) Prime + Parallel Gro up 3-4 in Pattern 1, E xps 3-4 in Visit 09	450 Secs (1335 Secs) [==>800.0 Secs (Pattern 1)] [==>535.0 Secs (Pattern 2)]	[1]



Proposal 14796 - Visit 10 - An extremely asymmetric dwarf satellite distribution around M101

Thu Jul 13 18:02:03 GMT 2017

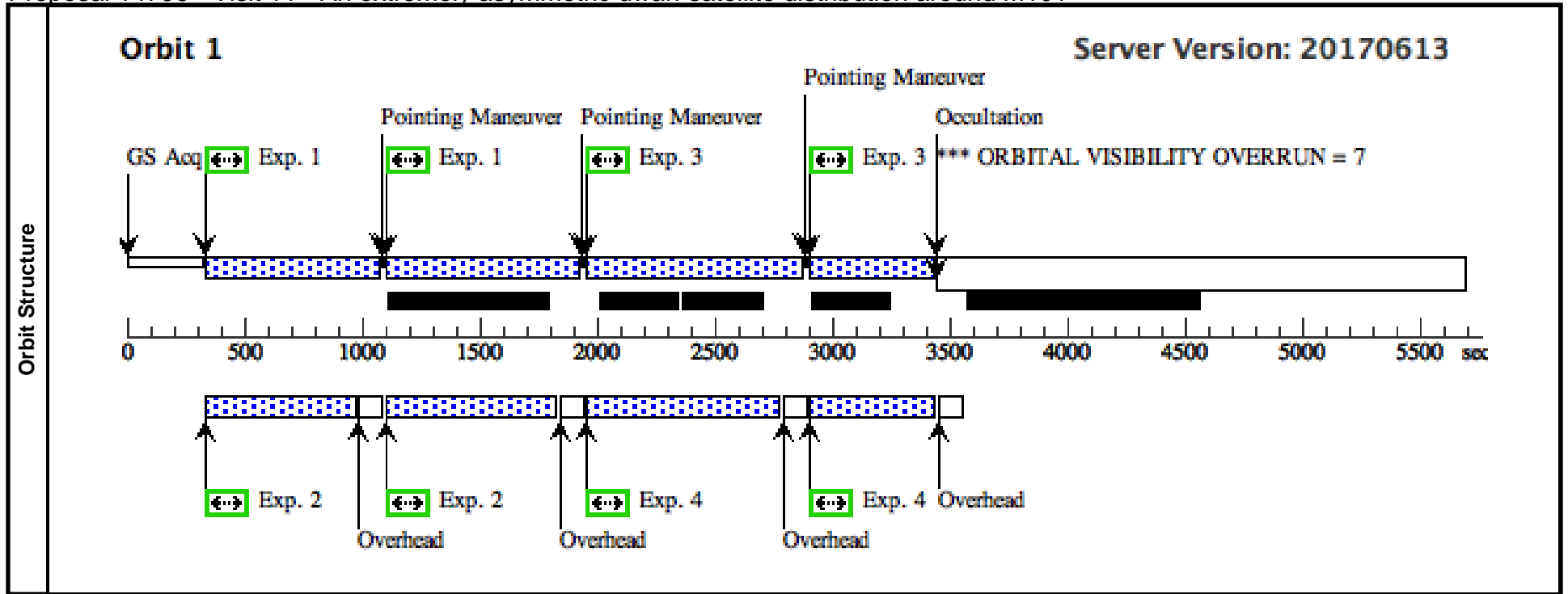
Visit	Proposal 14796, Visit 10, completed Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS, ACS/WFC Special Requirements: (none)									
	(Visit 10) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
Patterns	#	Primary Pattern		Secondary Pattern	Exposures					
	(1)	Pattern Type=ACS-WFC-DITHER- LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.364 Line Spacing=		Coordinate Frame=POS-TARG Pattern Orientation=47.23 Angle Between Sides= Center Pattern=false	(1-2), (3-4)					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(10)	M101-DW10	RA: 14 02 20.0410 (210.5835042d) Dec: +55 39 18.07 (55.65502d) Equinox: J2000 Comments: Extended=YES		V=19.84	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(10) M101-DW10	ACS/WFC, ACCUM, WFC1	F606W				Pattern 1, Exps 1-2 in Visit 10 (1) Prime + Parallel Gro up 1-2 in Pattern 1, E xps 1-2 in Visit 10	600 Secs (1225 Secs) [==>530.0 Secs (Pattern 1)] [==>695 Secs (Pattern 2)]	[1]
	2	ANY	WFC3/UVIS, ACCUM, UVIS1	F606W				Pattern 1, Exps 1-2 in Visit 10 (1) Prime + Parallel Gro up 1-2 in Pattern 1, E xps 1-2 in Visit 10	600 Secs (1325 Secs) [==>610.0 Secs (Pattern 1)] [==>715.0 Secs (Pattern 2)]	[1]
	3	(10) M101-DW10	ACS/WFC, ACCUM, WFC1	F814W				Pattern 1, Exps 3-4 in Visit 10 (1) Prime + Parallel Gro up 3-4 in Pattern 1, E xps 3-4 in Visit 10	450 Secs (1149 Secs) [==>738.0 Secs (Pattern 1)] [==>411.0 Secs (Pattern 2)]	[1]
4	ANY	WFC3/UVIS, ACCUM, UVIS1	F814W				Pattern 1, Exps 3-4 in Visit 10 (1) Prime + Parallel Gro up 3-4 in Pattern 1, E xps 3-4 in Visit 10	450 Secs (1335 Secs) [==>800 Secs (Pattern 1)] [==>535 Secs (Pattern 2)]	[1]	



Proposal 14796 - Visit 11 - An extremely asymmetric dwarf satellite distribution around M101

Thu Jul 13 18:02:03 GMT 2017

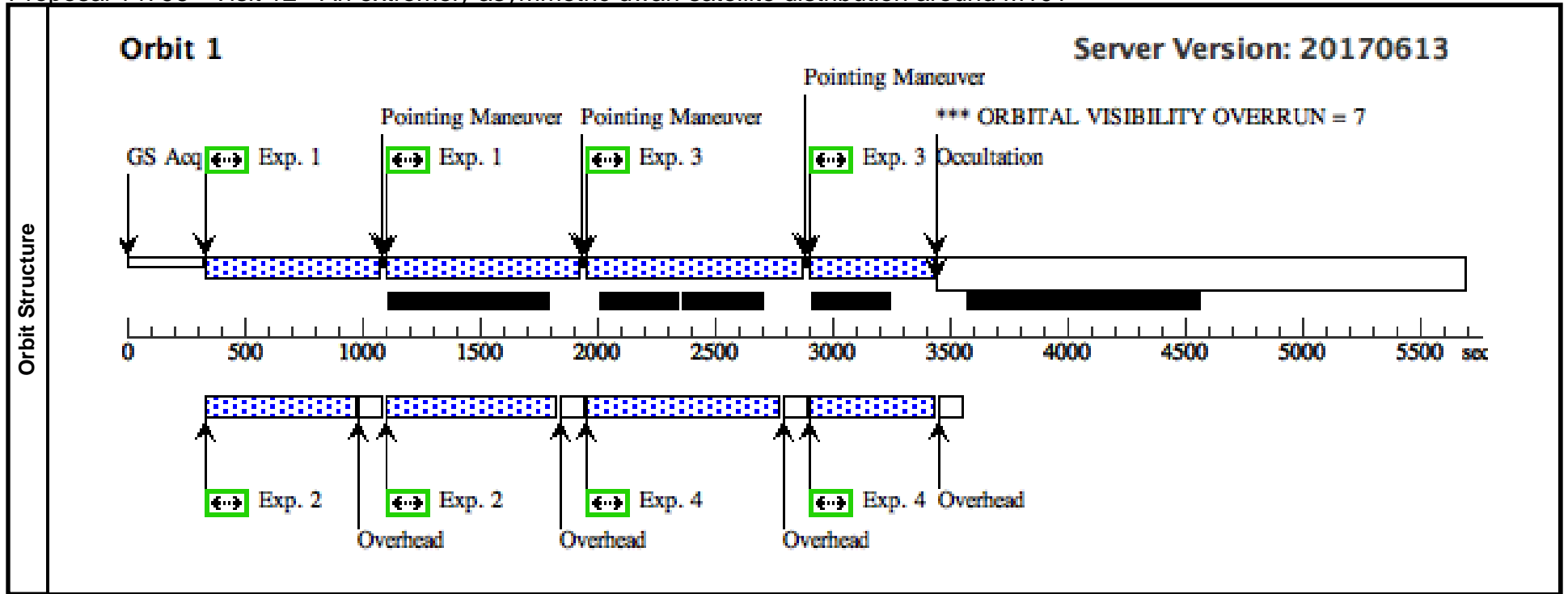
Visit	Proposal 14796, Visit 11, scheduling Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS, ACS/WFC Special Requirements: ORIENT 175D TO 115 D									
	(Visit 11) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
Diagnosics										
Patterns	#	Primary Pattern	Secondary Pattern		Exposures					
	(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.364 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=47.23 Angle Between Sides= Center Pattern=false		(1-2), (3-4)					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(11)	M101-DW11	RA: 14 07 21.0570 (211.8377375d) Dec: +55 03 50.49 (55.06402d) Equinox: J2000 <i>Comments: Extended=YES</i>		V=21.10	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(11) M101-DW11		ACS/WFC, ACCUM, WFC1	F606W			Pattern 1, Exps 1-2 in Visit 11 (1) Prime + Parallel Group 1-2 in Pattern 1, Exps 1-2 in Visit 11	600 Secs (1225 Secs) [==>530.0 Secs (Pattern 1)] [==>695.0 Secs (Pattern 2)]	[1]
	2	ANY		WFC3/UVIS, ACCUM, UVIS1	F606W			Pattern 1, Exps 1-2 in Visit 11 (1) Prime + Parallel Group 1-2 in Pattern 1, Exps 1-2 in Visit 11	600 Secs (1335 Secs) [==>610.0 Secs (Pattern 1)] [==>725.0 Secs (Pattern 2)]	[1]
	3	(11) M101-DW11		ACS/WFC, ACCUM, WFC1	F814W			Pattern 1, Exps 3-4 in Visit 11 (1) Prime + Parallel Group 3-4 in Pattern 1, Exps 3-4 in Visit 11	450 Secs (1149 Secs) [==>738.0 Secs (Pattern 1)] [==>411.0 Secs (Pattern 2)]	[1]
	4	ANY		WFC3/UVIS, ACCUM, UVIS1	F814W			Pattern 1, Exps 3-4 in Visit 11 (1) Prime + Parallel Group 3-4 in Pattern 1, Exps 3-4 in Visit 11	450 Secs (1335 Secs) [==>800 Secs (Pattern 1)] [==>535 Secs (Pattern 2)]	[1]



Proposal 14796 - Visit 12 - An extremely asymmetric dwarf satellite distribution around M101

Thu Jul 13 18:02:03 GMT 2017

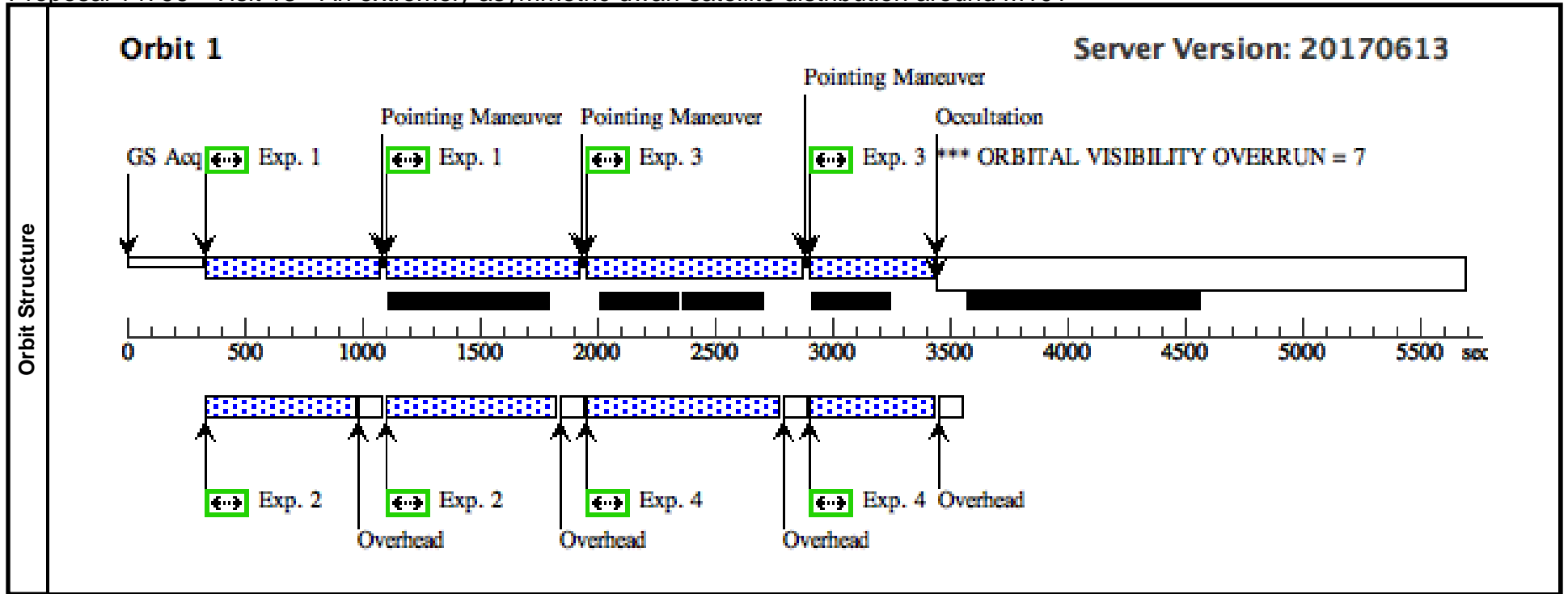
Visit	Proposal 14796, Visit 12, completed Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS, ACS/WFC Special Requirements: ORIENT 350D TO 300 D									
	(Visit 12) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
Diagnosics										
Patterns	#	Primary Pattern	Secondary Pattern	Exposures						
	(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.364 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=47.23 Angle Between Sides= Center Pattern=false		(1-2), (3-4)					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(12)	M101-DW12	RA: 14 04 24.8840 (211.1036833d) Dec: +55 06 13.24 (55.10368d) Equinox: J2000 <i>Comments: Extended=YES</i>		V=19.83	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(12) M101-DW12	ACS/WFC, ACCUM, WFC1	F606W			Pattern 1, Exps 1-2 in Visit 12 (1) Prime + Parallel Group 1-2 in Pattern 1, Exps 1-2 in Visit 12	600 Secs (1225 Secs) [==>530.0 Secs (Pattern 1)] [==>695.0 Secs (Pattern 2)]	[1]
	2		ANY	WFC3/UVIS, ACCUM, UVIS1	F606W			Pattern 1, Exps 1-2 in Visit 12 (1) Prime + Parallel Group 1-2 in Pattern 1, Exps 1-2 in Visit 12	600 Secs (1335 Secs) [==>610.0 Secs (Pattern 1)] [==>725.0 Secs (Pattern 2)]	[1]
	3		(12) M101-DW12	ACS/WFC, ACCUM, WFC1	F814W			Pattern 1, Exps 3-4 in Visit 12 (1) Prime + Parallel Group 3-4 in Pattern 1, Exps 3-4 in Visit 12	450 Secs (1149 Secs) [==>738.0 Secs (Pattern 1)] [==>411.0 Secs (Pattern 2)]	[1]
	4		ANY	WFC3/UVIS, ACCUM, UVIS1	F814W			Pattern 1, Exps 3-4 in Visit 12 (1) Prime + Parallel Group 3-4 in Pattern 1, Exps 3-4 in Visit 12	450 Secs (1335 Secs) [==>800 Secs (Pattern 1)] [==>535 Secs (Pattern 2)]	[1]



Proposal 14796 - Visit 13 - An extremely asymmetric dwarf satellite distribution around M101

Thu Jul 13 18:02:03 GMT 2017

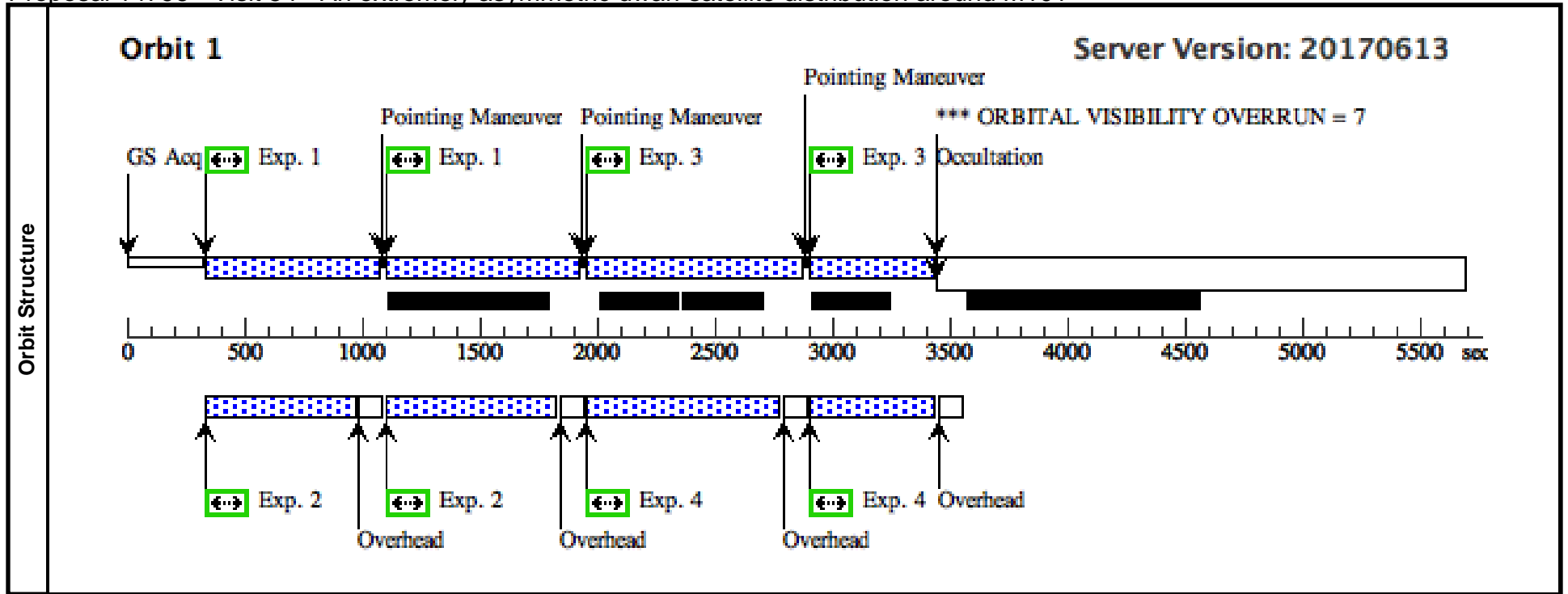
Visit	Proposal 14796, Visit 13, completed Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS, ACS/WFC Special Requirements: ORIENT 295D TO 180 D; ORIENT 245D TO 280 D									
	(Visit 13) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
Diagnosics										
Patterns	#	Primary Pattern	Secondary Pattern		Exposures					
	(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.364 Line Spacing= Coordinate Frame=POS-TARG Pattern Orientation=47.23 Angle Between Sides= Center Pattern=false			(1-2), (3-4)					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(13)	M101-DW13	RA: 13 55 44.7590 (208.9364958d) Dec: +55 08 44.39 (55.14566d) Equinox: J2000 <i>Comments: Extended=YES</i>		V=21.01	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(13) M101-DW13		ACS/WFC, ACCUM, WFC1	F606W			Pattern 1, Exps 1-2 in Visit 13 (1) Prime + Parallel Group 1-2 in Pattern 1, Exps 1-2 in Visit 13	600 Secs (1225 Secs) [==>530.0 Secs (Pattern 1)] [==>695.0 Secs (Pattern 2)]	[1]
	2	ANY		WFC3/UVIS, ACCUM, UVIS1	F606W			Pattern 1, Exps 1-2 in Visit 13 (1) Prime + Parallel Group 1-2 in Pattern 1, Exps 1-2 in Visit 13	600 Secs (1335 Secs) [==>610.0 Secs (Pattern 1)] [==>725.0 Secs (Pattern 2)]	[1]
	3	(13) M101-DW13		ACS/WFC, ACCUM, WFC1	F814W			Pattern 1, Exps 3-4 in Visit 13 (1) Prime + Parallel Group 3-4 in Pattern 1, Exps 3-4 in Visit 13	450 Secs (1149 Secs) [==>738.0 Secs (Pattern 1)] [==>411.0 Secs (Pattern 2)]	[1]
	4	ANY		WFC3/UVIS, ACCUM, UVIS1	F814W			Pattern 1, Exps 3-4 in Visit 13 (1) Prime + Parallel Group 3-4 in Pattern 1, Exps 3-4 in Visit 13	450 Secs (1335 Secs) [==>800 Secs (Pattern 1)] [==>535 Secs (Pattern 2)]	[1]



Proposal 14796 - Visit 54 - An extremely asymmetric dwarf satellite distribution around M101

Thu Jul 13 18:02:04 GMT 2017

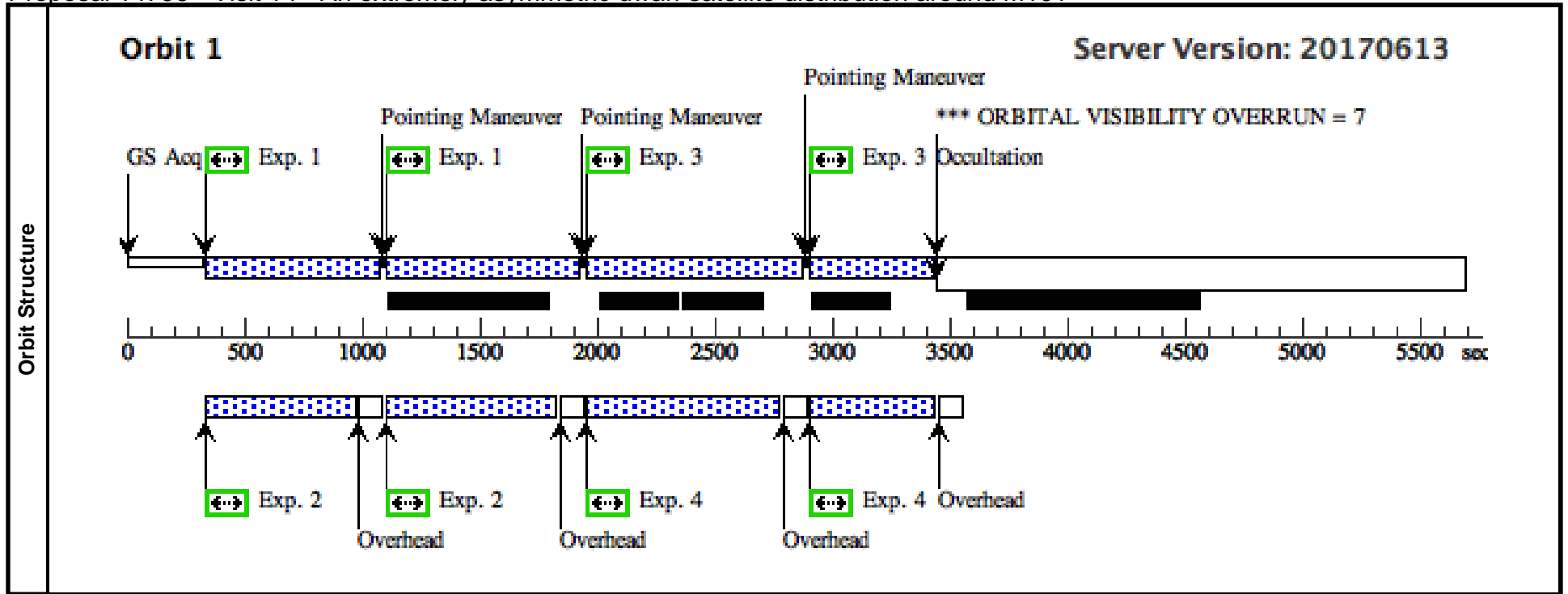
Visit	Proposal 14796, Visit 54 Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS, ACS/WFC Special Requirements: ORIENT 295D TO 180 D; ORIENT 245D TO 280 D Comments: HOPR repeat of visit 13									
	(Visit 54) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
Diagnosics										
Patterns	#	Primary Pattern	Secondary Pattern		Exposures					
	(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.364 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=47.23 Angle Between Sides= Center Pattern=false		(1-2), (3-4)					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(13)	M101-DW13	RA: 13 55 44.7590 (208.9364958d) Dec: +55 08 44.39 (55.14566d) Equinox: J2000		V=21.01	Reference Frame: ICRS				
Comments: Extended=YES										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(13) M101-DW13	ACS/WFC, ACCUM, WFC1	F606W			Pattern 1, Exps 1-2 in Visit 54 (1) Prime + Parallel Group 1-2 in Pattern 1, Exps 1-2 in Visit 54	600 Secs (1225 Secs) [==>530.0 Secs (Pattern 1)] [==>695.0 Secs (Pattern 2)]	[1]
	2		ANY	WFC3/UVIS, ACCUM, UVIS1	F606W			Pattern 1, Exps 1-2 in Visit 54 (1) Prime + Parallel Group 1-2 in Pattern 1, Exps 1-2 in Visit 54	600 Secs (1335 Secs) [==>610.0 Secs (Pattern 1)] [==>725.0 Secs (Pattern 2)]	[1]
	3		(13) M101-DW13	ACS/WFC, ACCUM, WFC1	F814W			Pattern 1, Exps 3-4 in Visit 54 (1) Prime + Parallel Group 3-4 in Pattern 1, Exps 3-4 in Visit 54	450 Secs (1149 Secs) [==>738.0 Secs (Pattern 1)] [==>411.0 Secs (Pattern 2)]	[1]
	4		ANY	WFC3/UVIS, ACCUM, UVIS1	F814W			Pattern 1, Exps 3-4 in Visit 54 (1) Prime + Parallel Group 3-4 in Pattern 1, Exps 3-4 in Visit 54	450 Secs (1335 Secs) [==>800 Secs (Pattern 1)] [==>535 Secs (Pattern 2)]	[1]



Proposal 14796 - Visit 14 - An extremely asymmetric dwarf satellite distribution around M101

Thu Jul 13 18:02:04 GMT 2017

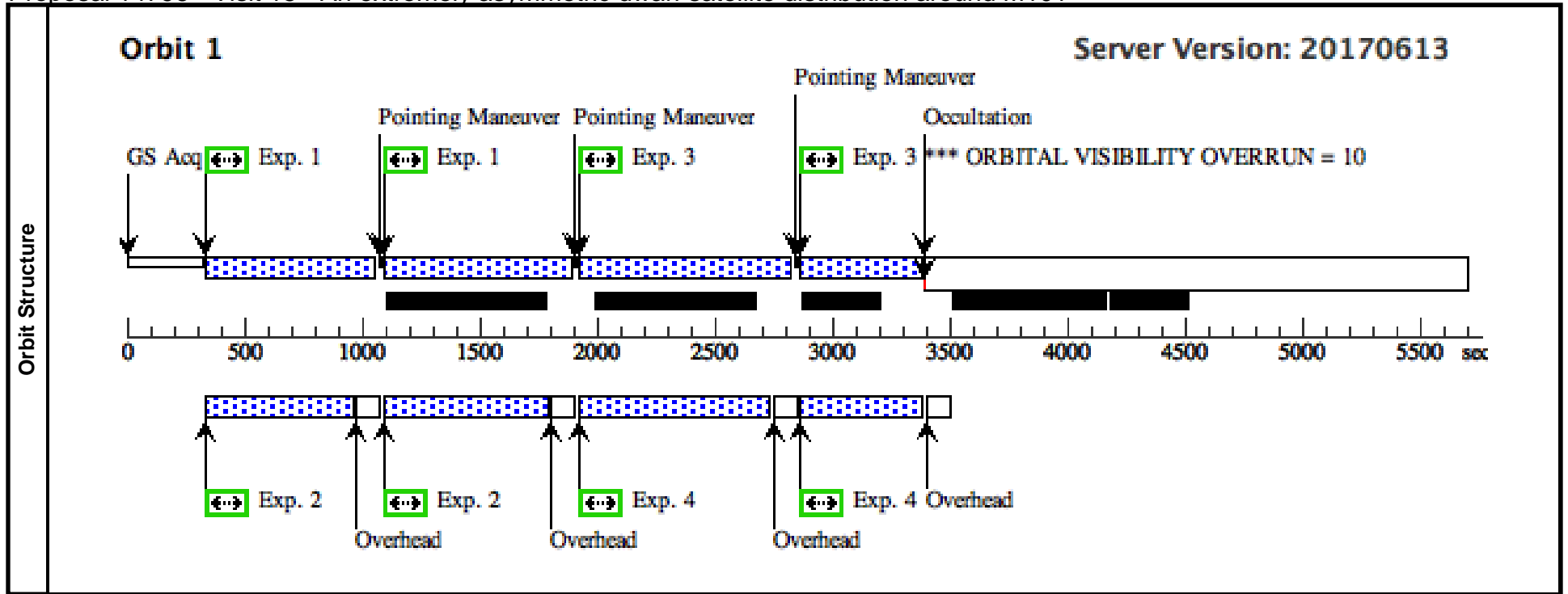
Visit	Proposal 14796, Visit 14, completed Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS, ACS/WFC Special Requirements: ORIENT 220D TO 230 D; ORIENT 290D TO 180 D									
	(Visit 14) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
Diagnosics										
Patterns	#	Primary Pattern	Secondary Pattern	Exposures						
	(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.364 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=47.23 Angle Between Sides= Center Pattern=false	(1-2), (3-4)						
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(14)	M101-DW14	RA: 14 01 40.3550 (210.4181458d) Dec: +55 00 56.39 (55.01566d) Equinox: J2000 Comments: Extended=YES		V=22.12	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(14) M101-DW14		ACS/WFC, ACCUM, WFC1	F606W			Pattern 1, Exps 1-2 in Visit 14 (1) Prime + Parallel Group 1-2 in Pattern 1, Exps 1-2 in Visit 14	600 Secs (1225 Secs) [==>530.0 Secs (Pattern 1)] [==>695.0 Secs (Pattern 2)]	[1]
	2	ANY		WFC3/UVIS, ACCUM, UVIS1	F606W			Pattern 1, Exps 1-2 in Visit 14 (1) Prime + Parallel Group 1-2 in Pattern 1, Exps 1-2 in Visit 14	600 Secs (1335 Secs) [==>610.0 Secs (Pattern 1)] [==>725.0 Secs (Pattern 2)]	[1]
	3	(14) M101-DW14		ACS/WFC, ACCUM, WFC1	F814W			Pattern 1, Exps 3-4 in Visit 14 (1) Prime + Parallel Group 3-4 in Pattern 1, Exps 3-4 in Visit 14	450 Secs (1149 Secs) [==>738.0 Secs (Pattern 1)] [==>411.0 Secs (Pattern 2)]	[1]
	4	ANY		WFC3/UVIS, ACCUM, UVIS1	F814W			Pattern 1, Exps 3-4 in Visit 14 (1) Prime + Parallel Group 3-4 in Pattern 1, Exps 3-4 in Visit 14	450 Secs (1335 Secs) [==>800 Secs (Pattern 1)] [==>535 Secs (Pattern 2)]	[1]



Proposal 14796 - Visit 15 - An extremely asymmetric dwarf satellite distribution around M101

Thu Jul 13 18:02:04 GMT 2017

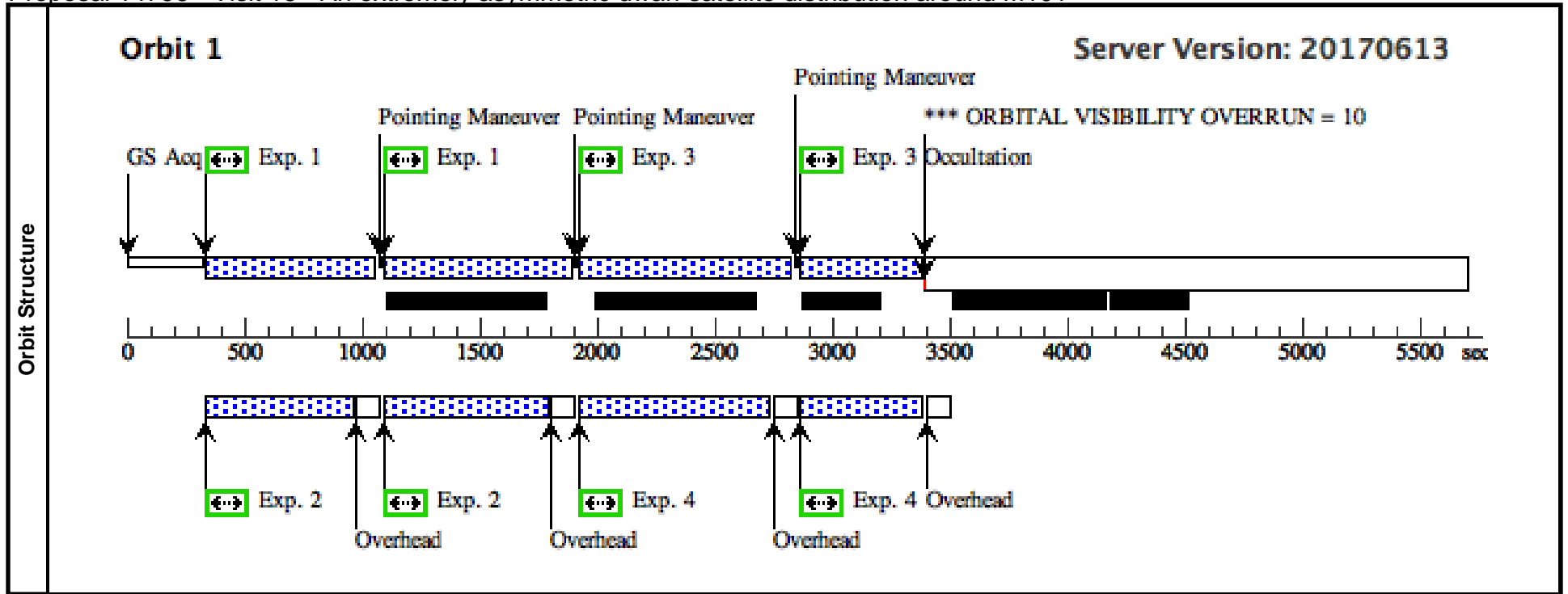
Visit	Proposal 14796, Visit 15, scheduling Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS, ACS/WFC Special Requirements: ORIENT 50D TO 170 D; ORIENT 225D TO 355 D									
	(Visit 15) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
Diagnosics										
Patterns	#	Primary Pattern	Secondary Pattern	Exposures						
	(1)	Pattern Type=ACS-WFC-DITHER- LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.364 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=47.23 Angle Between Sides= Center Pattern=false		(1-2), (3-4)					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(15)	M101-DW15	RA: 14 10 4.7820 (212.5199250d) Dec: +54 15 29.13 (54.25809d) Equinox: J2000 <i>Comments: Extended=YES</i>		V=20.77	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(15) M101-DW15		ACS/WFC, ACCUM, WFC1	F606W			Pattern 1, Exps 1-2 in Visit 15 (1) Prime + Parallel Gro up 1-2 in Pattern 1, E xps 1-2 in Visit 15	600 Secs (1193 Secs) [==>517 Secs (Pattern 1)] [==>676 Secs (Pattern 2)]	[1]
	2	ANY		WFC3/UVIS, ACCUM, UVIS1	F606W			Pattern 1, Exps 1-2 in Visit 15 (1) Prime + Parallel Gro up 1-2 in Pattern 1, E xps 1-2 in Visit 15	600 Secs (1300 Secs) [==>600 Secs (Pattern 1)] [==>700 Secs (Pattern 2)]	[1]
	3	(15) M101-DW15		ACS/WFC, ACCUM, WFC1	F814W			Pattern 1, Exps 3-4 in Visit 15 (1) Prime + Parallel Gro up 3-4 in Pattern 1, E xps 3-4 in Visit 15	450 Secs (1122 Secs) [==>725 Secs (Pattern 1)] [==>397 Secs (Pattern 2)]	[1]
	4	ANY		WFC3/UVIS, ACCUM, UVIS1	F814W			Pattern 1, Exps 3-4 in Visit 15 (1) Prime + Parallel Gro up 3-4 in Pattern 1, E xps 3-4 in Visit 15	450 Secs (1313 Secs) [==>790 Secs (Pattern 1)] [==>523 Secs (Pattern 2)]	[1]



Proposal 14796 - Visit 16 - An extremely asymmetric dwarf satellite distribution around M101

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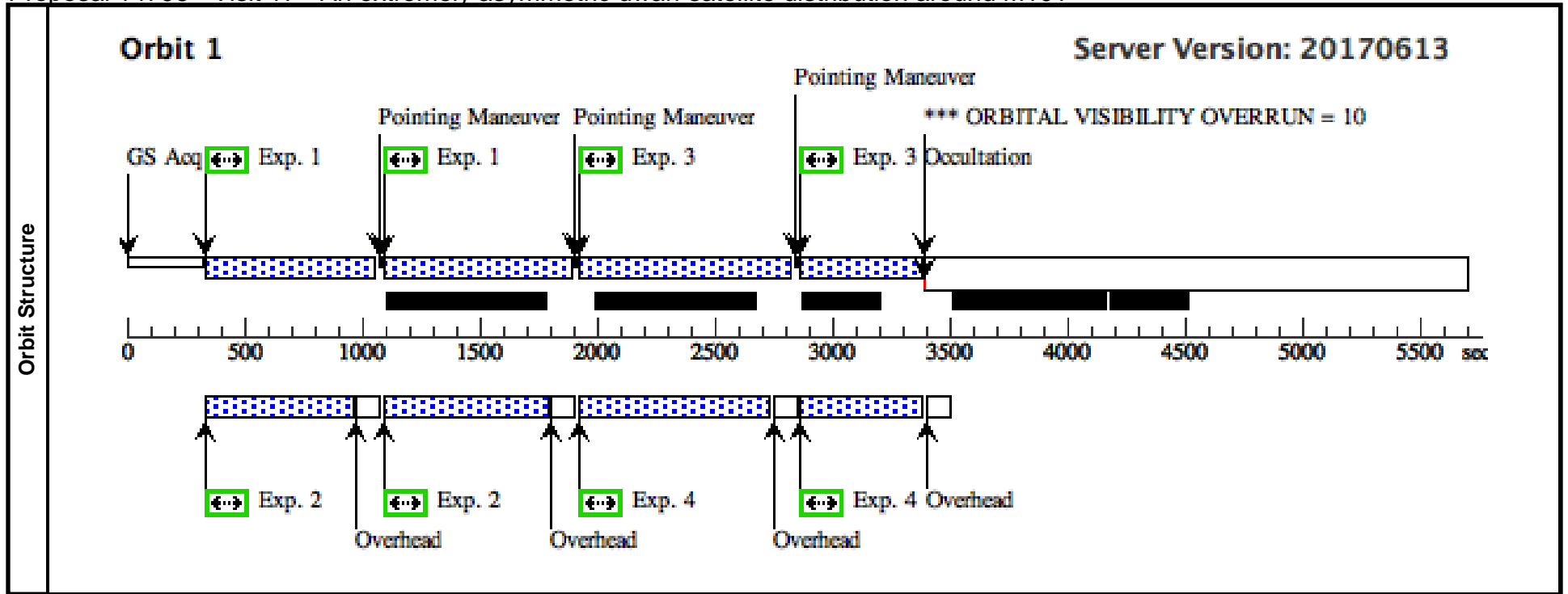
Visit	Proposal 14796, Visit 16, scheduling Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS, ACS/WFC Special Requirements: ORIENT 85D TO 23 D									
	(Visit 16) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
Diagnosics										
Patterns	#	Primary Pattern	Secondary Pattern	Exposures						
	(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.364 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=47.23 Angle Between Sides= Center Pattern=false		(1-2), (3-4)					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(16)	M101-DW16	RA: 14 09 26.0590 (212.3585792d) Dec: +54 14 51.39 (54.24761d) Equinox: J2000 <i>Comments: Extended=YES</i>		V=20.87	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(16) M101-DW16		ACS/WFC, ACCUM, WFC1	F606W			Pattern 1, Exps 1-2 in Visit 16 (1) Prime + Parallel Group 1-2 in Pattern 1, Exps 1-2 in Visit 16	600 Secs (1193 Secs) [==>517 Secs (Pattern 1)] [==>676 Secs (Pattern 2)]	[1]
	2	ANY		WFC3/UVIS, ACCUM, UVIS1	F606W			Pattern 1, Exps 1-2 in Visit 16 (1) Prime + Parallel Group 1-2 in Pattern 1, Exps 1-2 in Visit 16	600 Secs (1300 Secs) [==>600 Secs (Pattern 1)] [==>700 Secs (Pattern 2)]	[1]
	3	(16) M101-DW16		ACS/WFC, ACCUM, WFC1	F814W			Pattern 1, Exps 3-4 in Visit 16 (1) Prime + Parallel Group 3-4 in Pattern 1, Exps 3-4 in Visit 16	450 Secs (1122 Secs) [==>725 Secs (Pattern 1)] [==>397 Secs (Pattern 2)]	[1]
	4	ANY		WFC3/UVIS, ACCUM, UVIS1	F814W			Pattern 1, Exps 3-4 in Visit 16 (1) Prime + Parallel Group 3-4 in Pattern 1, Exps 3-4 in Visit 16	450 Secs (1313 Secs) [==>790 Secs (Pattern 1)] [==>523 Secs (Pattern 2)]	[1]



Proposal 14796 - Visit 17 - An extremely asymmetric dwarf satellite distribution around M101

Thu Jul 13 18:02:04 GMT 2017

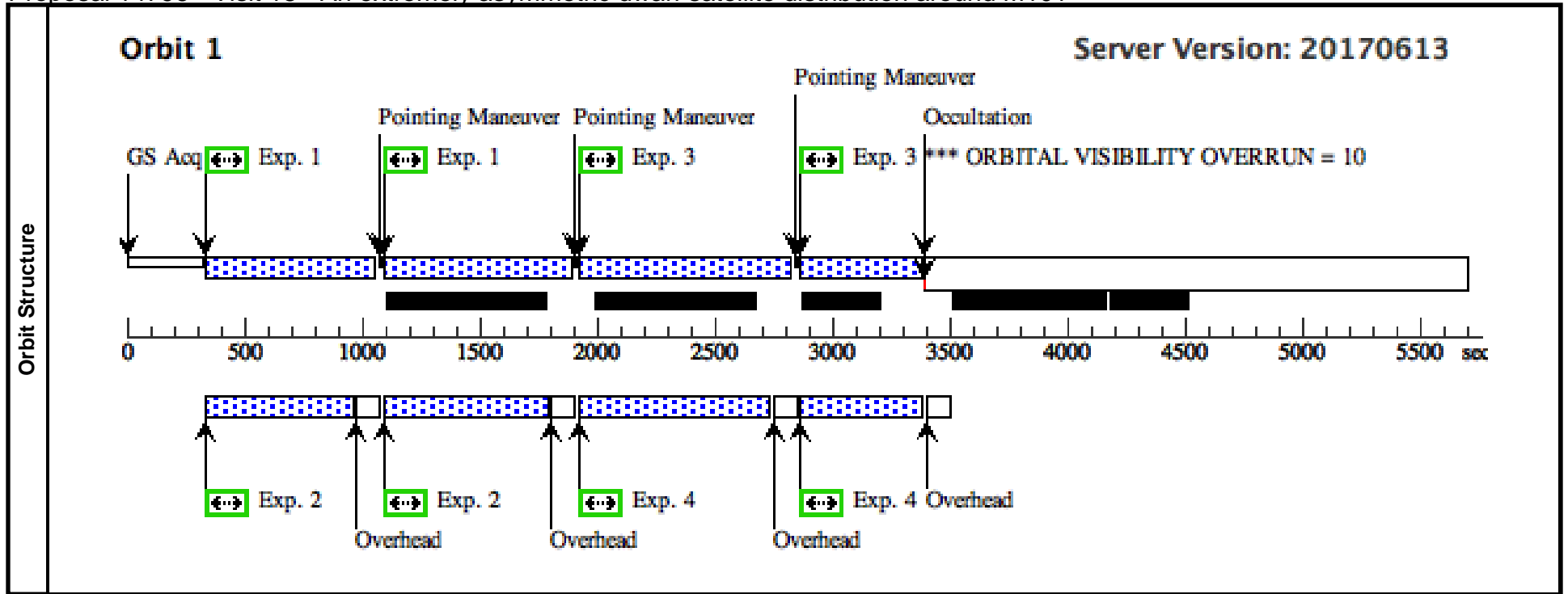
Visit	Proposal 14796, Visit 17, completed Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS, ACS/WFC Special Requirements: ORIENT 35D TO 160 D; ORIENT 300D TO 345 D									
	(Visit 17) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
Diagnosics										
Patterns	#	Primary Pattern	Secondary Pattern	Exposures						
	(1)	Pattern Type=ACS-WFC-DITHER- LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.364 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=47.23 Angle Between Sides= Center Pattern=false		(1-2), (3-4)					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(17)	M101-DW17	RA: 14 08 1.1530 (212.0048042d) Dec: +54 22 28.88 (54.37469d) Equinox: J2000 <i>Comments: Extended=YES</i>		V=20.40	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(17) M101-DW17	ACS/WFC, ACCUM, WFC1	F606W			Pattern 1, Exps 1-2 in Visit 17 (1) Prime + Parallel Gro up 1-2 in Pattern 1, E xps 1-2 in Visit 17	600 Secs (1193 Secs) [==>517 Secs (Pattern 1)] [==>676 Secs (Pattern 2)]	[1]
	2		ANY	WFC3/UVIS, ACCUM, UVIS1	F606W			Pattern 1, Exps 1-2 in Visit 17 (1) Prime + Parallel Gro up 1-2 in Pattern 1, E xps 1-2 in Visit 17	600 Secs (1300 Secs) [==>600 Secs (Pattern 1)] [==>700 Secs (Pattern 2)]	[1]
	3		(17) M101-DW17	ACS/WFC, ACCUM, WFC1	F814W			Pattern 1, Exps 3-4 in Visit 17 (1) Prime + Parallel Gro up 3-4 in Pattern 1, E xps 3-4 in Visit 17	450 Secs (1122 Secs) [==>725 Secs (Pattern 1)] [==>397 Secs (Pattern 2)]	[1]
	4		ANY	WFC3/UVIS, ACCUM, UVIS1	F814W			Pattern 1, Exps 3-4 in Visit 17 (1) Prime + Parallel Gro up 3-4 in Pattern 1, E xps 3-4 in Visit 17	450 Secs (1313 Secs) [==>790 Secs (Pattern 1)] [==>523 Secs (Pattern 2)]	[1]



Proposal 14796 - Visit 18 - An extremely asymmetric dwarf satellite distribution around M101

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Visit	Proposal 14796, Visit 18, completed Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS, ACS/WFC Special Requirements: ORIENT 325D TO 80 D; ORIENT 150D TO 270 D									
	(Visit 18) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
Diagnosics										
Patterns	#	Primary Pattern	Secondary Pattern		Exposures					
	(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.364 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=47.23 Angle Between Sides= Center Pattern=false		(1-2), (3-4)					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(18)	M101-DW18	RA: 14 11 3.3220 (212.7638417d) Dec: +53 56 50.85 (53.94746d) Equinox: J2000 <i>Comments: Extended=YES</i>		V=20.90	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(18) M101-DW18		ACS/WFC, ACCUM, WFC1	F606W			Pattern 1, Exps 1-2 in Visit 18 (1) Prime + Parallel Group 1-2 in Pattern 1, Exps 1-2 in Visit 18	600 Secs (1193 Secs) [==>517.0 Secs (Pattern 1)] [==>676.0 Secs (Pattern 2)]	[1]
	2	ANY		WFC3/UVIS, ACCUM, UVIS1	F606W			Pattern 1, Exps 1-2 in Visit 18 (1) Prime + Parallel Group 1-2 in Pattern 1, Exps 1-2 in Visit 18	600 Secs (1300 Secs) [==>600.0 Secs (Pattern 1)] [==>700.0 Secs (Pattern 2)]	[1]
	3	(18) M101-DW18		ACS/WFC, ACCUM, WFC1	F814W			Pattern 1, Exps 3-4 in Visit 18 (1) Prime + Parallel Group 3-4 in Pattern 1, Exps 3-4 in Visit 18	450 Secs (1122 Secs) [==>725 Secs (Pattern 1)] [==>397 Secs (Pattern 2)]	[1]
	4	ANY		WFC3/UVIS, ACCUM, UVIS1	F814W			Pattern 1, Exps 3-4 in Visit 18 (1) Prime + Parallel Group 3-4 in Pattern 1, Exps 3-4 in Visit 18	450 Secs (1313 Secs) [==>790 Secs (Pattern 1)] [==>523 Secs (Pattern 2)]	[1]



Proposal 14796 - Visit 19 - An extremely asymmetric dwarf satellite distribution around M101

Thu Jul 13 18:02:04 GMT 2017

Visit	Proposal 14796, Visit 19, completed Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS, ACS/WFC Special Requirements: (none)									
	(Visit 19) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN									
Diagnosics										
Patterns	#	Primary Pattern	Secondary Pattern		Exposures					
	(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.364 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=47.23 Angle Between Sides= Center Pattern=false		(1-2), (3-4)					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(19)	M101-DW19	RA: 14 09 17.5120 (212.3229667d) Dec: +53 45 29.70 (53.75825d) Equinox: J2000 <i>Comments: Extended=YES</i>		V=20.66	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(19) M101-DW19	ACS/WFC, ACCUM, WFC1	F606W			Pattern 1, Exps 1-2 in Visit 19 (1) Prime + Parallel Group 1-2 in Pattern 1, Exps 1-2 in Visit 19	600 Secs (1193 Secs) [==>517.0 Secs (Pattern 1)] [==>676.0 Secs (Pattern 2)]	[1]
	2		ANY	WFC3/UVIS, ACCUM, UVIS1	F606W			Pattern 1, Exps 1-2 in Visit 19 (1) Prime + Parallel Group 1-2 in Pattern 1, Exps 1-2 in Visit 19	600 Secs (1300 Secs) [==>600.0 Secs (Pattern 1)] [==>700.0 Secs (Pattern 2)]	[1]
	3		(19) M101-DW19	ACS/WFC, ACCUM, WFC1	F814W			Pattern 1, Exps 3-4 in Visit 19 (1) Prime + Parallel Group 3-4 in Pattern 1, Exps 3-4 in Visit 19	450 Secs (1122 Secs) [==>725 Secs (Pattern 1)] [==>397 Secs (Pattern 2)]	[1]
	4		ANY	WFC3/UVIS, ACCUM, UVIS1	F814W			Pattern 1, Exps 3-4 in Visit 19 (1) Prime + Parallel Group 3-4 in Pattern 1, Exps 3-4 in Visit 19	450 Secs (1313 Secs) [==>790 Secs (Pattern 1)] [==>523 Secs (Pattern 2)]	[1]

