



15658 - Resolved Proper Motions of M31 and the M31-M32 Interaction

Cycle: 26, 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) M31-SPHEROID ANY	ACS/WFC WFC3/UVIS	5	22-Jan-2020 12:03:52.0	yes
02	(2) M31-OUTERDISK ANY	ACS/WFC WFC3/UVIS	5	22-Jan-2020 12:03:56.0	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>
03	(3) M31-TIDALSTREAM ANY	ACS/WFC WFC3/UVIS	5	22-Jan-2020 12:03:59.0	yes
04	(4) M31-HALO21 ANY	ACS/WFC WFC3/UVIS	5	22-Jan-2020 12:04:02.0	yes
05	(5) M31-HALO35 ANY	ACS/WFC WFC3/UVIS	5	22-Jan-2020 12:04:06.0	yes
06	(6) M32 ANY	ACS/WFC WFC3/UVIS	5	22-Jan-2020 12:04:09.0	yes
07	(7) M32-CONTROL ANY	ACS/WFC WFC3/UVIS	5	22-Jan-2020 12:04:12.0	yes
56	(6) M32 ANY	ACS/WFC WFC3/UVIS	5	22-Jan-2020 12:04:15.0	yes
52	(2) M31-OUTERDISK ANY	ACS/WFC WFC3/UVIS	4	22-Jan-2020 12:04:17.0	yes
62	(2) M31-OUTERDISK ANY	ACS/WFC WFC3/UVIS	2	22-Jan-2020 12:04:19.0	yes

46 Total Orbits Used

ABSTRACT

We propose to measure the proper motion (PM) of M31 stars to unprecedented precision, using multi-epoch HST data of seven ACS/WFC fields. Our first goal is to measure M31's mean tangential motion with a precision nearly triple that of the previous HST and Gaia measurements. The better-determined center-of-mass (COM) motion of M31 will be essential for refining models of the local Universe, the orbits of objects in M31's halo, the total dark matter halo masses of the Milky Way (MW) and M31, and the evolution and fate of the MW. Second, we will clearly resolve the internal kinematics of M31 with PMs. We will obtain useful precision for multiple structural components and even the brighter individual stars. We will measure the bulk flows between cold components such as M31's disk and giant stream, and resolve the tangential velocity dispersion in M31's hot halo. Third, we will obtain the PM of M32 for the first time. This will provide crucial information about M32's orbit, evolution, and interactions with M31. In particular, we will test scenarios where it is the stripped remnant of a major merger, responsible for shaping many of M31's properties. Gaia (which can only measure young M31 disk stars) cannot undertake the differential PM investigations proposed here, and would require many more

Proposal 15658 (STScI Edit Number: 0, Created: Wednesday, January 22, 2020 at 12:04:19 PM Eastern Standard Time) - Overview

years of data to compete with our expected M31 COM motion. Based on previous works, the PM accuracies required for our scientific goals are well within reach of HST's demonstrated capabilities. HST's 2012 M31 bulk PM measurements were highly publicized, but due to HST's longevity it is now possible to address many new questions that were previously out of reach.

OBSERVING DESCRIPTION

The primary goals of this program are to measure the proper motion (PM) of M31 to unprecedented accuracy, and to measure the PM of M32 for the first time. We will target 7 fields in total that have existing deep ACS/WFC imaging data. These are SPHEROID, OUTERDISK, TIDALSTREAM, HALO21, HALO35, M32, and M32-CONTROL.

The first three fields are the SPHEROID, OUTERDISK, and TIDALSTREAM fields studied in Sohn et al. (2012). The next two fields are HALO21 and HALO35. These are located along the minor axis in the M31 halo at projected distances of 21 and 35 kpc, respectively, and were obtained in 2006 to study the stellar population of distant halo stars of M31 (Brown et al. 2007, 2008). The last two fields are M32 and M32-CONTROL which were observed as part of program GO-9392 (PI: M. Mateo) to study the RR Lyrae population of M32. The M32-CONTROL field is offset from the center of M32 by ~ 4 arcmin in the opposite direction of M31 to lower contamination from the M31 disk stars. Each target field will be re-observed for 5 orbits with ACS/WFC using the same field locations and telescope orientations as the first-epoch images. We will image all target fields using either the F606W or F814W filter to measure PMs. Each orbit will be split into two half orbit exposures, and we will use dithered patterns specially designed to maximize pixel-phase coverage. We will also use coordinated parallel observations using WFC3/UVIS to study the number density of M31 stars that are 6 arcmin away from our primary target fields.

Proposal 15658 - M31-SPHEROID (01) - Resolved Proper Motions of M31 and the M31-M32 Interaction

Visit	Proposal 15658, M31-SPHEROID (01), completed Wed Jan 22 17:04:20 GMT 2020				
	Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS, ACS/WFC Special Requirements: ORIENT 75.14D TO 75.14 D; AFTER 01-FEB-2019:00:00:00 Comments: <i>This is the visit for imaging the M31-SPHEROID field with ACS/WFC as primary and WFC3/UVIS as parallel. We will image both fields only using the F606W filters. Five orbits are required to complete this visit. Each orbit consists of two long exposures. To maximize the time baseline w.r.t. the earlier epochs, we added Timing Requirements of "After 01-FEB-2019" for this visit. We have also added Orient Ranges requirements to align our images with the previous epoch images. We implemented a custom-designed dither pattern via the POS-TARG requirement.</i>				
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes
	(1)	M31-SPHEROID	RA: 00 46 8.2758 (11.5344825d) Dec: +40 42 37.10 (40.71031d) Equinox: J2000	Radial Velocity: -301 km/sec	V=3.44+/-0.03
Comments: Category=GALAXY Description=[DISK, HALO, SPIRAL]					
Reference Frame: ICRS					

Proposal 15658 - M31-SPHEROID (01) - Resolved Proper Motions of M31 and the M31-M32 Interaction

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(1) M31-SPHEROID	ACS/WFC, ACCUM, WFC	F606W		POS TARG 0.0000,0.0000	Sequence 1-4 Non-Int in M31-SPHEROID (01) Prime + Parallel Group 1-2 in Sequence 1-4 Non-Int in M31-SPHEROID (01)	1263 Secs (1263 Secs) [==>]	[1]
	2		ANY	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 1-4 Non-Int in M31-SPHEROID (01) Prime + Parallel Group 1-2 in Sequence 1-4 Non-Int in M31-SPHEROID (01)	1300 Secs (1300 Secs) [==>]	[1]
	3		(1) M31-SPHEROID	ACS/WFC, ACCUM, WFC	F606W		POS TARG 0.0654,0.2574	Sequence 1-4 Non-Int in M31-SPHEROID (01) Prime + Parallel Group 3-4 in Sequence 1-4 Non-Int in M31-SPHEROID (01)	1263 Secs (1263 Secs) [==>]	[1]
	4		ANY	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 1-4 Non-Int in M31-SPHEROID (01) Prime + Parallel Group 3-4 in Sequence 1-4 Non-Int in M31-SPHEROID (01)	1300 Secs (1300 Secs) [==>]	[1]
	5		(1) M31-SPHEROID	ACS/WFC, ACCUM, WFC	F606W		POS TARG 0.1391,0.1689	Sequence 5-8 Non-Int in M31-SPHEROID (01) Prime + Parallel Group 5-6 in Sequence 5-8 Non-Int in M31-SPHEROID (01)	1300 Secs (1300 Secs) [==>]	[2]
	6		ANY	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 5-8 Non-Int in M31-SPHEROID (01) Prime + Parallel Group 5-6 in Sequence 5-8 Non-Int in M31-SPHEROID (01)	1300 Secs (1300 Secs) [==>]	[2]
	7		(1) M31-SPHEROID	ACS/WFC, ACCUM, WFC	F606W		POS TARG 0.1550,0.4225	Sequence 5-8 Non-Int in M31-SPHEROID (01) Prime + Parallel Group 7-8 in Sequence 5-8 Non-Int in M31-SPHEROID (01)	1300 Secs (1300 Secs) [==>]	[2]
	8		ANY	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 5-8 Non-Int in M31-SPHEROID (01) Prime + Parallel Group 7-8 in Sequence 5-8 Non-Int in M31-SPHEROID (01)	1300 Secs (1300 Secs) [==>]	[2]

Proposal 15658 - M31-SPHEROID (01) - Resolved Proper Motions of M31 and the M31-M32 Interaction

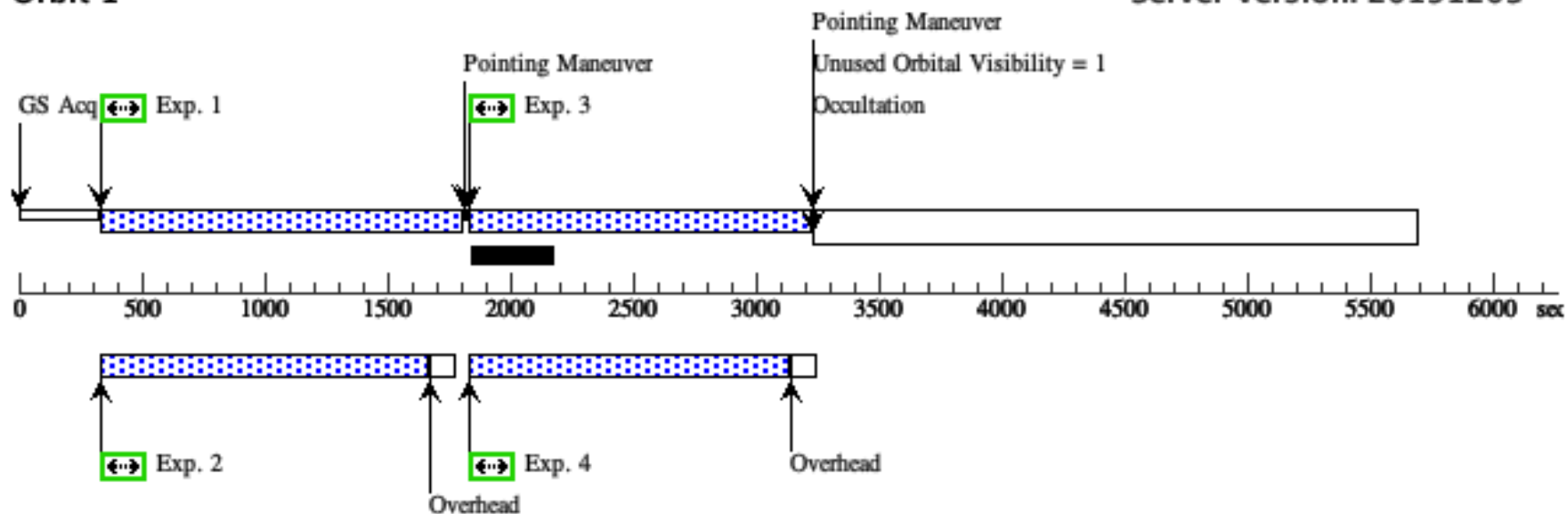
9	(1) M31-SPHEROID	ACS/WFC, ACCUM, WFC	F606W	POS TARG 0.2177,0 .0857	Sequence 9-12 Non-Int in M31-SPHEROID (01) Prime + Parallel Group 9-10 in Sequence 9-12 Non-Int in M31-SPHEROID (01)	1300 Secs (1300 Secs) [==>]	[3]
10	ANY	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 9-12 Non-Int in M31-SPHEROID (01) Prime + Parallel Group 9-10 in Sequence 9-12 Non-Int in M31-SPHEROID (01)	1300 Secs (1300 Secs) [==>]	[3]
11	(1) M31-SPHEROID	ACS/WFC, ACCUM, WFC	F606W	POS TARG 0.2781,0 .3427	Sequence 9-12 Non-Int in M31-SPHEROID (01) Prime + Parallel Group 11-12 in Sequence 9-12 Non-Int in M31-SPHEROID (01)	1300 Secs (1300 Secs) [==>]	[3]
12	ANY	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 9-12 Non-Int in M31-SPHEROID (01) Prime + Parallel Group 11-12 in Sequence 9-12 Non-Int in M31-SPHEROID (01)	1300 Secs (1300 Secs) [==>]	[3]
13	(1) M31-SPHEROID	ACS/WFC, ACCUM, WFC	F606W	POS TARG 0.3414,0 .1544	Sequence 13-16 Non-Int in M31-SPHEROID (01) Prime + Parallel Group 13-14 in Sequence 13-16 Non-Int in M31-SPHEROID (01)	1300 Secs (1300 Secs) [==>]	[4]
14	ANY	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 13-16 Non-Int in M31-SPHEROID (01) Prime + Parallel Group 13-14 in Sequence 13-16 Non-Int in M31-SPHEROID (01)	1300 Secs (1300 Secs) [==>]	[4]
15	(1) M31-SPHEROID	ACS/WFC, ACCUM, WFC	F606W	POS TARG 0.3567,0 .2595	Sequence 13-16 Non-Int in M31-SPHEROID (01) Prime + Parallel Group 15-16 in Sequence 13-16 Non-Int in M31-SPHEROID (01)	1300 Secs (1300 Secs) [==>]	[4]
16	ANY	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 13-16 Non-Int in M31-SPHEROID (01) Prime + Parallel Group 15-16 in Sequence 13-16 Non-Int in M31-SPHEROID (01)	1300 Secs (1300 Secs) [==>]	[4]

Proposal 15658 - M31-SPHEROID (01) - Resolved Proper Motions of M31 and the M31-M32 Interaction

	17	(1) M31-SPHEROID	ACS/WFC, ACCUM, WFC	F606W	POS TARG 0.4216,0 .4178	Sequence 17-20 Non-Int in M31-SPHEROID (01) Prime + Parallel Group 17-18 in Sequence 17-20 Non-Int in M31-SPHEROID (01)	1300 Secs (1300 Secs) [==>]	[5]
	18	ANY	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 17-20 Non-Int in M31-SPHEROID (01) Prime + Parallel Group 17-18 in Sequence 17-20 Non-Int in M31-SPHEROID (01)	1300 Secs (1300 Secs) [==>]	[5]
	19	(1) M31-SPHEROID	ACS/WFC, ACCUM, WFC	F606W	POS TARG 0.4802,0 .2787	Sequence 17-20 Non-Int in M31-SPHEROID (01) Prime + Parallel Group 19-20 in Sequence 17-20 Non-Int in M31-SPHEROID (01)	1300 Secs (1300 Secs) [==>]	[5]
	20	ANY	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 17-20 Non-Int in M31-SPHEROID (01) Prime + Parallel Group 19-20 in Sequence 17-20 Non-Int in M31-SPHEROID (01)	1300 Secs (1300 Secs) [==>]	[5]

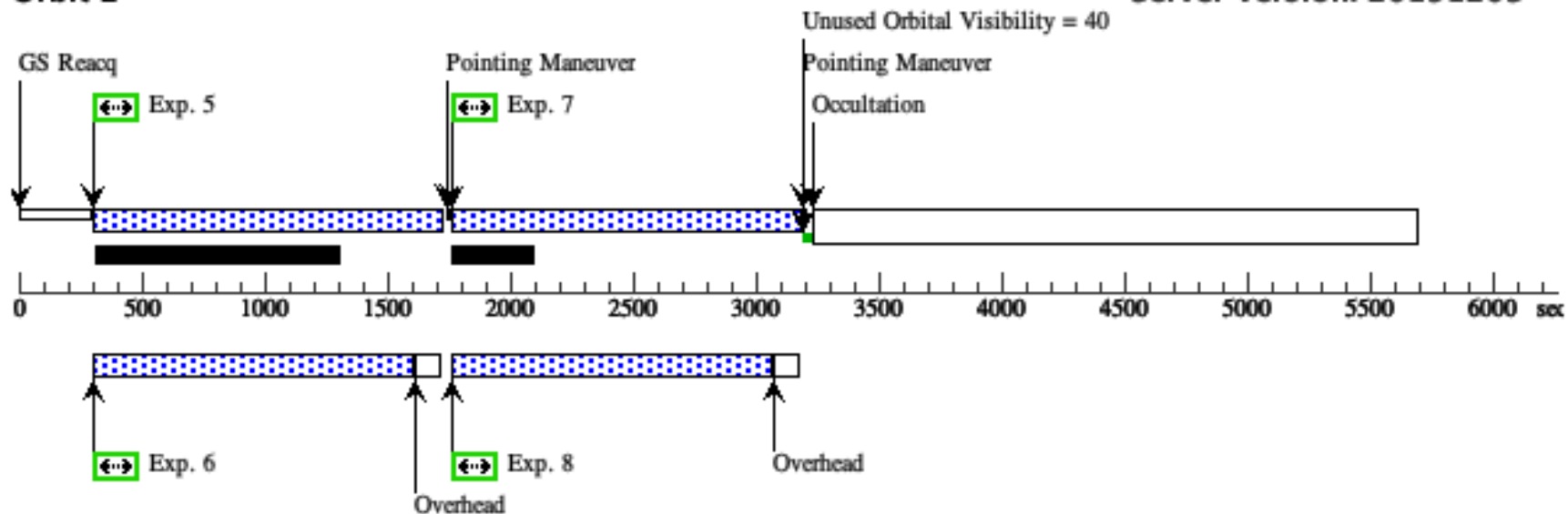
Orbit 1

Server Version: 20191203



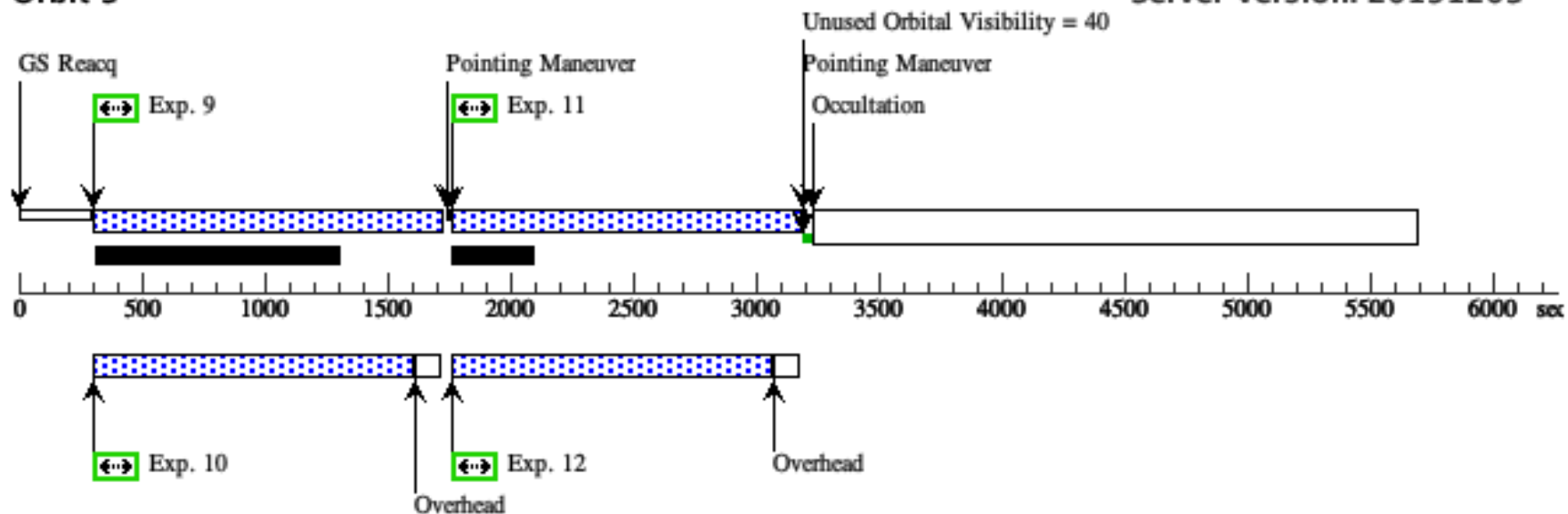
Orbit 2

Server Version: 20191203



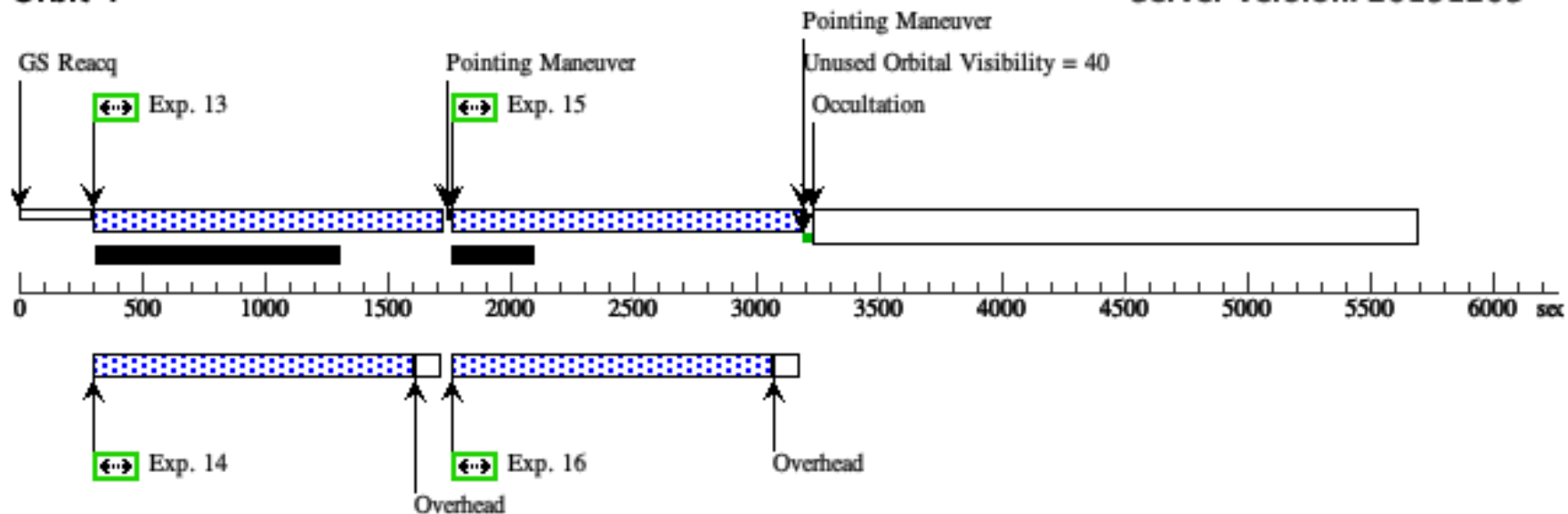
Orbit 3

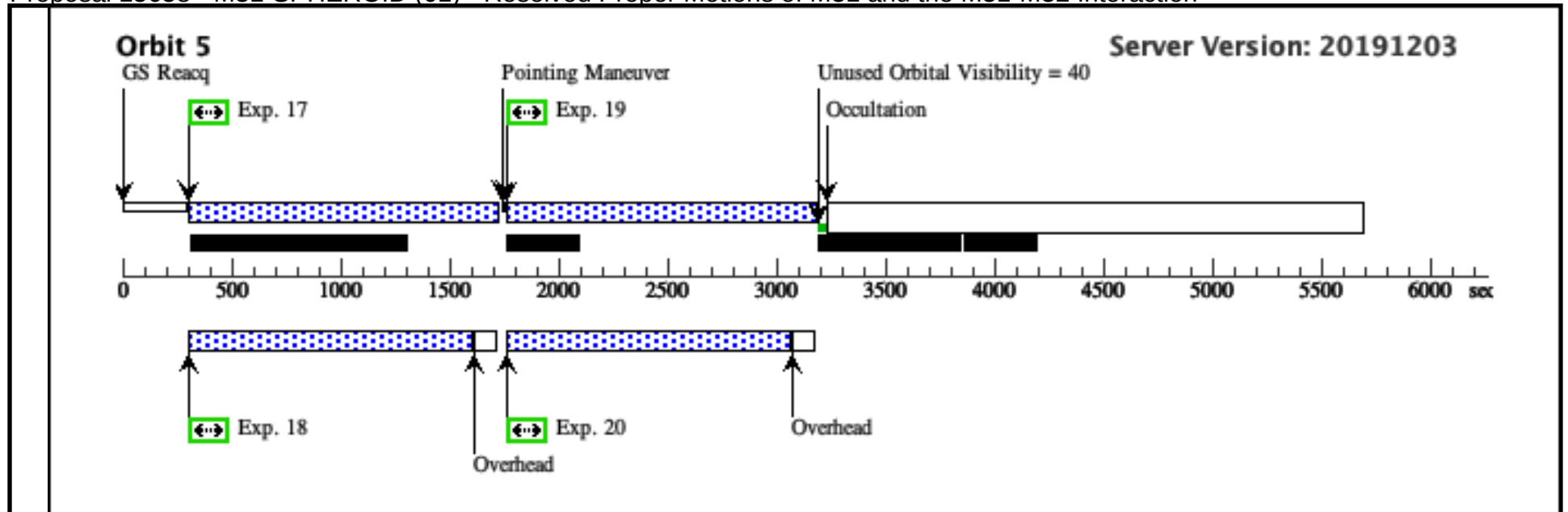
Server Version: 20191203



Orbit 4

Server Version: 20191203





Proposal 15658 - M31-OUTERDISK (02) - Resolved Proper Motions of M31 and the M31-M32 Interaction

Visit	Proposal 15658, M31-OUTERDISK (02), failed Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS, ACS/WFC Special Requirements: ORIENT 67.09D TO 67.09 D; AFTER 01-FEB-2019:00:00:00 Comments: This is the visit for imaging the M31-OUTERDISK field with ACS/WFC as primary and WFC3/UVIS as parallel. We will image both fields only using the F606W filters. Five orbits are required to complete this visit. Each orbit consists of two long exposures. To maximize the time baseline w.r.t. the earlier epochs, we added Timing Requirements of "After 01-FEB-2019" for this visit. We have also added Orient Ranges requirements to align our images with the previous epoch images. We implemented a custom-designed dither pattern via the POS-TARG requirement.					
	Wed Jan 22 17:04:20 GMT 2020					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(2)	M31-OUTERDISK	RA: 00 49 9.9123 (12.2913012d) Dec: +42 45 2.03 (42.75056d) Equinox: J2000	Radial Velocity: -301 km/sec	V=3.44+/-0.03	Reference Frame: ICRS
Fixed Targets	Comments: Category=GALAXY Description=[DISK, HALO, SPIRAL]					

Proposal 15658 - M31-OUTERDISK (02) - Resolved Proper Motions of M31 and the M31-M32 Interaction

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(2) M31-OUTERDISK	ACS/WFC, ACCUM, WFC	F606W		POS TARG 0.0000,0.0000	Sequence 1-4 Non-Int in M31-OUTERDISK (02) Prime + Parallel Group 1-2 in Sequence 1-4 Non-Int in M31-OUTERDISK (02)	1263 Secs (1263 Secs) [==>]	[1]
	2		ANY	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 1-4 Non-Int in M31-OUTERDISK (02) Prime + Parallel Group 1-2 in Sequence 1-4 Non-Int in M31-OUTERDISK (02)	1300 Secs (1300 Secs) [==>]	[1]
	3		(2) M31-OUTERDISK	ACS/WFC, ACCUM, WFC	F606W		POS TARG 0.0654,0.2574	Sequence 1-4 Non-Int in M31-OUTERDISK (02) Prime + Parallel Group 3-4 in Sequence 1-4 Non-Int in M31-OUTERDISK (02)	1263 Secs (1263 Secs) [==>]	[1]
	4		ANY	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 1-4 Non-Int in M31-OUTERDISK (02) Prime + Parallel Group 3-4 in Sequence 1-4 Non-Int in M31-OUTERDISK (02)	1300 Secs (1300 Secs) [==>]	[1]
	5		(2) M31-OUTERDISK	ACS/WFC, ACCUM, WFC	F606W		POS TARG 0.1391,0.1689	Sequence 5-8 Non-Int in M31-OUTERDISK (02) Prime + Parallel Group 5-6 in Sequence 5-8 Non-Int in M31-OUTERDISK (02)	1300 Secs (1300 Secs) [==>]	[2]
	6		ANY	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 5-8 Non-Int in M31-OUTERDISK (02) Prime + Parallel Group 5-6 in Sequence 5-8 Non-Int in M31-OUTERDISK (02)	1300 Secs (1300 Secs) [==>]	[2]
	7		(2) M31-OUTERDISK	ACS/WFC, ACCUM, WFC	F606W		POS TARG 0.1550,0.4225	Sequence 5-8 Non-Int in M31-OUTERDISK (02) Prime + Parallel Group 7-8 in Sequence 5-8 Non-Int in M31-OUTERDISK (02)	1300 Secs (1300 Secs) [==>]	[2]
	8		ANY	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 5-8 Non-Int in M31-OUTERDISK (02) Prime + Parallel Group 7-8 in Sequence 5-8 Non-Int in M31-OUTERDISK (02)	1300 Secs (1300 Secs) [==>]	[2]

Proposal 15658 - M31-OUTERDISK (02) - Resolved Proper Motions of M31 and the M31-M32 Interaction

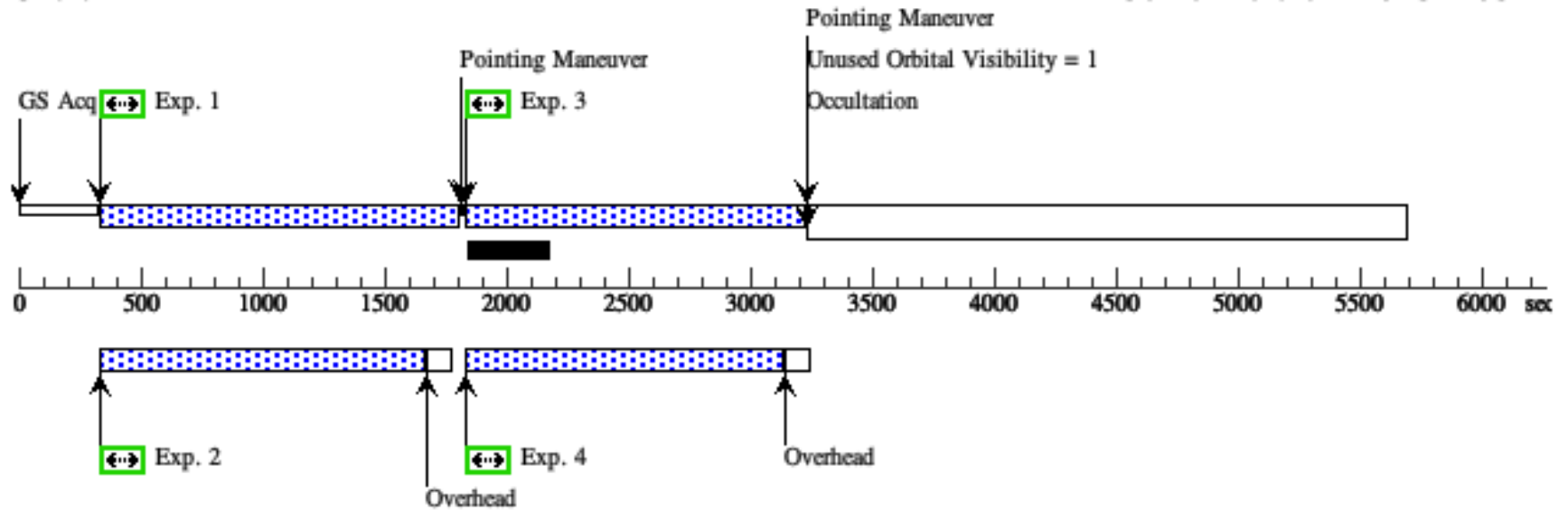
9	(2) M31-OUTERDISK	ACS/WFC, ACCUM, WFC	F606W	POS TARG 0.2177,0 .0857	Sequence 9-12 Non-Int in M31-OUTERDISK (02) Prime + Parallel Group 9-10 in Sequence 9-12 Non-Int in M31-OUTERDISK (02)	1300 Secs (1300 Secs) [==>]	[3]
10	ANY	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 9-12 Non-Int in M31-OUTERDISK (02) Prime + Parallel Group 9-10 in Sequence 9-12 Non-Int in M31-OUTERDISK (02)	1300 Secs (1300 Secs) [==>]	[3]
11	(2) M31-OUTERDISK	ACS/WFC, ACCUM, WFC	F606W	POS TARG 0.2781,0 .3427	Sequence 9-12 Non-Int in M31-OUTERDISK (02) Prime + Parallel Group 11-12 in Sequence 9-12 Non-Int in M31-OUTERDISK (02)	1300 Secs (1300 Secs) [==>]	[3]
12	ANY	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 9-12 Non-Int in M31-OUTERDISK (02) Prime + Parallel Group 11-12 in Sequence 9-12 Non-Int in M31-OUTERDISK (02)	1300 Secs (1300 Secs) [==>]	[3]
13	(2) M31-OUTERDISK	ACS/WFC, ACCUM, WFC	F606W	POS TARG 0.3414,0 .1544	Sequence 13-16 Non-Int in M31-OUTERDISK (02) Prime + Parallel Group 13-14 in Sequence 13-16 Non-Int in M31-OUTERDISK (02)	1300 Secs (1300 Secs) [==>]	[4]
14	ANY	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 13-16 Non-Int in M31-OUTERDISK (02) Prime + Parallel Group 13-14 in Sequence 13-16 Non-Int in M31-OUTERDISK (02)	1300 Secs (1300 Secs) [==>]	[4]
15	(2) M31-OUTERDISK	ACS/WFC, ACCUM, WFC	F606W	POS TARG 0.3567,0 .2595	Sequence 13-16 Non-Int in M31-OUTERDISK (02) Prime + Parallel Group 15-16 in Sequence 13-16 Non-Int in M31-OUTERDISK (02)	1300 Secs (1300 Secs) [==>]	[4]

Proposal 15658 - M31-OUTERDISK (02) - Resolved Proper Motions of M31 and the M31-M32 Interaction

16	ANY	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 13-16 Non-Int in M31-OUTERDISK (02) Prime + Parallel Group 15-16 in Sequence 13-16 Non-Int in M31-OUTERDISK (02)	1300 Secs (1300 Secs) [==>]	[4]
17	(2) M31-OUTERDISK	ACS/WFC, ACCUM, WFC	F606W	POS TARG 0.4216,0.4178	Sequence 17-20 Non-Int in M31-OUTERDISK (02) Prime + Parallel Group 17-18 in Sequence 17-20 Non-Int in M31-OUTERDISK (02)	1300 Secs (1300 Secs) [==>]	[5]
18	ANY	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 17-20 Non-Int in M31-OUTERDISK (02) Prime + Parallel Group 17-18 in Sequence 17-20 Non-Int in M31-OUTERDISK (02)	1300 Secs (1300 Secs) [==>]	[5]
19	(2) M31-OUTERDISK	ACS/WFC, ACCUM, WFC	F606W	POS TARG 0.4802,0.2787	Sequence 17-20 Non-Int in M31-OUTERDISK (02) Prime + Parallel Group 19-20 in Sequence 17-20 Non-Int in M31-OUTERDISK (02)	1300 Secs (1300 Secs) [==>]	[5]
20	ANY	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 17-20 Non-Int in M31-OUTERDISK (02) Prime + Parallel Group 19-20 in Sequence 17-20 Non-Int in M31-OUTERDISK (02)	1300 Secs (1300 Secs) [==>]	[5]

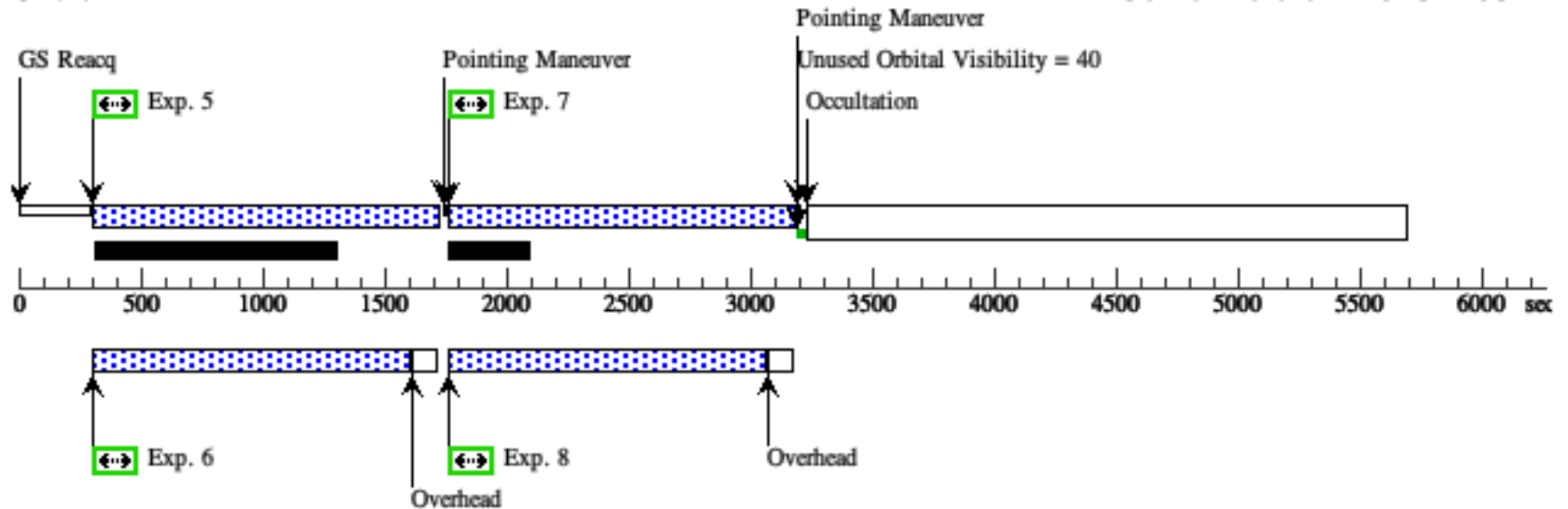
Orbit 1

Server Version: 20191203



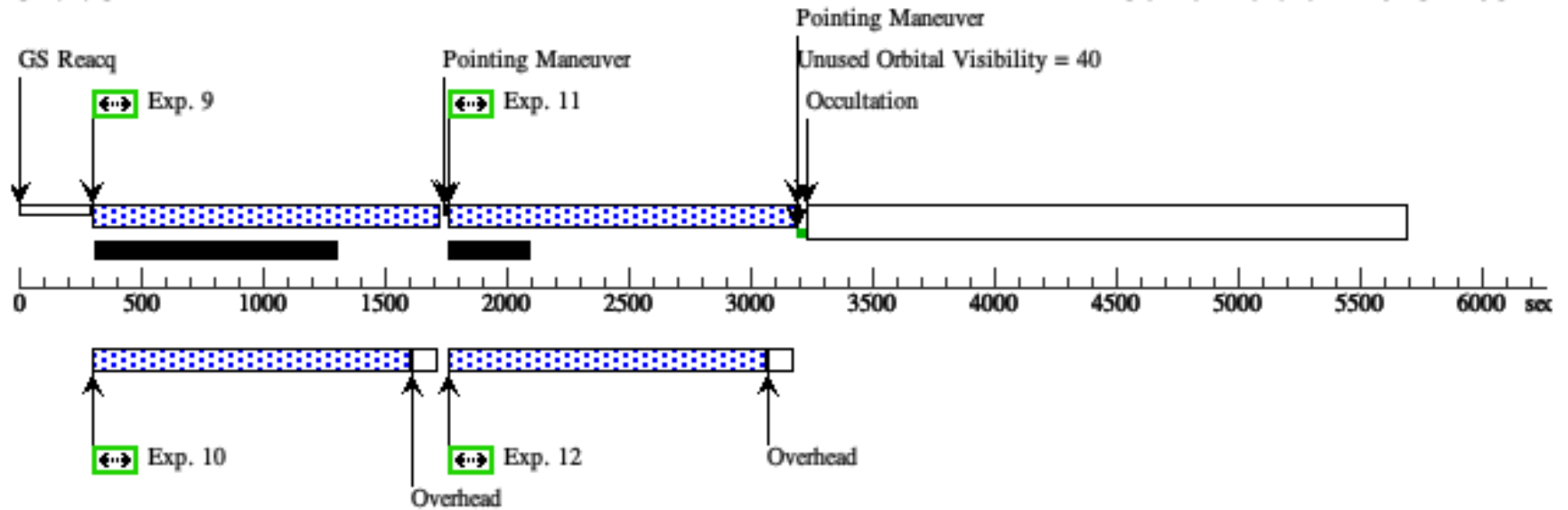
Orbit 2

Server Version: 20191203



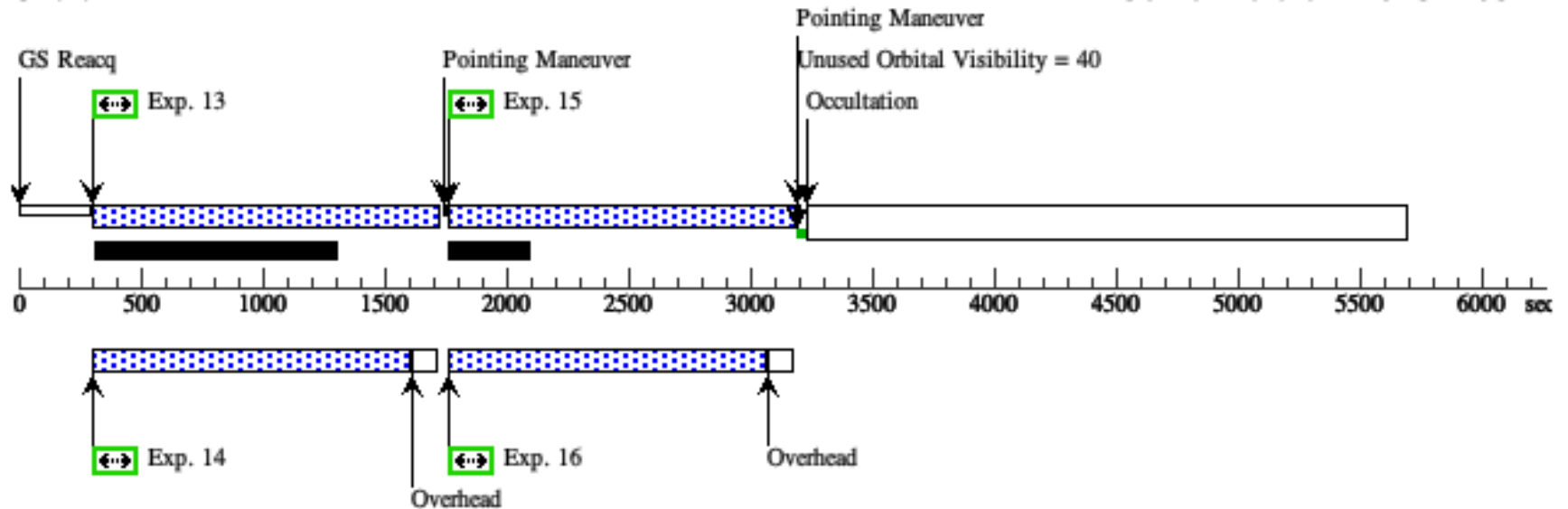
Orbit 3

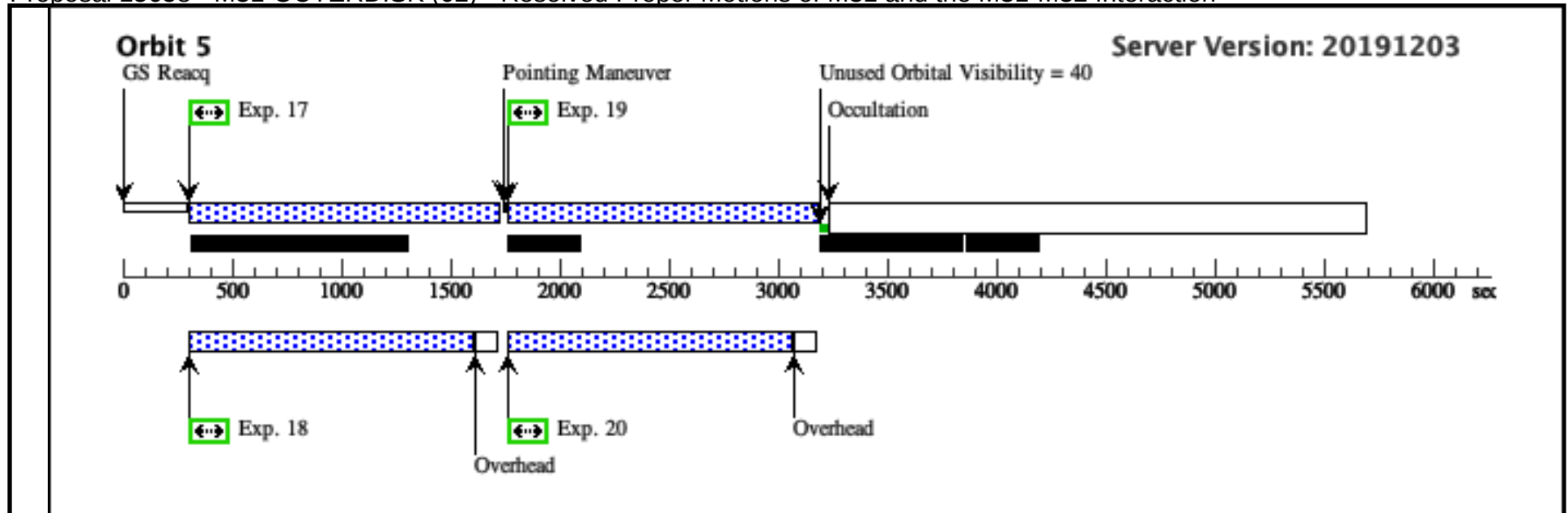
Server Version: 20191203



Orbit 4

Server Version: 20191203





Proposal 15658 - M31-TIDALSTREAM (03) - Resolved Proper Motions of M31 and the M31-M32 Interaction

Visit	Proposal 15658, M31-TIDALSTREAM (03), completed Wed Jan 22 17:04:20 GMT 2020				
	Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS, ACS/WFC Special Requirements: ORIENT 201.92D TO 201.92 D; AFTER 01-FEB-2019:00:00:00 <i>Comments: This is the visit for imaging the M31-TIDALSTREAM field with ACS/WFC as primary and WFC3/UVIS as parallel. We will image both fields only using the F606W filters. Five orbits are required to complete this visit. Each orbit consists of two long exposures. To maximize the time baseline w.r.t. the earlier epochs, we added Timing Requirements of "After 01-FEB-2019" for this visit. We have also added Orient Ranges requirements to align our images with the previous epoch images. We implemented a custom-designed dither pattern via the POS-TARG requirement.</i>				
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes
	(3)	M31-TIDALSTREAM	RA: 00 44 17.3790 (11.0724125d) Dec: +39 47 21.70 (39.78936d) Equinox: J2000	Radial Velocity: -301 km/sec	V=3.44+/-0.03
Miscellaneous Reference Frame: ICRS <i>Comments:</i> Category=GALAXY Description=[DISK, HALO, SPIRAL]					

Proposal 15658 - M31-TIDALSTREAM (03) - Resolved Proper Motions of M31 and the M31-M32 Interaction

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(3) M31-TIDALSTR EAM	ACS/WFC, ACCUM, WFC	F606W		POS TARG 0.0000,0 .0000	Sequence 1-4 Non-Int in M31-TIDALSTR EAM (03) Prime + Parallel Group 1-2 in Sequence 1-4 Non-Int in M31-TIDALSTREAM (03)	1244 Secs (1244 Secs) [==>]	[1]
	2		ANY	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 1-4 Non-Int in M31-TIDALSTR EAM (03) Prime + Parallel Group 1-2 in Sequence 1-4 Non-Int in M31-TIDALSTREAM (03)	1300 Secs (1300 Secs) [==>]	[1]
	3		(3) M31-TIDALSTR EAM	ACS/WFC, ACCUM, WFC	F606W		POS TARG 0.0654,0 .2574	Sequence 1-4 Non-Int in M31-TIDALSTR EAM (03) Prime + Parallel Group 3-4 in Sequence 1-4 Non-Int in M31-TIDALSTREAM (03)	1244 Secs (1244 Secs) [==>]	[1]
	4		ANY	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 1-4 Non-Int in M31-TIDALSTR EAM (03) Prime + Parallel Group 3-4 in Sequence 1-4 Non-Int in M31-TIDALSTREAM (03)	1300 Secs (1300 Secs) [==>]	[1]
	5		(3) M31-TIDALSTR EAM	ACS/WFC, ACCUM, WFC	F606W		POS TARG 0.1391,0 .1689	Sequence 5-8 Non-Int in M31-TIDALSTR EAM (03) Prime + Parallel Group 5-6 in Sequence 5-8 Non-Int in M31-TIDALSTREAM (03)	1300 Secs (1300 Secs) [==>]	[2]
	6		ANY	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 5-8 Non-Int in M31-TIDALSTR EAM (03) Prime + Parallel Group 5-6 in Sequence 5-8 Non-Int in M31-TIDALSTREAM (03)	1300 Secs (1300 Secs) [==>]	[2]
	7		(3) M31-TIDALSTR EAM	ACS/WFC, ACCUM, WFC	F606W		POS TARG 0.1550,0 .4225	Sequence 5-8 Non-Int in M31-TIDALSTR EAM (03) Prime + Parallel Group 7-8 in Sequence 5-8 Non-Int in M31-TIDALSTREAM (03)	1300 Secs (1300 Secs) [==>]	[2]
	8		ANY	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 5-8 Non-Int in M31-TIDALSTR EAM (03) Prime + Parallel Group 7-8 in Sequence 5-8 Non-Int in M31-TIDALSTREAM (03)	1300 Secs (1300 Secs) [==>]	[2]

Proposal 15658 - M31-TIDALSTREAM (03) - Resolved Proper Motions of M31 and the M31-M32 Interaction

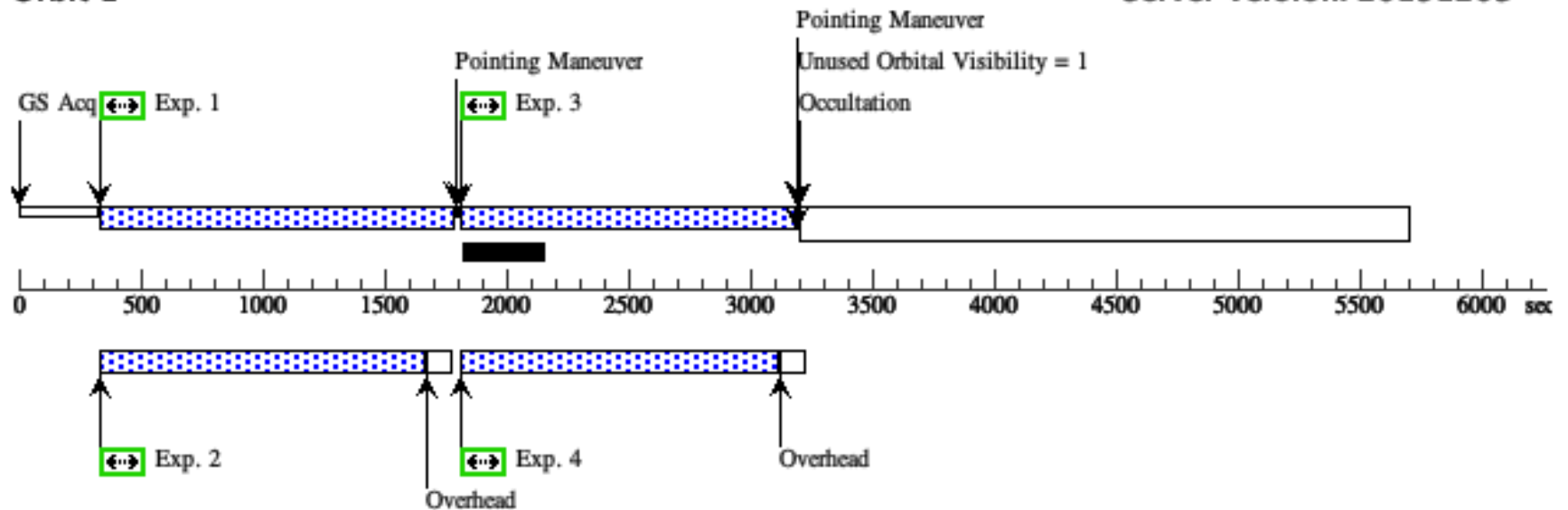
9	(3) M31-TIDALSTR EAM	ACS/WFC, ACCUM, WFC	F606W	POS TARG 0.2177,0 .0857	Sequence 9-12 Non-Int in M31-TIDALSTREAM (03) Prime + Parallel Group 9-10 in Sequence 9-12 Non-Int in M31-TIDALSTREAM (03)	1300 Secs (1300 Secs) [==>]	[3]
10	ANY	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 9-12 Non-Int in M31-TIDALSTREAM (03) Prime + Parallel Group 9-10 in Sequence 9-12 Non-Int in M31-TIDALSTREAM (03)	1300 Secs (1300 Secs) [==>]	[3]
11	(3) M31-TIDALSTR EAM	ACS/WFC, ACCUM, WFC	F606W	POS TARG 0.2781,0 .3427	Sequence 9-12 Non-Int in M31-TIDALSTREAM (03) Prime + Parallel Group 11-12 in Sequence 9-12 Non-Int in M31-TIDALSTREAM (03)	1300 Secs (1300 Secs) [==>]	[3]
12	ANY	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 9-12 Non-Int in M31-TIDALSTREAM (03) Prime + Parallel Group 11-12 in Sequence 9-12 Non-Int in M31-TIDALSTREAM (03)	1300 Secs (1300 Secs) [==>]	[3]
13	(3) M31-TIDALSTR EAM	ACS/WFC, ACCUM, WFC	F606W	POS TARG 0.3414,0 .1544	Sequence 13-16 Non-Int in M31-TIDALSTREAM (03) Prime + Parallel Group 13-14 in Sequence 13-16 Non-Int in M31-TIDALSTREAM (03)	1300 Secs (1300 Secs) [==>]	[4]
14	ANY	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 13-16 Non-Int in M31-TIDALSTREAM (03) Prime + Parallel Group 13-14 in Sequence 13-16 Non-Int in M31-TIDALSTREAM (03)	1300 Secs (1300 Secs) [==>]	[4]
15	(3) M31-TIDALSTR EAM	ACS/WFC, ACCUM, WFC	F606W	POS TARG 0.3567,0 .2595	Sequence 13-16 Non-Int in M31-TIDALSTREAM (03) Prime + Parallel Group 15-16 in Sequence 13-16 Non-Int in M31-TIDALSTREAM (03)	1300 Secs (1300 Secs) [==>]	[4]

Proposal 15658 - M31-TIDALSTREAM (03) - Resolved Proper Motions of M31 and the M31-M32 Interaction

16	ANY	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 13-16 Non-Int in M31-TIDALSTREAM (03) Prime + Parallel Group 15-16 in Sequence 13-16 Non-Int in M31-TIDALSTREAM (03)	1300 Secs (1300 Secs) [==>]	[4]
17	(3) M31-TIDALSTREAM	ACS/WFC, ACCUM, WFC	F606W	POS TARG 0.4216,0.4178	Sequence 17-20 Non-Int in M31-TIDALSTREAM (03) Prime + Parallel Group 17-18 in Sequence 17-20 Non-Int in M31-TIDALSTREAM (03)	1300 Secs (1300 Secs) [==>]	[5]
18	ANY	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 17-20 Non-Int in M31-TIDALSTREAM (03) Prime + Parallel Group 17-18 in Sequence 17-20 Non-Int in M31-TIDALSTREAM (03)	1300 Secs (1300 Secs) [==>]	[5]
19	(3) M31-TIDALSTREAM	ACS/WFC, ACCUM, WFC	F606W	POS TARG 0.4802,0.2787	Sequence 17-20 Non-Int in M31-TIDALSTREAM (03) Prime + Parallel Group 19-20 in Sequence 17-20 Non-Int in M31-TIDALSTREAM (03)	1300 Secs (1300 Secs) [==>]	[5]
20	ANY	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 17-20 Non-Int in M31-TIDALSTREAM (03) Prime + Parallel Group 19-20 in Sequence 17-20 Non-Int in M31-TIDALSTREAM (03)	1300 Secs (1300 Secs) [==>]	[5]

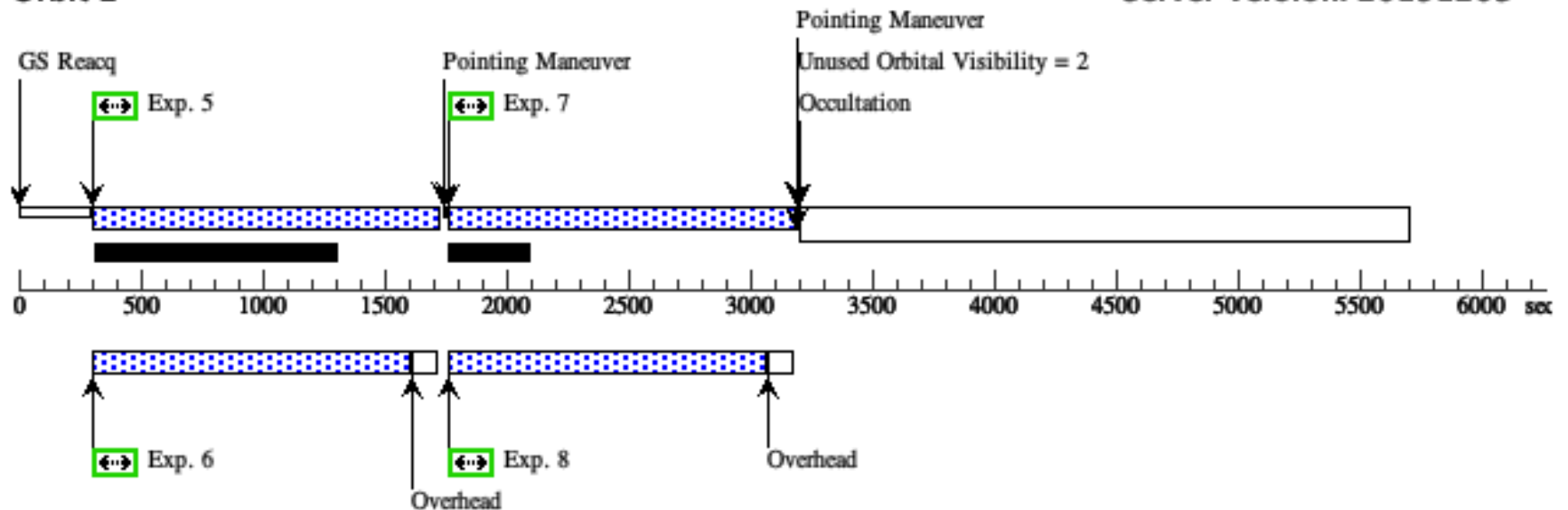
Orbit 1

Server Version: 20191203



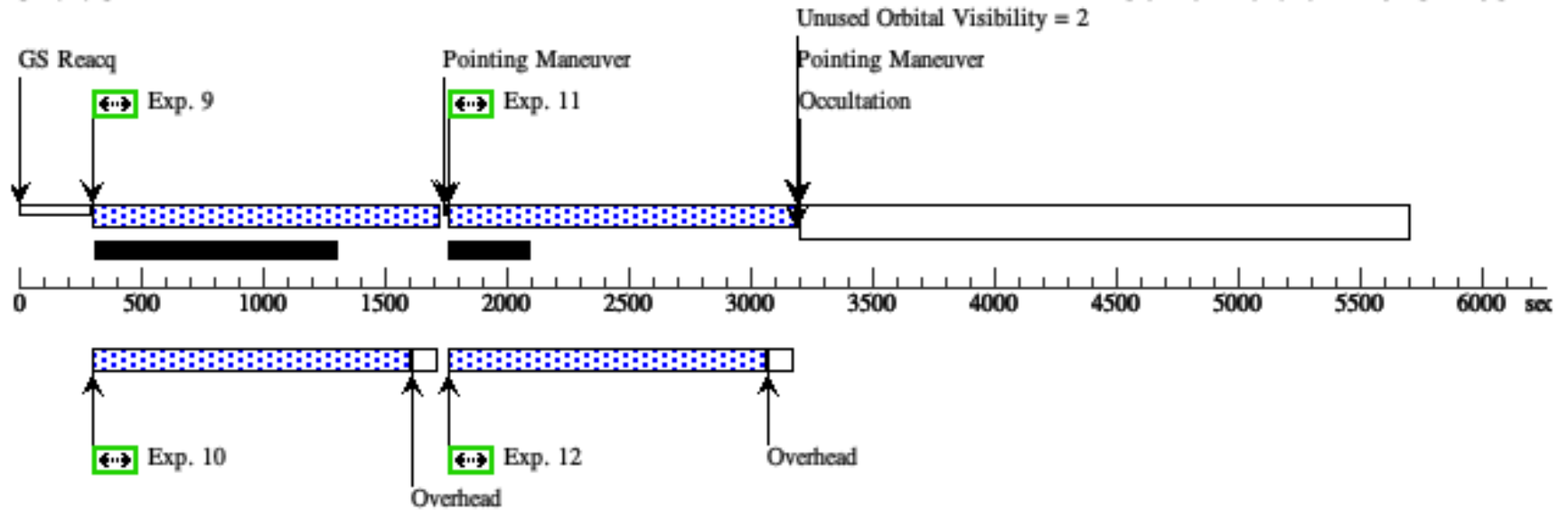
Orbit 2

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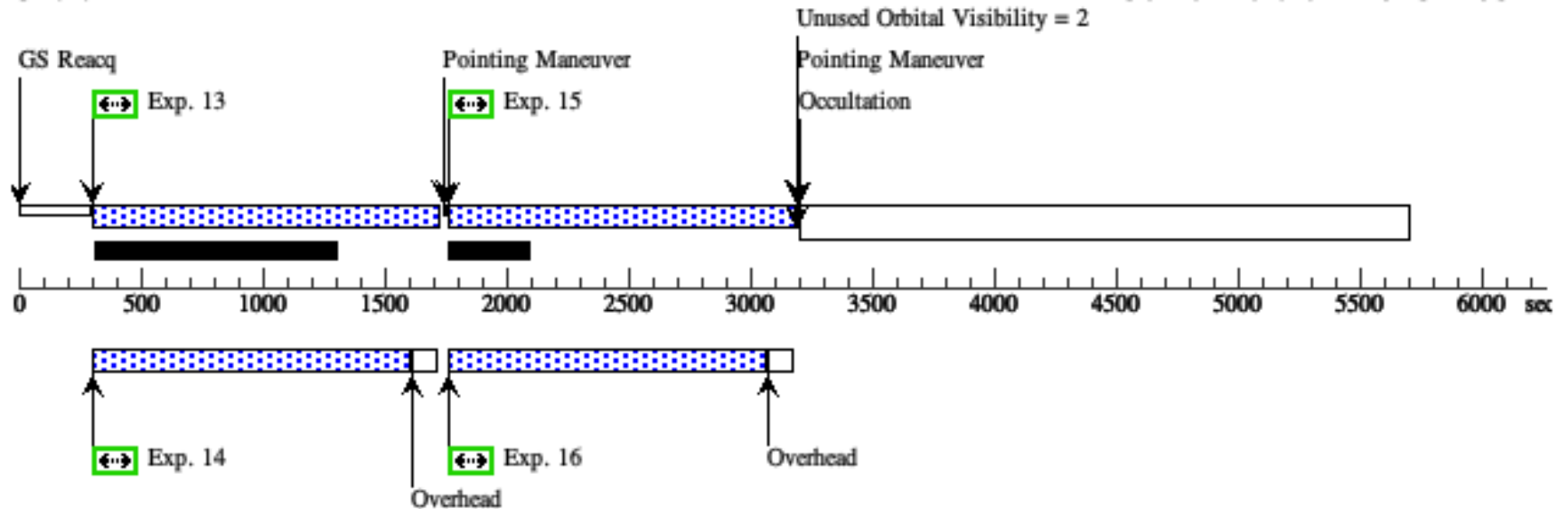
Orbit 3

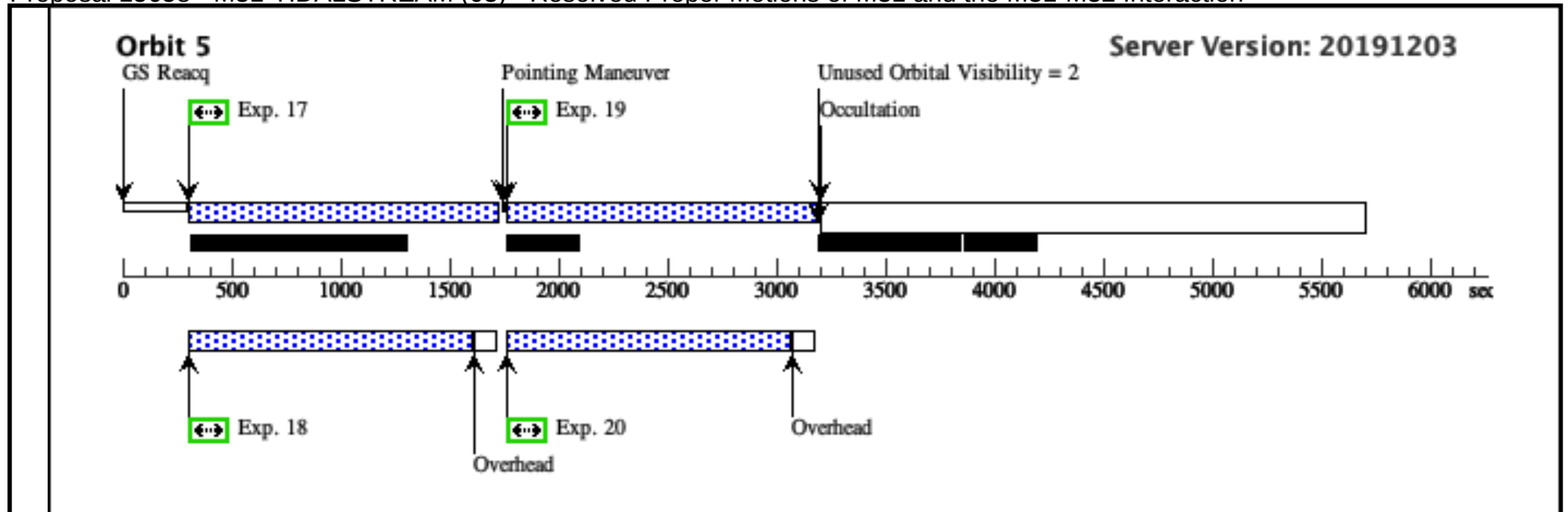
Server Version: 20191203



Orbit 4

Server Version: 20191203





Proposal 15658 - M31-HALO21 (04) - Resolved Proper Motions of M31 and the M31-M32 Interaction

Visit	Proposal 15658, M31-HALO21 (04), completed					Wed Jan 22 17:04:20 GMT 2020
	Diagnostic Status: No Diagnostics					
	Scientific Instruments: WFC3/UVIS, ACS/WFC					
	Special Requirements: ORIENT 231.92D TO 231.92 D					
	Comments: This is the visit for imaging the M31-HALO21 field with ACS/WFC as primary and WFC3/UVIS as parallel. We will image both fields only using the F606W filters. Five orbits are required to complete this visit. Each orbit consists of two long exposures. We added Orient Ranges requirements to align our images with the previous epoch images obtained through program 10816. We implemented a custom-designed dither pattern via the POS-TARG requirement.					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(4)	M31-HALO21	RA: 00 49 3.9848 (12.2666033d) Dec: +40 17 28.93 (40.29137d) Equinox: J2000	Radial Velocity: -301 km/sec	V=3.44+/-0.03	Reference Frame: ICRS
	Comments: Category=GALAXY Description=[DISK, HALO, SPIRAL]					

Proposal 15658 - M31-HALO21 (04) - Resolved Proper Motions of M31 and the M31-M32 Interaction

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(4) M31-HALO21	ACS/WFC, ACCUM, WFC	F606W		POS TARG 0.0000,0.0000	Sequence 1-4 Non-Int in M31-HALO21 (04) Prime + Parallel Group 1-2 in Sequence 1-4 Non-Int in M31-HALO21 (04)	1263 Secs (1263 Secs) [==>]	[1]
	2		ANY	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 1-4 Non-Int in M31-HALO21 (04) Prime + Parallel Group 1-2 in Sequence 1-4 Non-Int in M31-HALO21 (04)	1300 Secs (1300 Secs) [==>]	[1]
	3		(4) M31-HALO21	ACS/WFC, ACCUM, WFC	F606W		POS TARG 0.0654,0.2574	Sequence 1-4 Non-Int in M31-HALO21 (04) Prime + Parallel Group 3-4 in Sequence 1-4 Non-Int in M31-HALO21 (04)	1263 Secs (1263 Secs) [==>]	[1]
	4		ANY	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 1-4 Non-Int in M31-HALO21 (04) Prime + Parallel Group 3-4 in Sequence 1-4 Non-Int in M31-HALO21 (04)	1300 Secs (1300 Secs) [==>]	[1]
	5		(4) M31-HALO21	ACS/WFC, ACCUM, WFC	F606W		POS TARG 0.1391,0.1689	Sequence 5-8 Non-Int in M31-HALO21 (04) Prime + Parallel Group 5-6 in Sequence 5-8 Non-Int in M31-HALO21 (04)	1300 Secs (1300 Secs) [==>]	[2]
	6		ANY	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 5-8 Non-Int in M31-HALO21 (04) Prime + Parallel Group 5-6 in Sequence 5-8 Non-Int in M31-HALO21 (04)	1300 Secs (1300 Secs) [==>]	[2]
	7		(4) M31-HALO21	ACS/WFC, ACCUM, WFC	F606W		POS TARG 0.1550,0.4225	Sequence 5-8 Non-Int in M31-HALO21 (04) Prime + Parallel Group 7-8 in Sequence 5-8 Non-Int in M31-HALO21 (04)	1300 Secs (1300 Secs) [==>]	[2]
	8		ANY	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 5-8 Non-Int in M31-HALO21 (04) Prime + Parallel Group 7-8 in Sequence 5-8 Non-Int in M31-HALO21 (04)	1300 Secs (1300 Secs) [==>]	[2]

Proposal 15658 - M31-HALO21 (04) - Resolved Proper Motions of M31 and the M31-M32 Interaction

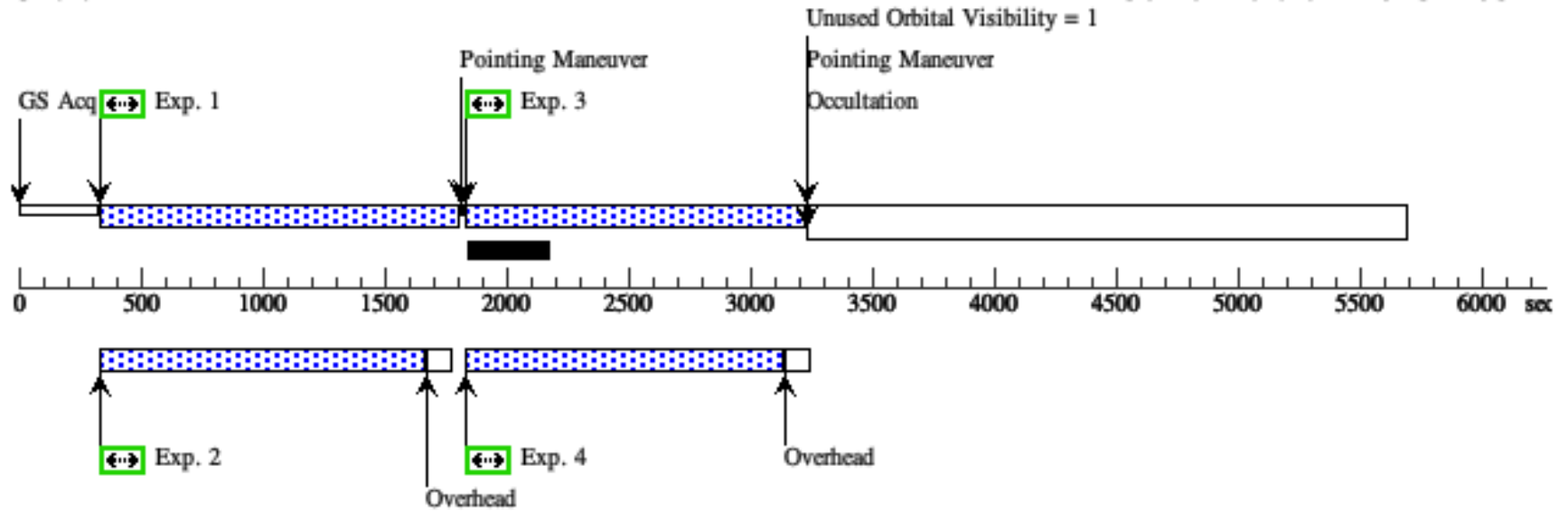
9	(4) M31-HALO21	ACS/WFC, ACCUM, WFC	F606W	POS TARG 0.2177,0 .0857	Sequence 9-12 Non-Int in M31-HALO21 (04) Prime + Parallel Group 9-10 in Sequence 9-12 Non-Int in M31-HALO21 (04)	1300 Secs (1300 Secs) [==>]	[3]
10	ANY	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 9-12 Non-Int in M31-HALO21 (04) Prime + Parallel Group 9-10 in Sequence 9-12 Non-Int in M31-HALO21 (04)	1300 Secs (1300 Secs) [==>]	[3]
11	(4) M31-HALO21	ACS/WFC, ACCUM, WFC	F606W	POS TARG 0.2781,0 .3427	Sequence 9-12 Non-Int in M31-HALO21 (04) Prime + Parallel Group 11-12 in Sequence 9-12 Non-Int in M31-HALO21 (04)	1300 Secs (1300 Secs) [==>]	[3]
12	ANY	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 9-12 Non-Int in M31-HALO21 (04) Prime + Parallel Group 11-12 in Sequence 9-12 Non-Int in M31-HALO21 (04)	1300 Secs (1300 Secs) [==>]	[3]
13	(4) M31-HALO21	ACS/WFC, ACCUM, WFC	F606W	POS TARG 0.3414,0 .1544	Sequence 13-16 Non-Int in M31-HALO21 (04) Prime + Parallel Group 13-14 in Sequence 13-16 Non-Int in M31-HALO21 (04)	1300 Secs (1300 Secs) [==>]	[4]
14	ANY	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 13-16 Non-Int in M31-HALO21 (04) Prime + Parallel Group 13-14 in Sequence 13-16 Non-Int in M31-HALO21 (04)	1300 Secs (1300 Secs) [==>]	[4]
15	(4) M31-HALO21	ACS/WFC, ACCUM, WFC	F606W	POS TARG 0.3567,0 .2595	Sequence 13-16 Non-Int in M31-HALO21 (04) Prime + Parallel Group 15-16 in Sequence 13-16 Non-Int in M31-HALO21 (04)	1300 Secs (1300 Secs) [==>]	[4]
16	ANY	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 13-16 Non-Int in M31-HALO21 (04) Prime + Parallel Group 15-16 in Sequence 13-16 Non-Int in M31-HALO21 (04)	1300 Secs (1300 Secs) [==>]	[4]

Proposal 15658 - M31-HALO21 (04) - Resolved Proper Motions of M31 and the M31-M32 Interaction

17	(4) M31-HALO21	ACS/WFC, ACCUM, WFC	F606W	POS TARG 0.4216,0 .4178	Sequence 17-20 Non-Int in M31-HALO21 (04) Prime + Parallel Group 17-18 in Sequence 17-20 Non-Int in M31-HALO21 (04)	1300 Secs (1300 Secs) [==>]	[5]
18	ANY	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 17-20 Non-Int in M31-HALO21 (04) Prime + Parallel Group 17-18 in Sequence 17-20 Non-Int in M31-HALO21 (04)	1300 Secs (1300 Secs) [==>]	[5]
19	(4) M31-HALO21	ACS/WFC, ACCUM, WFC	F606W	POS TARG 0.4802,0 .2787	Sequence 17-20 Non-Int in M31-HALO21 (04) Prime + Parallel Group 19-20 in Sequence 17-20 Non-Int in M31-HALO21 (04)	1300 Secs (1300 Secs) [==>]	[5]
20	ANY	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 17-20 Non-Int in M31-HALO21 (04) Prime + Parallel Group 19-20 in Sequence 17-20 Non-Int in M31-HALO21 (04)	1300 Secs (1300 Secs) [==>]	[5]

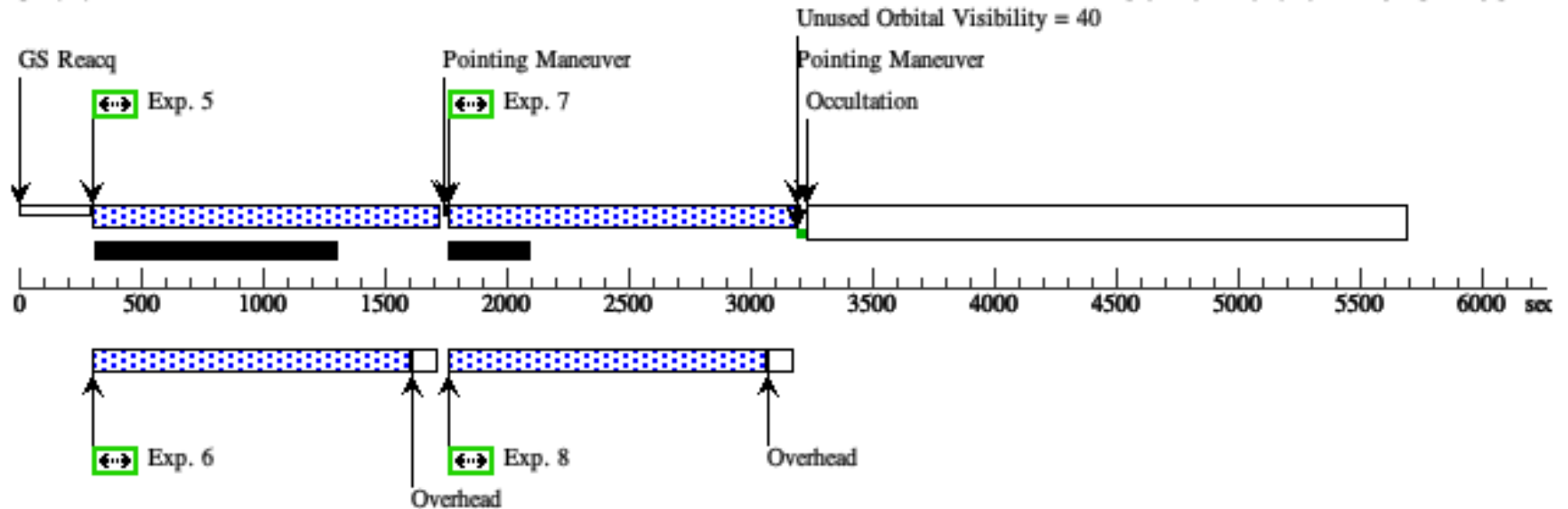
Orbit 1

Server Version: 20191203



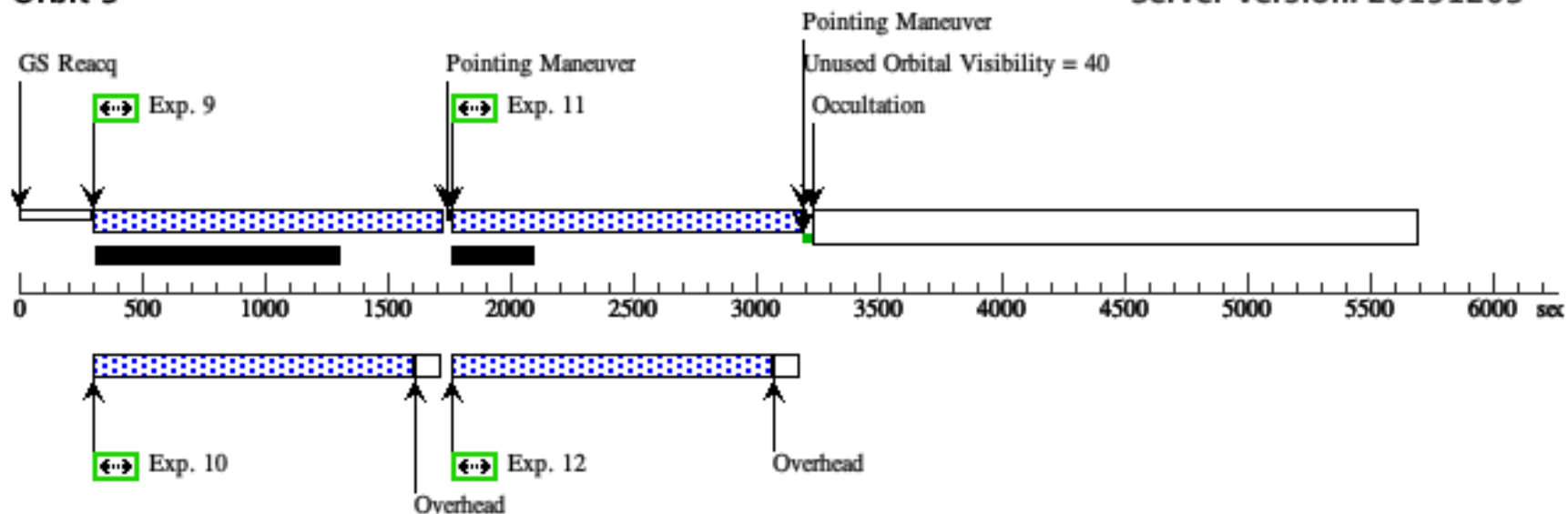
Orbit 2

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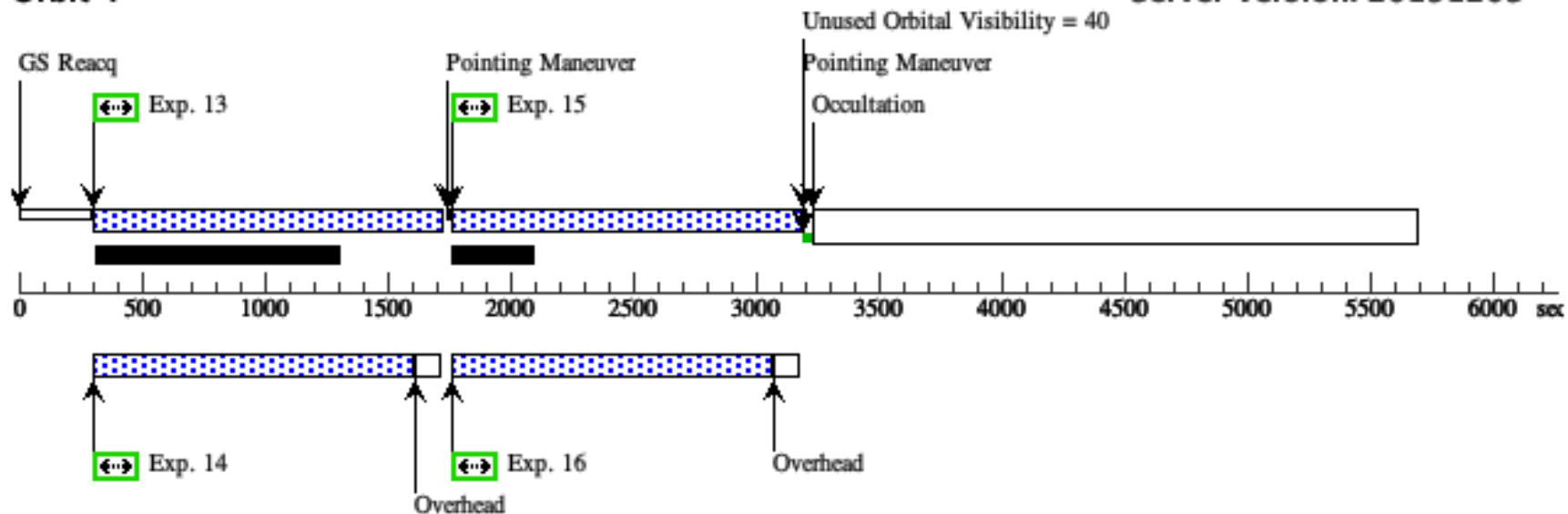
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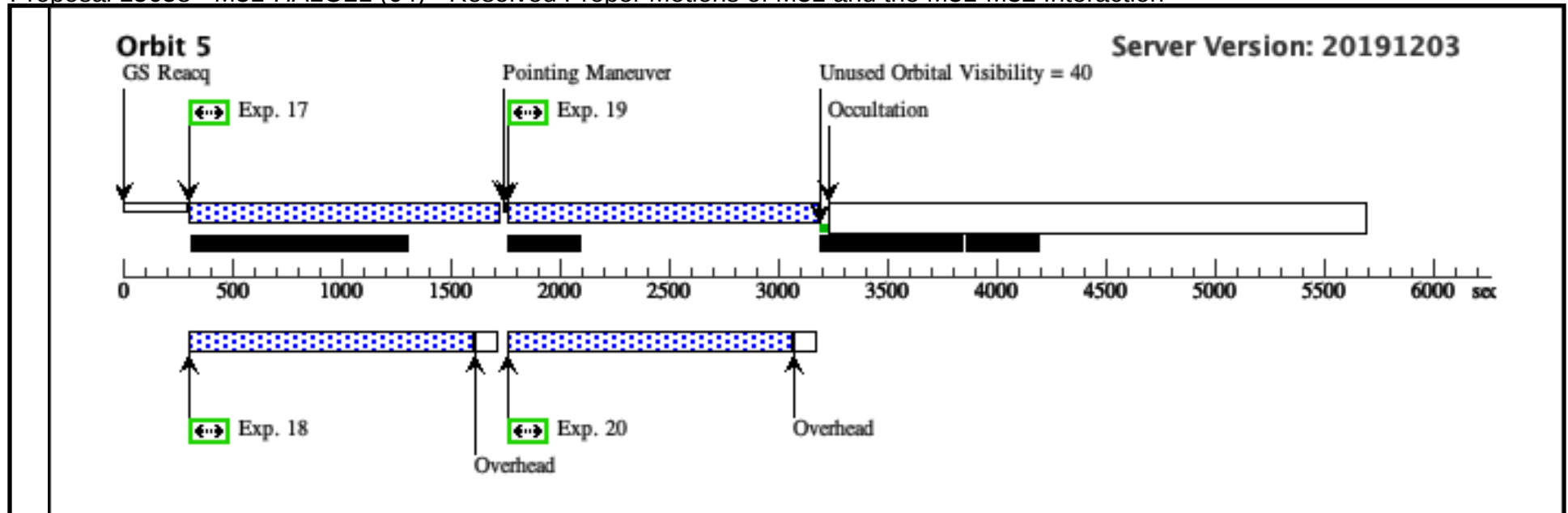
Server Version: 20191203



Orbit 4

Server Version: 20191203





Proposal 15658 - M31-HALO35 (05) - Resolved Proper Motions of M31 and the M31-M32 Interaction

Visit	Proposal 15658, M31-HALO35 (05), completed					Wed Jan 22 17:04:20 GMT 2020
	Diagnostic Status: No Diagnostics					
	Scientific Instruments: WFC3/UVIS, ACS/WFC					
	Special Requirements: ORIENT 163.96D TO 163.96 D					
	Comments: This is the visit for imaging the M31-HALO35 field with ACS/WFC as primary and WFC3/UVIS as parallel. We will image both fields only using the F606W filters. Five orbits are required to complete this visit. Each orbit consists of two long exposures. We added Orient Ranges requirements to align our images with the previous epoch images obtained through program 10816. We implemented a custom-designed dither pattern via the POS-TARG requirement.					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(5)	M31-HALO35	RA: 00 53 27.9978 (13.3666575d)	Radial Velocity: -301 km/sec	V=3.44+/-0.03	Reference Frame: ICRS
			Dec: +39 49 31.67 (39.82546d)			
			Equinox: J2000			
	Comments: Category=GALAXY Description=[DISK, HALO, SPIRAL]					

Proposal 15658 - M31-HALO35 (05) - Resolved Proper Motions of M31 and the M31-M32 Interaction

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(5) M31-HALO35	ACS/WFC, ACCUM, WFC	F606W		POS TARG 0.0000,0.0000	Sequence 1-4 Non-Int in M31-HALO35 (05) Prime + Parallel Group 1-2 in Sequence 1-4 Non-Int in M31-HALO35 (05)	1244 Secs (1244 Secs) [==>]	[1]
	2		ANY	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 1-4 Non-Int in M31-HALO35 (05) Prime + Parallel Group 1-2 in Sequence 1-4 Non-Int in M31-HALO35 (05)	1300 Secs (1300 Secs) [==>]	[1]
	3		(5) M31-HALO35	ACS/WFC, ACCUM, WFC	F606W		POS TARG 0.0654,0.2574	Sequence 1-4 Non-Int in M31-HALO35 (05) Prime + Parallel Group 3-4 in Sequence 1-4 Non-Int in M31-HALO35 (05)	1244 Secs (1244 Secs) [==>]	[1]
	4		ANY	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 1-4 Non-Int in M31-HALO35 (05) Prime + Parallel Group 3-4 in Sequence 1-4 Non-Int in M31-HALO35 (05)	1300 Secs (1300 Secs) [==>]	[1]
	5		(5) M31-HALO35	ACS/WFC, ACCUM, WFC	F606W		POS TARG 0.1391,0.1689	Sequence 5-8 Non-Int in M31-HALO35 (05) Prime + Parallel Group 5-6 in Sequence 5-8 Non-Int in M31-HALO35 (05)	1300 Secs (1300 Secs) [==>]	[2]
	6		ANY	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 5-8 Non-Int in M31-HALO35 (05) Prime + Parallel Group 5-6 in Sequence 5-8 Non-Int in M31-HALO35 (05)	1300 Secs (1300 Secs) [==>]	[2]
	7		(5) M31-HALO35	ACS/WFC, ACCUM, WFC	F606W		POS TARG 0.1550,0.4225	Sequence 5-8 Non-Int in M31-HALO35 (05) Prime + Parallel Group 7-8 in Sequence 5-8 Non-Int in M31-HALO35 (05)	1300 Secs (1300 Secs) [==>]	[2]
	8		ANY	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 5-8 Non-Int in M31-HALO35 (05) Prime + Parallel Group 7-8 in Sequence 5-8 Non-Int in M31-HALO35 (05)	1300 Secs (1300 Secs) [==>]	[2]

Proposal 15658 - M31-HALO35 (05) - Resolved Proper Motions of M31 and the M31-M32 Interaction

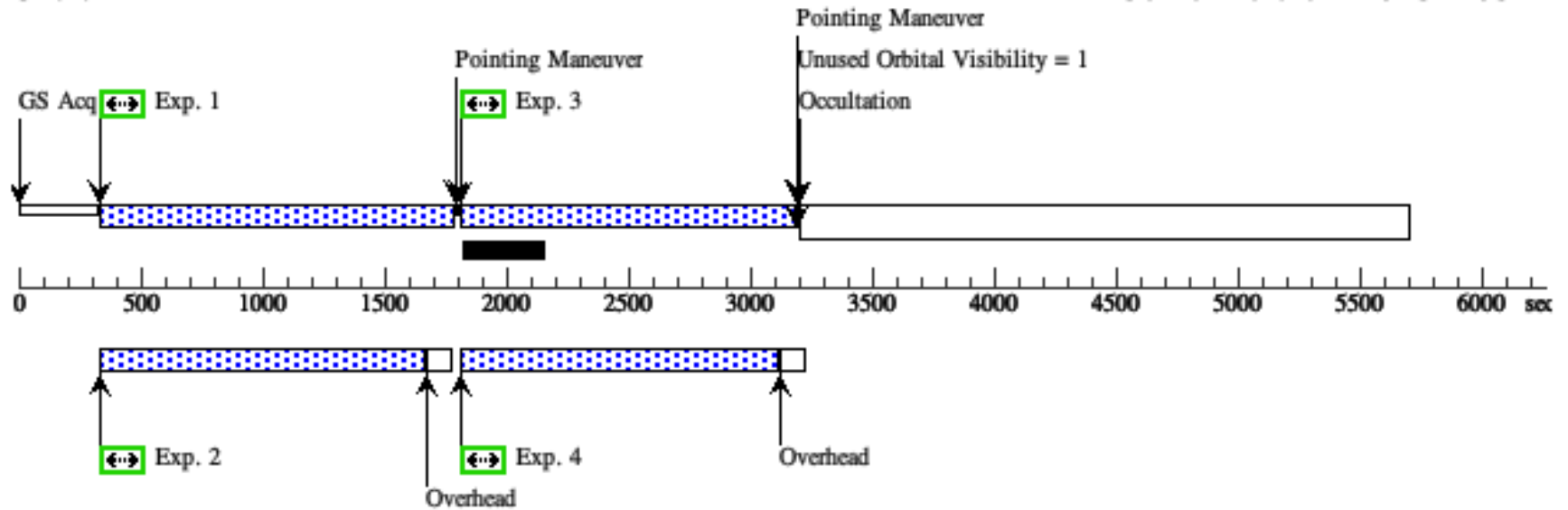
9	(5) M31-HALO35	ACS/WFC, ACCUM, WFC	F606W	POS TARG 0.2177,0 .0857	Sequence 9-12 Non-Int in M31-HALO35 (05) Prime + Parallel Group 9-10 in Sequence 9-12 Non-Int in M31-HALO35 (05)	1300 Secs (1300 Secs) [==>]	[3]
10	ANY	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 9-12 Non-Int in M31-HALO35 (05) Prime + Parallel Group 9-10 in Sequence 9-12 Non-Int in M31-HALO35 (05)	1300 Secs (1300 Secs) [==>]	[3]
11	(5) M31-HALO35	ACS/WFC, ACCUM, WFC	F606W	POS TARG 0.2781,0 .3427	Sequence 9-12 Non-Int in M31-HALO35 (05) Prime + Parallel Group 11-12 in Sequence 9-12 Non-Int in M31-HALO35 (05)	1300 Secs (1300 Secs) [==>]	[3]
12	ANY	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 9-12 Non-Int in M31-HALO35 (05) Prime + Parallel Group 11-12 in Sequence 9-12 Non-Int in M31-HALO35 (05)	1300 Secs (1300 Secs) [==>]	[3]
13	(5) M31-HALO35	ACS/WFC, ACCUM, WFC	F606W	POS TARG 0.3414,0 .1544	Sequence 13-16 Non-Int in M31-HALO35 (05) Prime + Parallel Group 13-14 in Sequence 13-16 Non-Int in M31-HALO35 (05)	1300 Secs (1300 Secs) [==>]	[4]
14	ANY	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 13-16 Non-Int in M31-HALO35 (05) Prime + Parallel Group 13-14 in Sequence 13-16 Non-Int in M31-HALO35 (05)	1300 Secs (1300 Secs) [==>]	[4]
15	(5) M31-HALO35	ACS/WFC, ACCUM, WFC	F606W	POS TARG 0.3567,0 .2595	Sequence 13-16 Non-Int in M31-HALO35 (05) Prime + Parallel Group 15-16 in Sequence 13-16 Non-Int in M31-HALO35 (05)	1300 Secs (1300 Secs) [==>]	[4]
16	ANY	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 13-16 Non-Int in M31-HALO35 (05) Prime + Parallel Group 15-16 in Sequence 13-16 Non-Int in M31-HALO35 (05)	1300 Secs (1300 Secs) [==>]	[4]

Proposal 15658 - M31-HALO35 (05) - Resolved Proper Motions of M31 and the M31-M32 Interaction

17	(5) M31-HALO35	ACS/WFC, ACCUM, WFC	F606W	POS TARG 0.4216,0 .4178	Sequence 17-20 Non-Int in M31-HALO35 (05) Prime + Parallel Group 17-18 in Sequence 17-20 Non-Int in M31-HALO35 (05)	1300 Secs (1300 Secs) [==>]	[5]
18	ANY	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 17-20 Non-Int in M31-HALO35 (05) Prime + Parallel Group 17-18 in Sequence 17-20 Non-Int in M31-HALO35 (05)	1300 Secs (1300 Secs) [==>]	[5]
19	(5) M31-HALO35	ACS/WFC, ACCUM, WFC	F606W	POS TARG 0.4802,0 .2787	Sequence 17-20 Non-Int in M31-HALO35 (05) Prime + Parallel Group 19-20 in Sequence 17-20 Non-Int in M31-HALO35 (05)	1300 Secs (1300 Secs) [==>]	[5]
20	ANY	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 17-20 Non-Int in M31-HALO35 (05) Prime + Parallel Group 19-20 in Sequence 17-20 Non-Int in M31-HALO35 (05)	1300 Secs (1300 Secs) [==>]	[5]

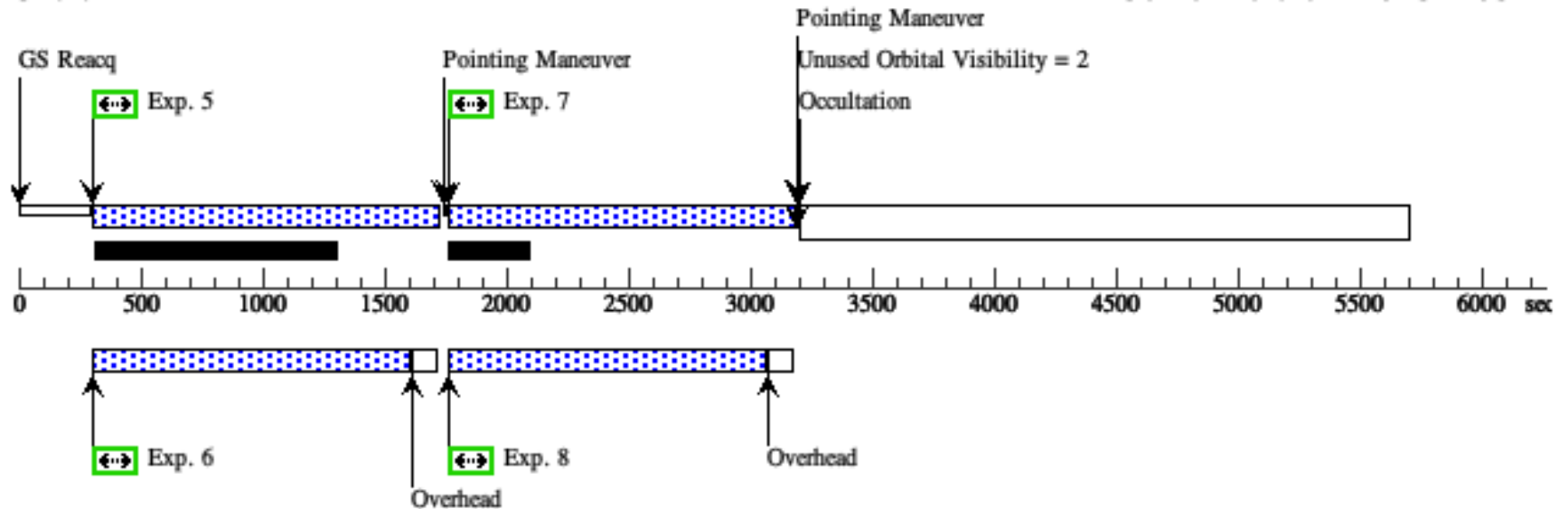
Orbit 1

Server Version: 20191203



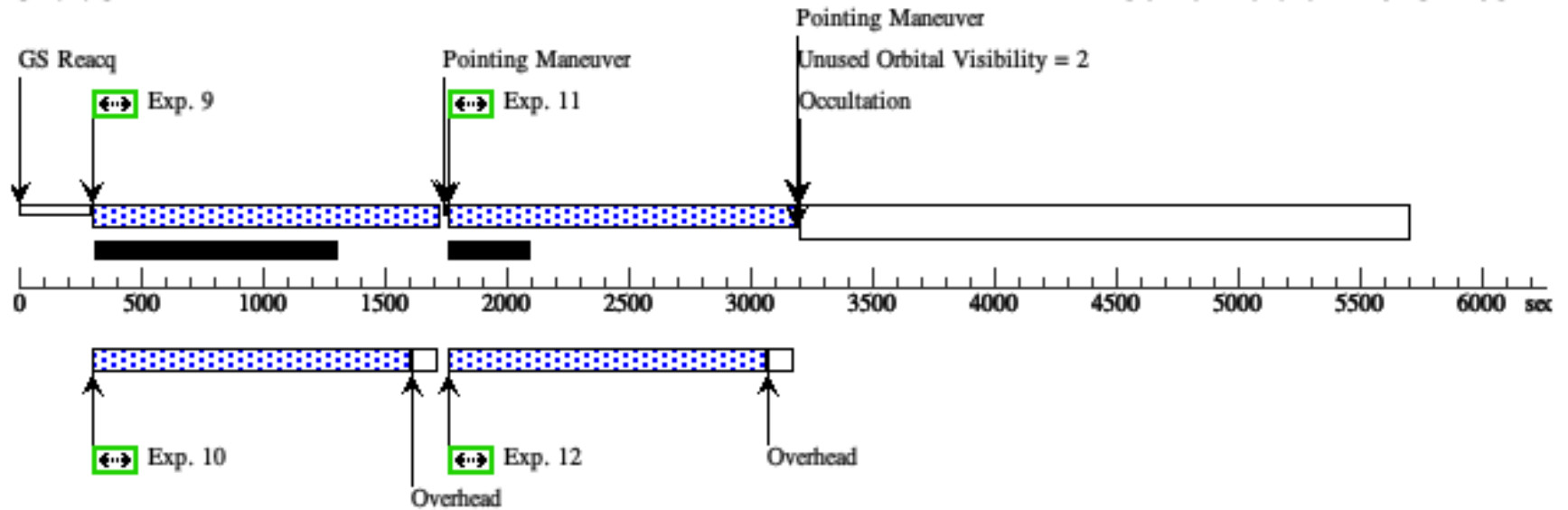
Orbit 2

Server Version: 20191203



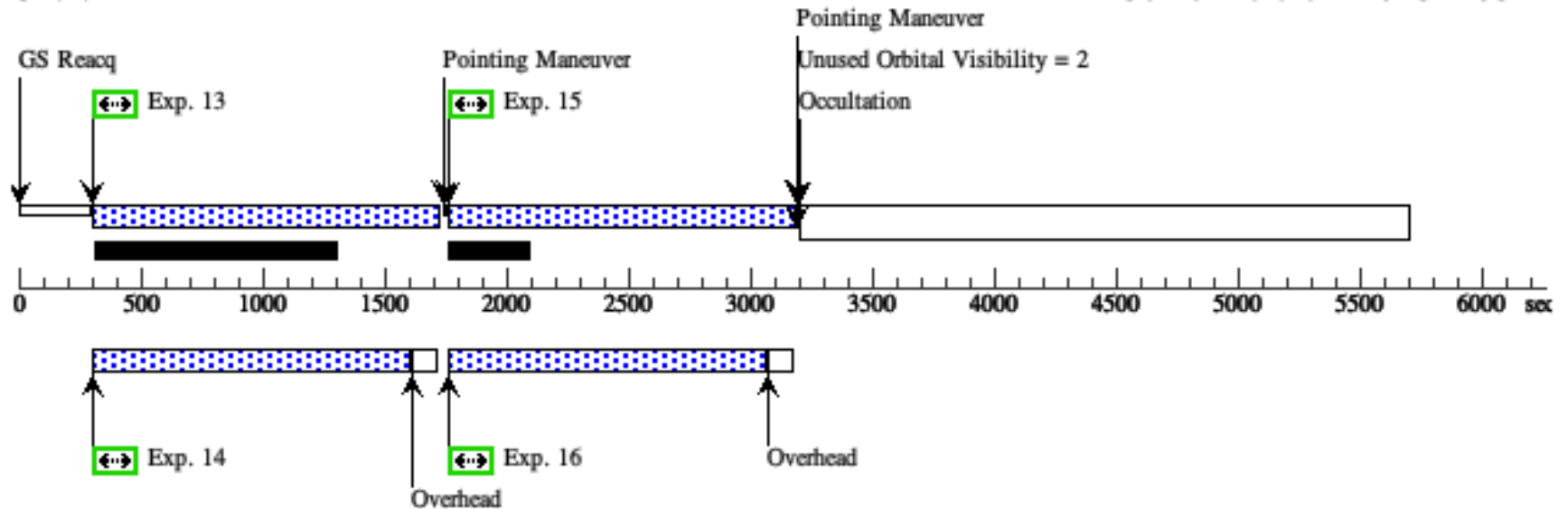
Orbit 3

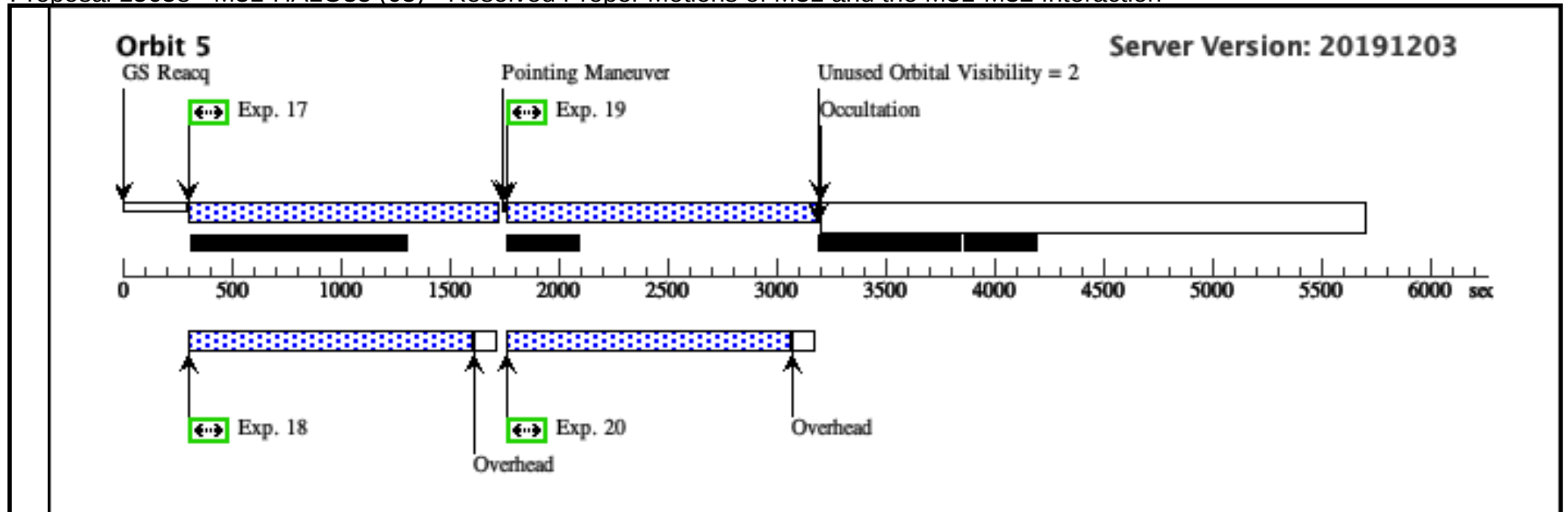
Server Version: 20191203



Orbit 4

Server Version: 20191203





Proposal 15658 - M32 (06) - Resolved Proper Motions of M31 and the M31-M32 Interaction

Visit	Proposal 15658, M32 (06), failed					Wed Jan 22 17:04:21 GMT 2020
	Diagnostic Status: No Diagnostics					
	Scientific Instruments: WFC3/UVIS, ACS/WFC					
	Special Requirements: ORIENT 90.06D TO 90.06 D; AFTER 01-FEB-2019:00:00:00					
	Comments: This is the visit for imaging the M32 field with ACS/WFC as primary and WFC3/UVIS as parallel. We will image both fields only using the F606W filters. Five orbits are required to complete this visit. Each orbit consists of two long exposures. We added Orient Ranges requirements to align our images with the previous epoch images obtained through program 9392. We implemented a custom-designed dither pattern via the POS-TARG requirement. We added Timing Requirement					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(6)	M32	RA: 00 42 56.0089 (10.7333704d) Dec: +40 50 51.10 (40.84753d) Equinox: J2000		V=8.1	Reference Frame: ICRS
	Comments: Category=GALAXY Description=[DWARF ELLIPTICAL]					

Proposal 15658 - M32 (06) - Resolved Proper Motions of M31 and the M31-M32 Interaction

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(6) M32	ACS/WFC, ACCUM, WFC	F814W		POS TARG 0.0000,0.0000	Sequence 1-4 Non-Int in M32 (06) Prime + Parallel Group 1-2 in Sequence 1-4 Non-Int in M32 (06)	1263 Secs (1263 Secs) [==>]	[1]
	2		ANY	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 1-4 Non-Int in M32 (06) Prime + Parallel Group 1-2 in Sequence 1-4 Non-Int in M32 (06)	1300 Secs (1300 Secs) [==>]	[1]
	3		(6) M32	ACS/WFC, ACCUM, WFC	F814W		POS TARG 0.0654,0.2574	Sequence 1-4 Non-Int in M32 (06) Prime + Parallel Group 3-4 in Sequence 1-4 Non-Int in M32 (06)	1263 Secs (1263 Secs) [==>]	[1]
	4		ANY	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 1-4 Non-Int in M32 (06) Prime + Parallel Group 3-4 in Sequence 1-4 Non-Int in M32 (06)	1300 Secs (1300 Secs) [==>]	[1]
	5		(6) M32	ACS/WFC, ACCUM, WFC	F814W		POS TARG 0.1391,0.1689	Sequence 5-8 Non-Int in M32 (06) Prime + Parallel Group 5-6 in Sequence 5-8 Non-Int in M32 (06)	1300 Secs (1300 Secs) [==>]	[2]
	6		ANY	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 5-8 Non-Int in M32 (06) Prime + Parallel Group 5-6 in Sequence 5-8 Non-Int in M32 (06)	1300 Secs (1300 Secs) [==>]	[2]
	7		(6) M32	ACS/WFC, ACCUM, WFC	F814W		POS TARG 0.1550,0.4225	Sequence 5-8 Non-Int in M32 (06) Prime + Parallel Group 7-8 in Sequence 5-8 Non-Int in M32 (06)	1300 Secs (1300 Secs) [==>]	[2]
	8		ANY	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 5-8 Non-Int in M32 (06) Prime + Parallel Group 7-8 in Sequence 5-8 Non-Int in M32 (06)	1300 Secs (1300 Secs) [==>]	[2]
	9		(6) M32	ACS/WFC, ACCUM, WFC	F814W		POS TARG 0.2177,0.0857	Sequence 9-12 Non-Int in M32 (06) Prime + Parallel Group 9-10 in Sequence 9-12 Non-Int in M32 (06)	1300 Secs (1300 Secs) [==>]	[3]

Proposal 15658 - M32 (06) - Resolved Proper Motions of M31 and the M31-M32 Interaction

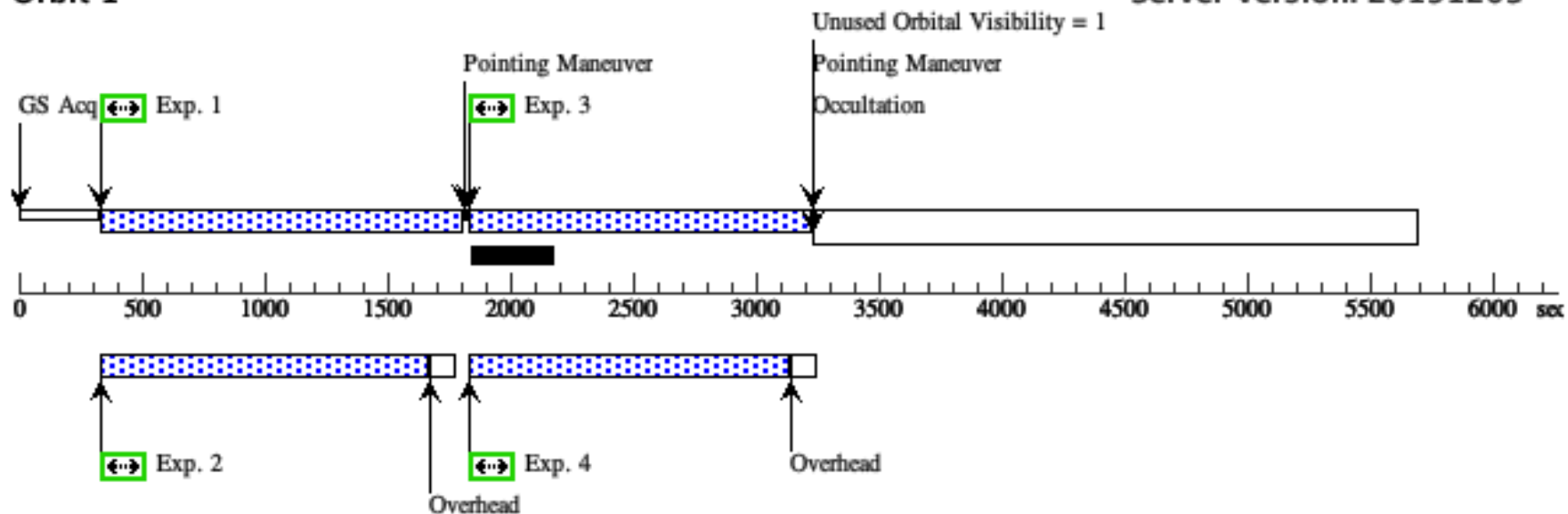
10	ANY	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 9-12 Non-Int in M32 (06) Prime + Parallel Group 9-10 in Sequence 9-12 Non-Int in M32 (06)	1300 Secs (1300 Secs) [==>]	[3]
11	(6) M32	ACS/WFC, ACCUM, WFC	F814W	POS TARG 0.2781,0.3427	Sequence 9-12 Non-Int in M32 (06) Prime + Parallel Group 11-12 in Sequence 9-12 Non-Int in M32 (06)	1300 Secs (1300 Secs) [==>]	[3]
12	ANY	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 9-12 Non-Int in M32 (06) Prime + Parallel Group 11-12 in Sequence 9-12 Non-Int in M32 (06)	1300 Secs (1300 Secs) [==>]	[3]
13	(6) M32	ACS/WFC, ACCUM, WFC	F814W	POS TARG 0.3414,0.1544	Sequence 13-16 Non-Int in M32 (06) Prime + Parallel Group 13-14 in Sequence 13-16 Non-Int in M32 (06)	1300 Secs (1300 Secs) [==>]	[4]
14	ANY	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 13-16 Non-Int in M32 (06) Prime + Parallel Group 13-14 in Sequence 13-16 Non-Int in M32 (06)	1300 Secs (1300 Secs) [==>]	[4]
15	(6) M32	ACS/WFC, ACCUM, WFC	F814W	POS TARG 0.3567,0.2595	Sequence 13-16 Non-Int in M32 (06) Prime + Parallel Group 15-16 in Sequence 13-16 Non-Int in M32 (06)	1300 Secs (1300 Secs) [==>]	[4]
16	ANY	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 13-16 Non-Int in M32 (06) Prime + Parallel Group 15-16 in Sequence 13-16 Non-Int in M32 (06)	1300 Secs (1300 Secs) [==>]	[4]
17	(6) M32	ACS/WFC, ACCUM, WFC	F814W	POS TARG 0.4216,0.4178	Sequence 17-20 Non-Int in M32 (06) Prime + Parallel Group 17-18 in Sequence 17-20 Non-Int in M32 (06)	1300 Secs (1300 Secs) [==>]	[5]
18	ANY	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 17-20 Non-Int in M32 (06) Prime + Parallel Group 17-18 in Sequence 17-20 Non-Int in M32 (06)	1300 Secs (1300 Secs) [==>]	[5]

Proposal 15658 - M32 (06) - Resolved Proper Motions of M31 and the M31-M32 Interaction

	19	(6) M32	ACS/WFC, ACCUM, WFC	F814W	POS TARG 0.4802,0.2787	Sequence 17-20 Non-Int in M32 (06) Prime + Parallel Group 19-20 in Sequence 17-20 Non-Int in M32 (06)	1300 Secs (1300 Secs) [==>]	[5]
	20	ANY	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 17-20 Non-Int in M32 (06) Prime + Parallel Group 19-20 in Sequence 17-20 Non-Int in M32 (06)	1300 Secs (1300 Secs) [==>]	[5]

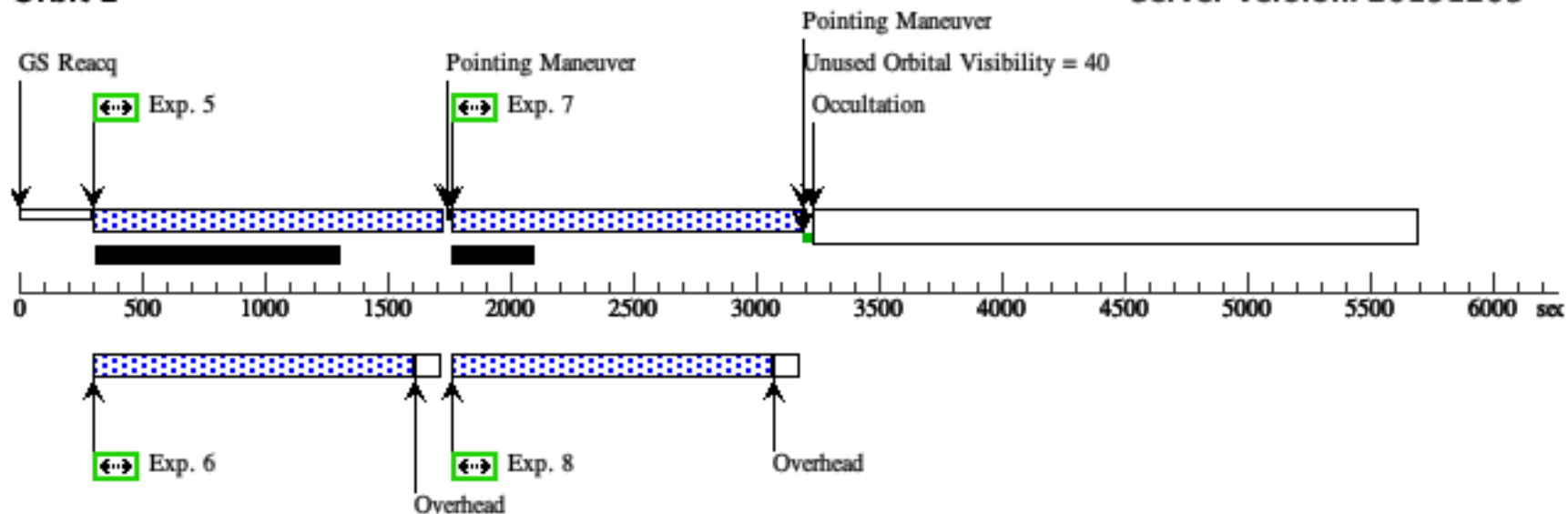
Orbit 1

Server Version: 20191203



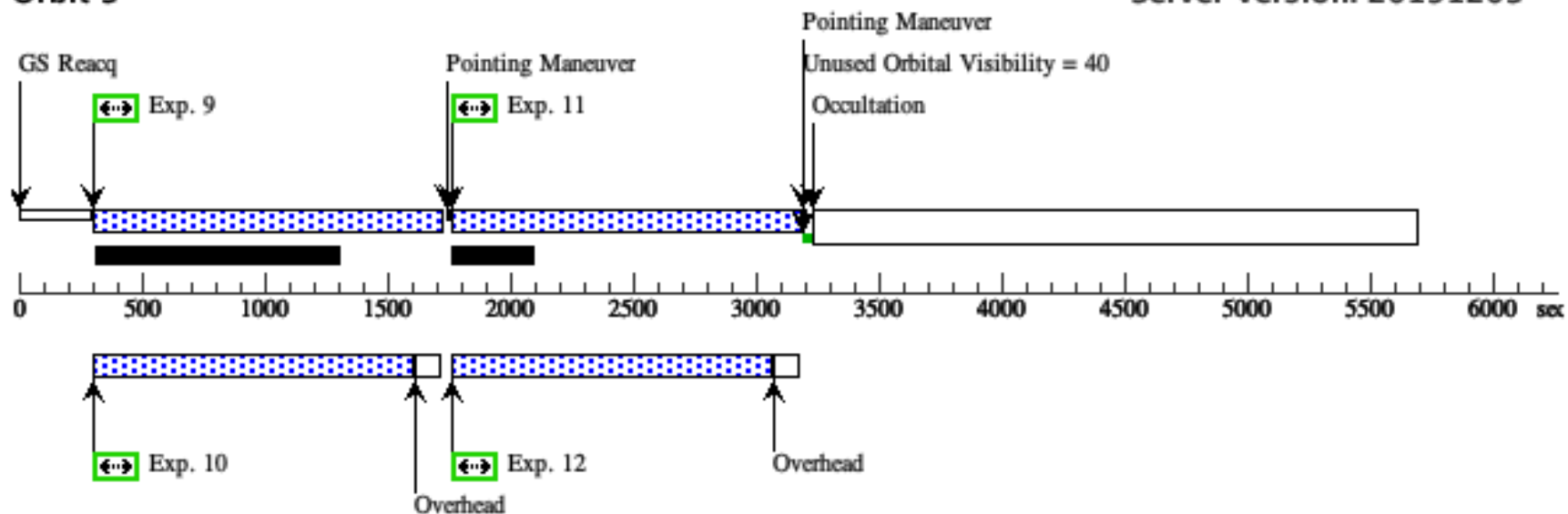
Orbit 2

Server Version: 20191203



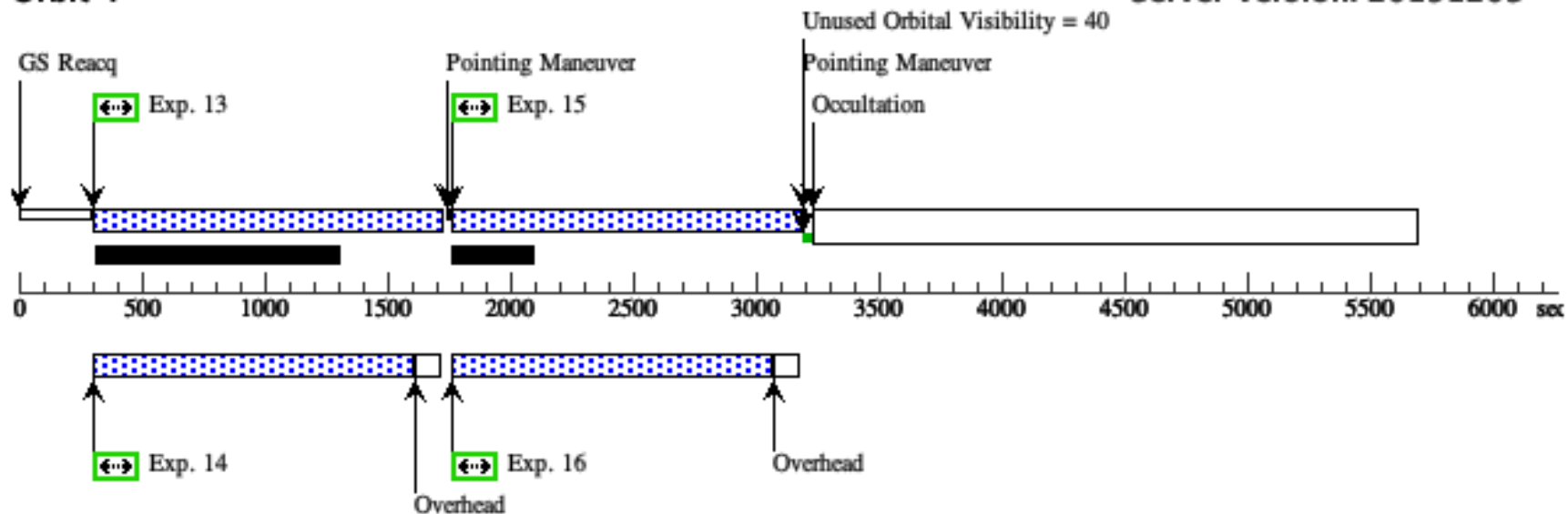
Orbit 3

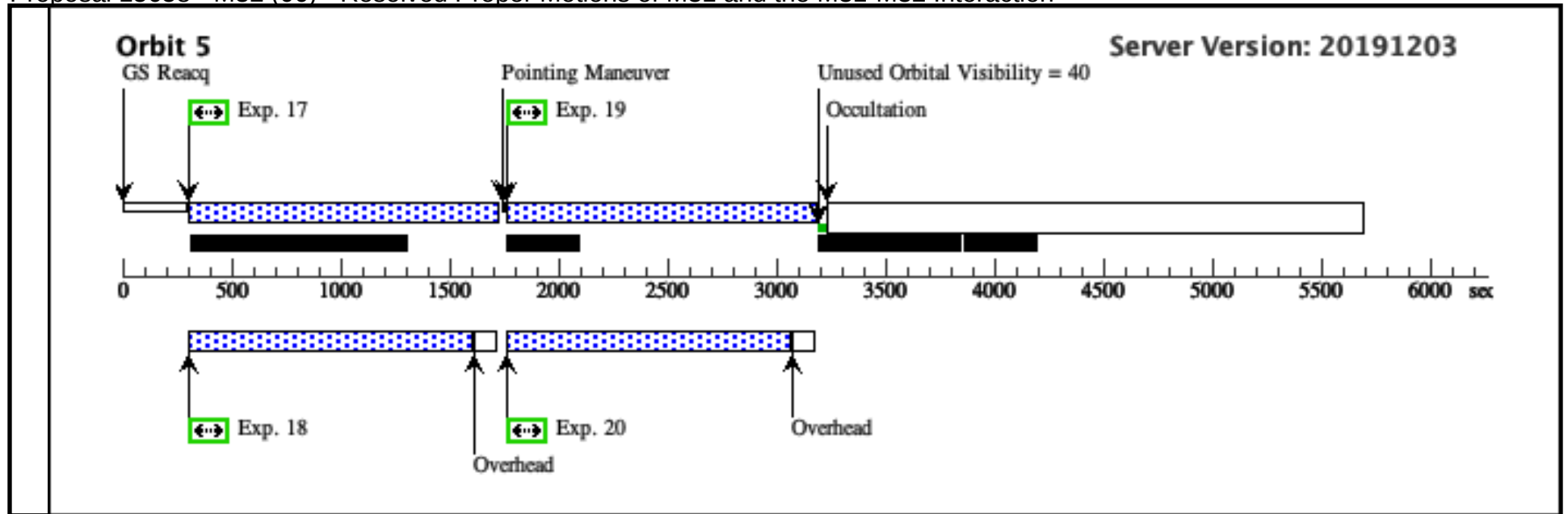
Server Version: 20191203



Orbit 4

Server Version: 20191203





Proposal 15658 - M32-CONTROL (07) - Resolved Proper Motions of M31 and the M31-M32 Interaction

Visit	Proposal 15658, M32-CONTROL (07), completed					Wed Jan 22 17:04:21 GMT 2020
	Diagnostic Status: No Diagnostics					
	Scientific Instruments: WFC3/UVIS, ACS/WFC					
	Special Requirements: ORIENT 87.46D TO 87.46 D; AFTER 01-FEB-2019:00:00:00					
	Comments: This is the visit for imaging the M32-CONTROL field with ACS/WFC as primary and WFC3/UVIS as parallel. We will image both fields only using the F606W filters. Five orbits are required to complete this visit. Each orbit consists of two long exposures. We added Orient Ranges requirements to align our images with the previous epoch images obtained through program 9392. We implemented a custom-designed dither pattern via the POS-TARG requirement.					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(7)	M32-CONTROL	RA: 00 43 28.7316 (10.8697150d) Dec: +41 03 44.60 (41.06239d) Equinox: J2000		V=8.1	Reference Frame: ICRS
	Comments: Category=GALAXY Description=[DWARF ELLIPTICAL]					

Proposal 15658 - M32-CONTROL (07) - Resolved Proper Motions of M31 and the M31-M32 Interaction

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(7) M32-CONTROL	ACS/WFC, ACCUM, WFC	F814W		POS TARG 0.0000,0.0000	Sequence 1-4 Non-Int in M32-CONTROL (07) Prime + Parallel Group 1-2 in Sequence 1-4 Non-Int in M32-CONTROL (07)	1263 Secs (1263 Secs) [==>]	[1]
	2		ANY	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 1-4 Non-Int in M32-CONTROL (07) Prime + Parallel Group 1-2 in Sequence 1-4 Non-Int in M32-CONTROL (07)	1300 Secs (1300 Secs) [==>]	[1]
	3		(7) M32-CONTROL	ACS/WFC, ACCUM, WFC	F814W		POS TARG 0.0654,0.2574	Sequence 1-4 Non-Int in M32-CONTROL (07) Prime + Parallel Group 3-4 in Sequence 1-4 Non-Int in M32-CONTROL (07)	1263 Secs (1263 Secs) [==>]	[1]
	4		ANY	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 1-4 Non-Int in M32-CONTROL (07) Prime + Parallel Group 3-4 in Sequence 1-4 Non-Int in M32-CONTROL (07)	1300 Secs (1300 Secs) [==>]	[1]
	5		(7) M32-CONTROL	ACS/WFC, ACCUM, WFC	F814W		POS TARG 0.1391,0.1689	Sequence 5-8 Non-Int in M32-CONTROL (07) Prime + Parallel Group 5-6 in Sequence 5-8 Non-Int in M32-CONTROL (07)	1300 Secs (1300 Secs) [==>]	[2]
	6		ANY	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 5-8 Non-Int in M32-CONTROL (07) Prime + Parallel Group 5-6 in Sequence 5-8 Non-Int in M32-CONTROL (07)	1300 Secs (1300 Secs) [==>]	[2]
	7		(7) M32-CONTROL	ACS/WFC, ACCUM, WFC	F814W		POS TARG 0.1550,0.4225	Sequence 5-8 Non-Int in M32-CONTROL (07) Prime + Parallel Group 7-8 in Sequence 5-8 Non-Int in M32-CONTROL (07)	1300 Secs (1300 Secs) [==>]	[2]
	8		ANY	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 5-8 Non-Int in M32-CONTROL (07) Prime + Parallel Group 7-8 in Sequence 5-8 Non-Int in M32-CONTROL (07)	1300 Secs (1300 Secs) [==>]	[2]

Proposal 15658 - M32-CONTROL (07) - Resolved Proper Motions of M31 and the M31-M32 Interaction

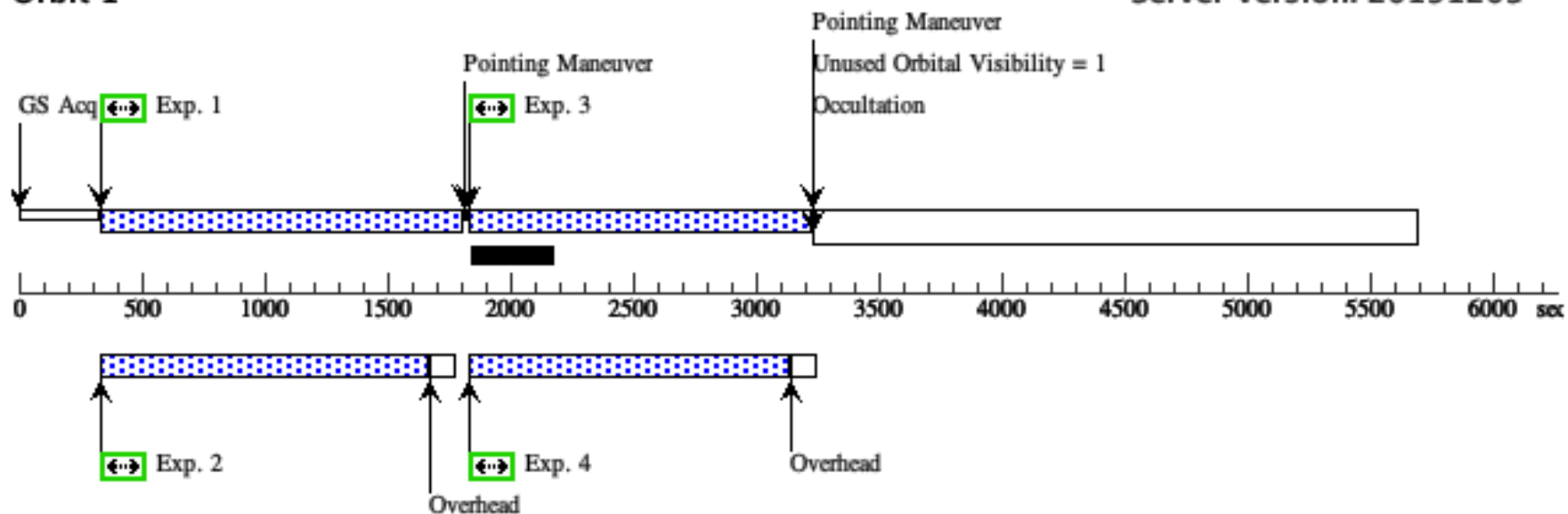
9	(7) M32-CONTROL	ACS/WFC, ACCUM, WFC	F814W	POS TARG 0.2177,0 .0857	Sequence 9-12 Non-Int in M32-CONTROL (07) Prime + Parallel Group 9-10 in Sequence 9-12 Non-Int in M32-CONTROL (07)	1300 Secs (1300 Secs) [==>]	[3]
10	ANY	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 9-12 Non-Int in M32-CONTROL (07) Prime + Parallel Group 9-10 in Sequence 9-12 Non-Int in M32-CONTROL (07)	1300 Secs (1300 Secs) [==>]	[3]
11	(7) M32-CONTROL	ACS/WFC, ACCUM, WFC	F814W	POS TARG 0.2781,0 .3427	Sequence 9-12 Non-Int in M32-CONTROL (07) Prime + Parallel Group 11-12 in Sequence 9-12 Non-Int in M32-CONTROL (07)	1300 Secs (1300 Secs) [==>]	[3]
12	ANY	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 9-12 Non-Int in M32-CONTROL (07) Prime + Parallel Group 11-12 in Sequence 9-12 Non-Int in M32-CONTROL (07)	1300 Secs (1300 Secs) [==>]	[3]
13	(7) M32-CONTROL	ACS/WFC, ACCUM, WFC	F814W	POS TARG 0.3414,0 .1544	Sequence 13-16 Non-Int in M32-CONTROL (07) Prime + Parallel Group 13-14 in Sequence 13-16 Non-Int in M32-CONTROL (07)	1300 Secs (1300 Secs) [==>]	[4]
14	ANY	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 13-16 Non-Int in M32-CONTROL (07) Prime + Parallel Group 13-14 in Sequence 13-16 Non-Int in M32-CONTROL (07)	1300 Secs (1300 Secs) [==>]	[4]
15	(7) M32-CONTROL	ACS/WFC, ACCUM, WFC	F814W	POS TARG 0.3567,0 .2595	Sequence 13-16 Non-Int in M32-CONTROL (07) Prime + Parallel Group 15-16 in Sequence 13-16 Non-Int in M32-CONTROL (07)	1300 Secs (1300 Secs) [==>]	[4]
16	ANY	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 13-16 Non-Int in M32-CONTROL (07) Prime + Parallel Group 15-16 in Sequence 13-16 Non-Int in M32-CONTROL (07)	1300 Secs (1300 Secs) [==>]	[4]

Proposal 15658 - M32-CONTROL (07) - Resolved Proper Motions of M31 and the M31-M32 Interaction

	17	(7) M32-CONTROL	ACS/WFC, ACCUM, WFC	F814W	POS TARG 0.4216,0 .4178	Sequence 17-20 Non-Int in M32-CONTROL (07) Prime + Parallel Group 17-18 in Sequence 17-20 Non-Int in M32-CONTROL (07)	1300 Secs (1300 Secs) [==>]	[5]
	18	ANY	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 17-20 Non-Int in M32-CONTROL (07) Prime + Parallel Group 17-18 in Sequence 17-20 Non-Int in M32-CONTROL (07)	1300 Secs (1300 Secs) [==>]	[5]
	19	(7) M32-CONTROL	ACS/WFC, ACCUM, WFC	F814W	POS TARG 0.4802,0 .2787	Sequence 17-20 Non-Int in M32-CONTROL (07) Prime + Parallel Group 19-20 in Sequence 17-20 Non-Int in M32-CONTROL (07)	1300 Secs (1300 Secs) [==>]	[5]
	20	ANY	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 17-20 Non-Int in M32-CONTROL (07) Prime + Parallel Group 19-20 in Sequence 17-20 Non-Int in M32-CONTROL (07)	1300 Secs (1300 Secs) [==>]	[5]

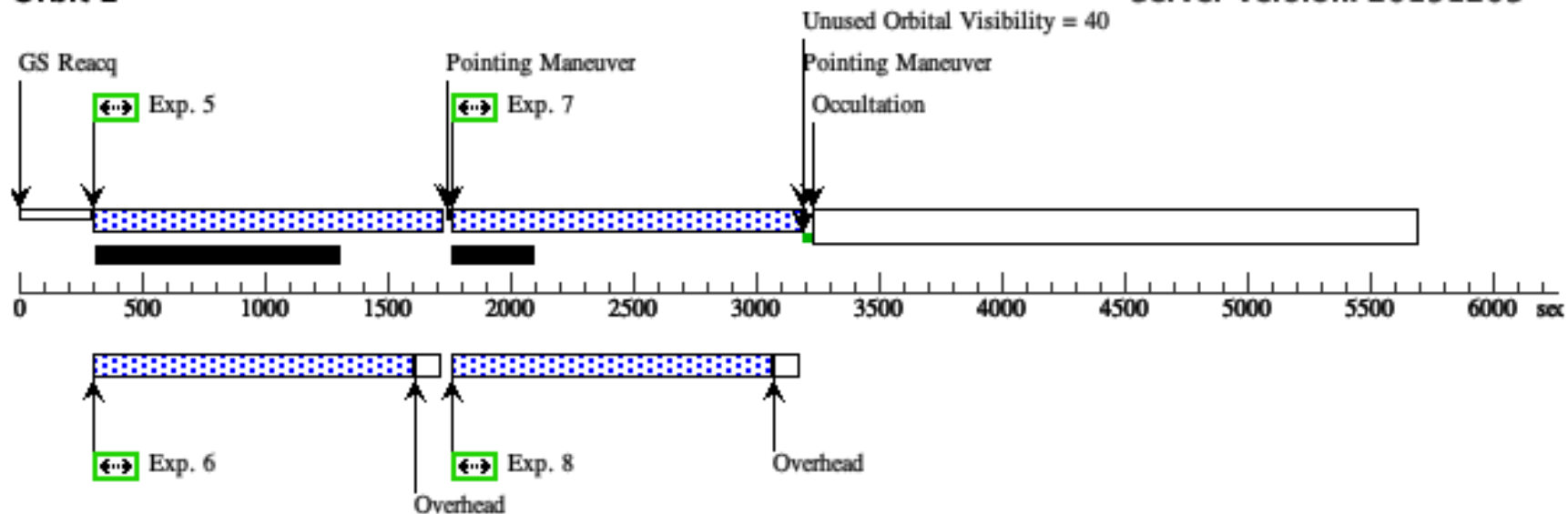
Orbit 1

Server Version: 20191203



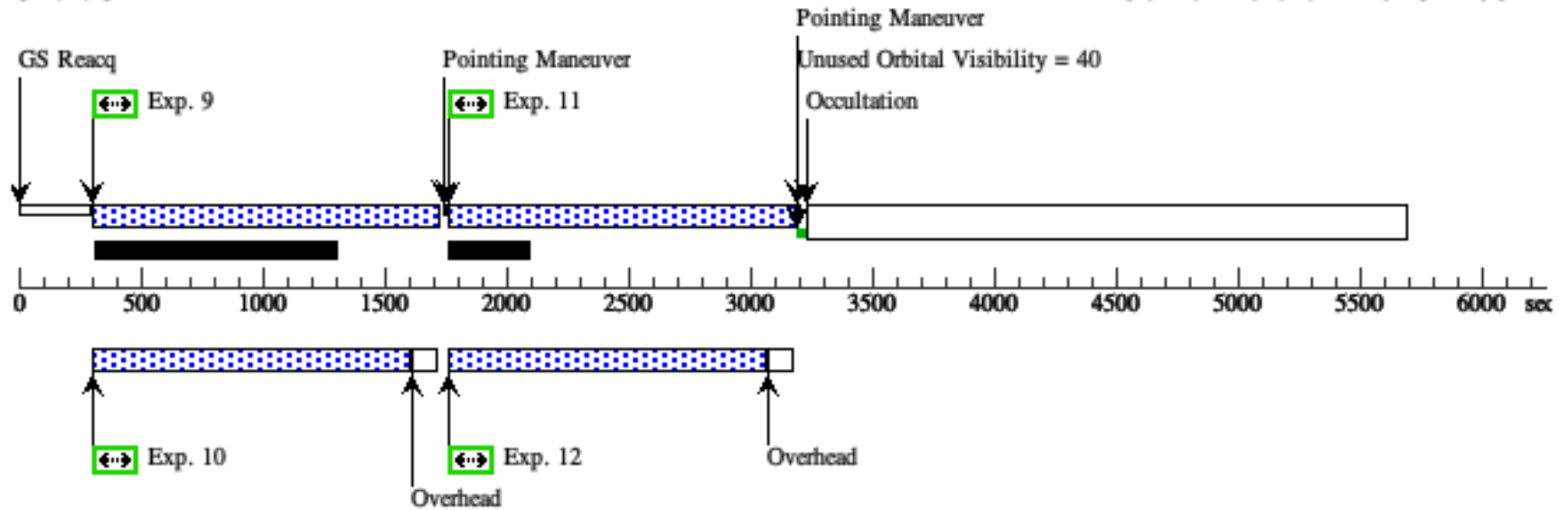
Orbit 2

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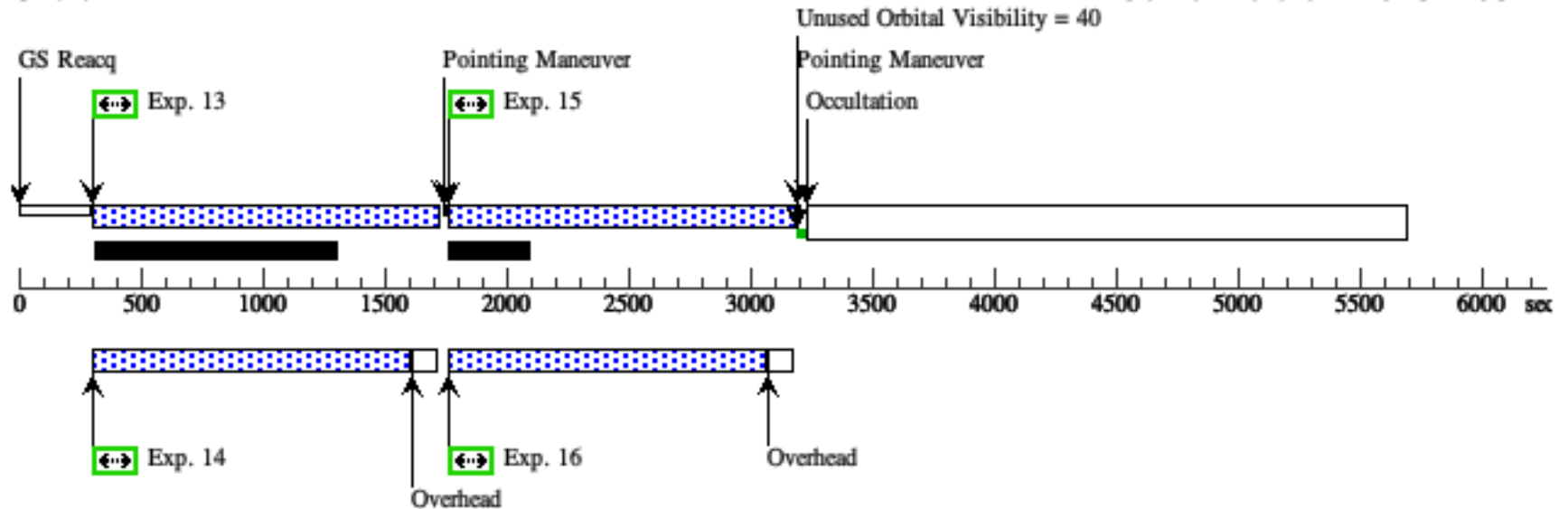
Orbit 3

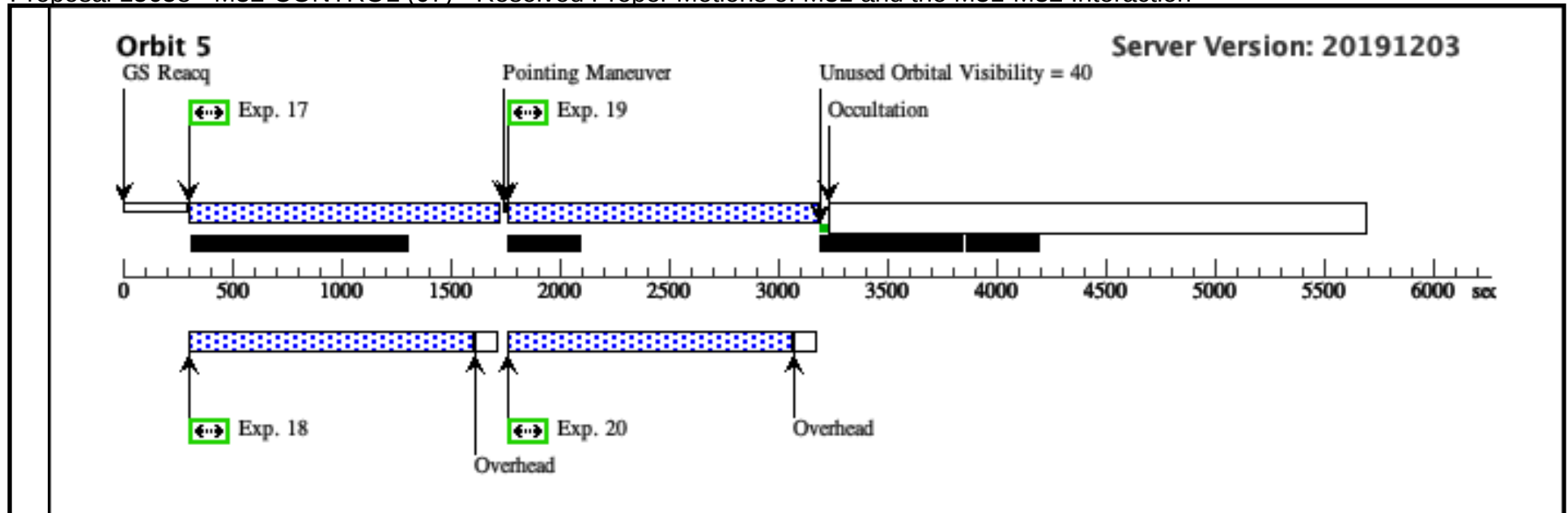
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Orbit 4

Server Version: 20191203





Proposal 15658 - M32 (56) - Resolved Proper Motions of M31 and the M31-M32 Interaction

Visit	Proposal 15658, M32 (56), completed Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS, ACS/WFC Special Requirements: ORIENT 90.06D TO 90.06 D; AFTER 01-FEB-2019:00:00:00 <i>Comments: This is the visit for imaging the M32 field with ACS/WFC as primary and WFC3/UVIS as parallel. We will image both fields only using the F606W filters. Five orbits are required to complete this visit. Each orbit consists of two long exposures. We added Orient Ranges requirements to align our images with the previous epoch images obtained through program 9392. We implemented a custom-designed dither pattern via the POS-TARG requirement. We added Timing Requirement</i>					Wed Jan 22 17:04:21 GMT 2020
	# Name Target Coordinates Targ. Coord. Corrections Fluxes Miscellaneous (6) M32 RA: 00 42 56.0089 (10.7333704d) V=8.1 Reference Frame: ICRS Dec: +40 50 51.10 (40.84753d) Equinox: J2000 <i>Comments:</i> <i>Category=GALAXY</i> <i>Description=[DWARF ELLIPTICAL]</i>					

Proposal 15658 - M32 (56) - Resolved Proper Motions of M31 and the M31-M32 Interaction

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(6) M32	ACS/WFC, ACCUM, WFC	F814W		POS TARG 0.0000,0.0000	Sequence 1-4 Non-Int in M32 (56) Prime + Parallel Group 1-2 in Sequence 1-4 Non-Int in M32 (56)	1263 Secs (1263 Secs) [==>]	[1]
	2		ANY	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 1-4 Non-Int in M32 (56) Prime + Parallel Group 1-2 in Sequence 1-4 Non-Int in M32 (56)	1300 Secs (1300 Secs) [==>]	[1]
	3		(6) M32	ACS/WFC, ACCUM, WFC	F814W		POS TARG 0.0654,0.2574	Sequence 1-4 Non-Int in M32 (56) Prime + Parallel Group 3-4 in Sequence 1-4 Non-Int in M32 (56)	1263 Secs (1263 Secs) [==>]	[1]
	4		ANY	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 1-4 Non-Int in M32 (56) Prime + Parallel Group 3-4 in Sequence 1-4 Non-Int in M32 (56)	1300 Secs (1300 Secs) [==>]	[1]
	5		(6) M32	ACS/WFC, ACCUM, WFC	F814W		POS TARG 0.1391,0.1689	Sequence 5-8 Non-Int in M32 (56) Prime + Parallel Group 5-6 in Sequence 5-8 Non-Int in M32 (56)	1300 Secs (1300 Secs) [==>]	[2]
	6		ANY	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 5-8 Non-Int in M32 (56) Prime + Parallel Group 5-6 in Sequence 5-8 Non-Int in M32 (56)	1300 Secs (1300 Secs) [==>]	[2]
	7		(6) M32	ACS/WFC, ACCUM, WFC	F814W		POS TARG 0.1550,0.4225	Sequence 5-8 Non-Int in M32 (56) Prime + Parallel Group 7-8 in Sequence 5-8 Non-Int in M32 (56)	1300 Secs (1300 Secs) [==>]	[2]
	8		ANY	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 5-8 Non-Int in M32 (56) Prime + Parallel Group 7-8 in Sequence 5-8 Non-Int in M32 (56)	1300 Secs (1300 Secs) [==>]	[2]
	9		(6) M32	ACS/WFC, ACCUM, WFC	F814W		POS TARG 0.2177,0.0857	Sequence 9-12 Non-Int in M32 (56) Prime + Parallel Group 9-10 in Sequence 9-12 Non-Int in M32 (56)	1300 Secs (1300 Secs) [==>]	[3]

Proposal 15658 - M32 (56) - Resolved Proper Motions of M31 and the M31-M32 Interaction

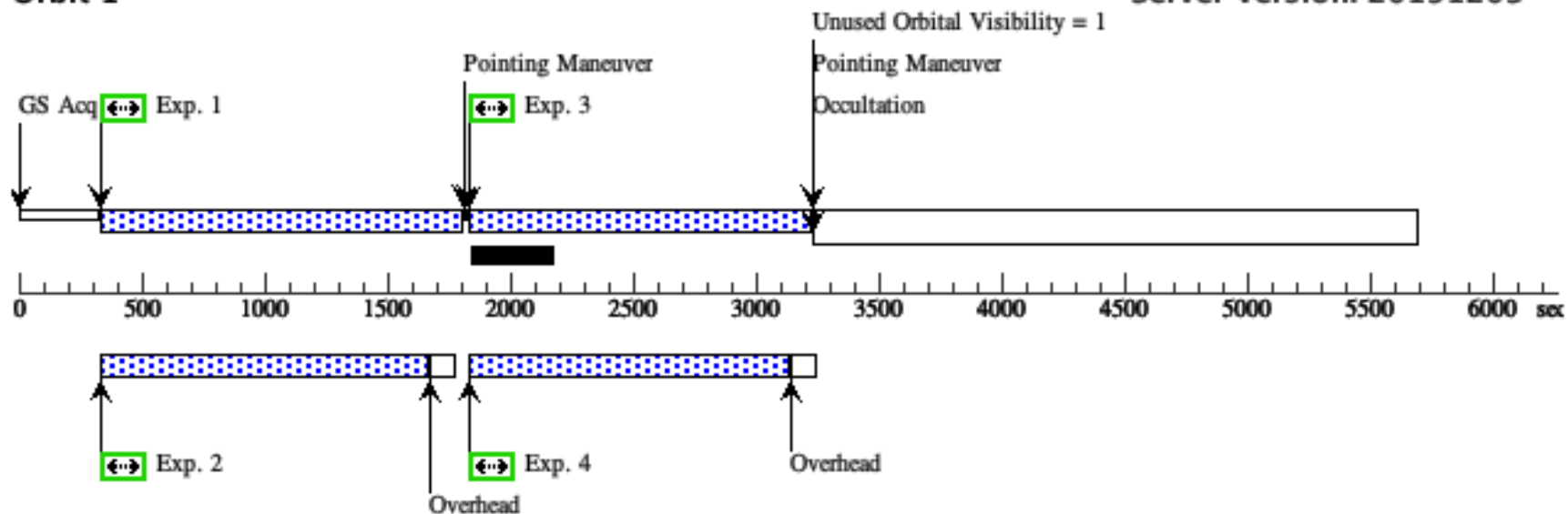
10	ANY	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 9-12 Non-Int in M32 (56) Prime + Parallel Group 9-10 in Sequence 9-12 Non-Int in M32 (56)	1300 Secs (1300 Secs) [==>]	[3]
11	(6) M32	ACS/WFC, ACCUM, WFC	F814W	POS TARG 0.2781,0.3427	Sequence 9-12 Non-Int in M32 (56) Prime + Parallel Group 11-12 in Sequence 9-12 Non-Int in M32 (56)	1300 Secs (1300 Secs) [==>]	[3]
12	ANY	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 9-12 Non-Int in M32 (56) Prime + Parallel Group 11-12 in Sequence 9-12 Non-Int in M32 (56)	1300 Secs (1300 Secs) [==>]	[3]
13	(6) M32	ACS/WFC, ACCUM, WFC	F814W	POS TARG 0.3414,0.1544	Sequence 13-16 Non-Int in M32 (56) Prime + Parallel Group 13-14 in Sequence 13-16 Non-Int in M32 (56)	1300 Secs (1300 Secs) [==>]	[4]
14	ANY	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 13-16 Non-Int in M32 (56) Prime + Parallel Group 13-14 in Sequence 13-16 Non-Int in M32 (56)	1300 Secs (1300 Secs) [==>]	[4]
15	(6) M32	ACS/WFC, ACCUM, WFC	F814W	POS TARG 0.3567,0.2595	Sequence 13-16 Non-Int in M32 (56) Prime + Parallel Group 15-16 in Sequence 13-16 Non-Int in M32 (56)	1300 Secs (1300 Secs) [==>]	[4]
16	ANY	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 13-16 Non-Int in M32 (56) Prime + Parallel Group 15-16 in Sequence 13-16 Non-Int in M32 (56)	1300 Secs (1300 Secs) [==>]	[4]
17	(6) M32	ACS/WFC, ACCUM, WFC	F814W	POS TARG 0.4216,0.4178	Sequence 17-20 Non-Int in M32 (56) Prime + Parallel Group 17-18 in Sequence 17-20 Non-Int in M32 (56)	1300 Secs (1300 Secs) [==>]	[5]
18	ANY	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 17-20 Non-Int in M32 (56) Prime + Parallel Group 17-18 in Sequence 17-20 Non-Int in M32 (56)	1300 Secs (1300 Secs) [==>]	[5]

Proposal 15658 - M32 (56) - Resolved Proper Motions of M31 and the M31-M32 Interaction

	19	(6) M32	ACS/WFC, ACCUM, WFC	F814W	POS TARG 0.4802,0.2787	Sequence 17-20 Non-Int in M32 (56) Prime + Parallel Group 19-20 in Sequence 17-20 Non-Int in M32 (56)	1300 Secs (1300 Secs) [==>]	[5]
	20	ANY	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 17-20 Non-Int in M32 (56) Prime + Parallel Group 19-20 in Sequence 17-20 Non-Int in M32 (56)	1300 Secs (1300 Secs) [==>]	[5]

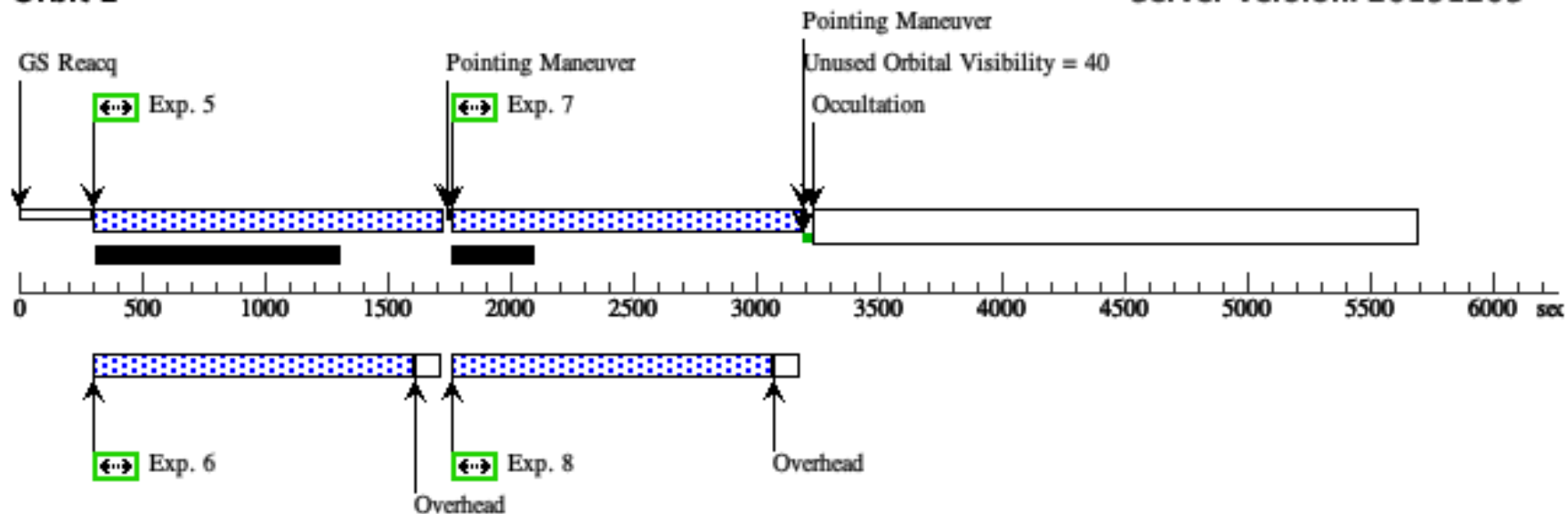
Orbit 1

Server Version: 20191203



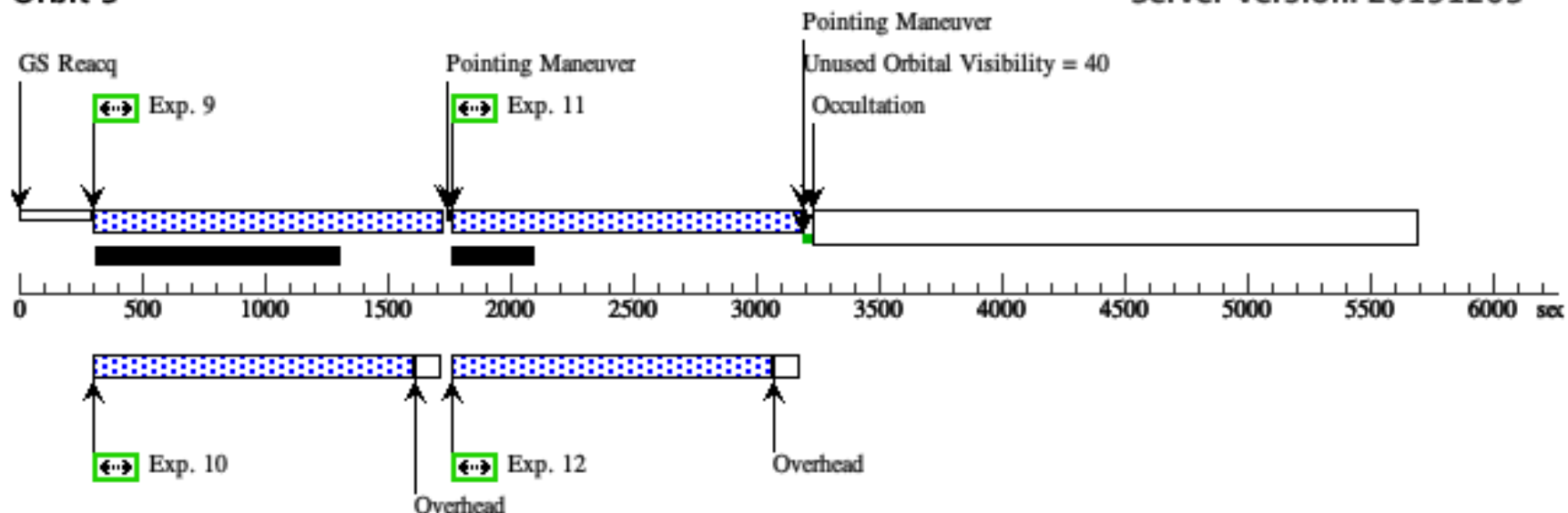
Orbit 2

Server Version: 20191203



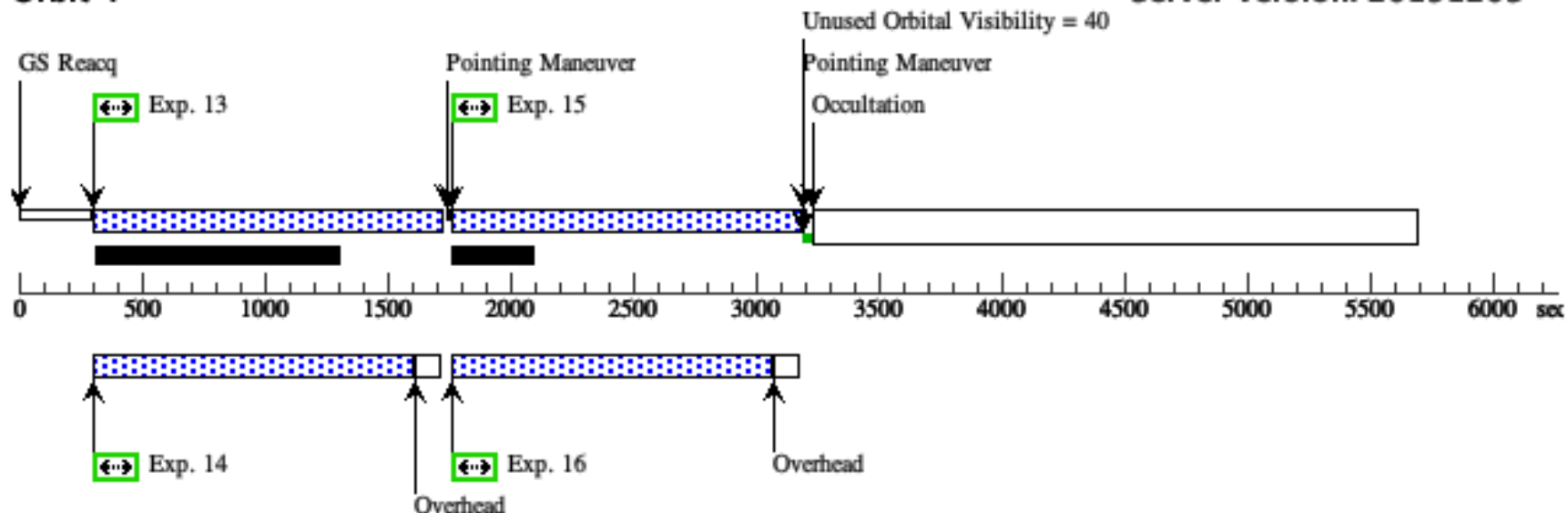
Orbit 3

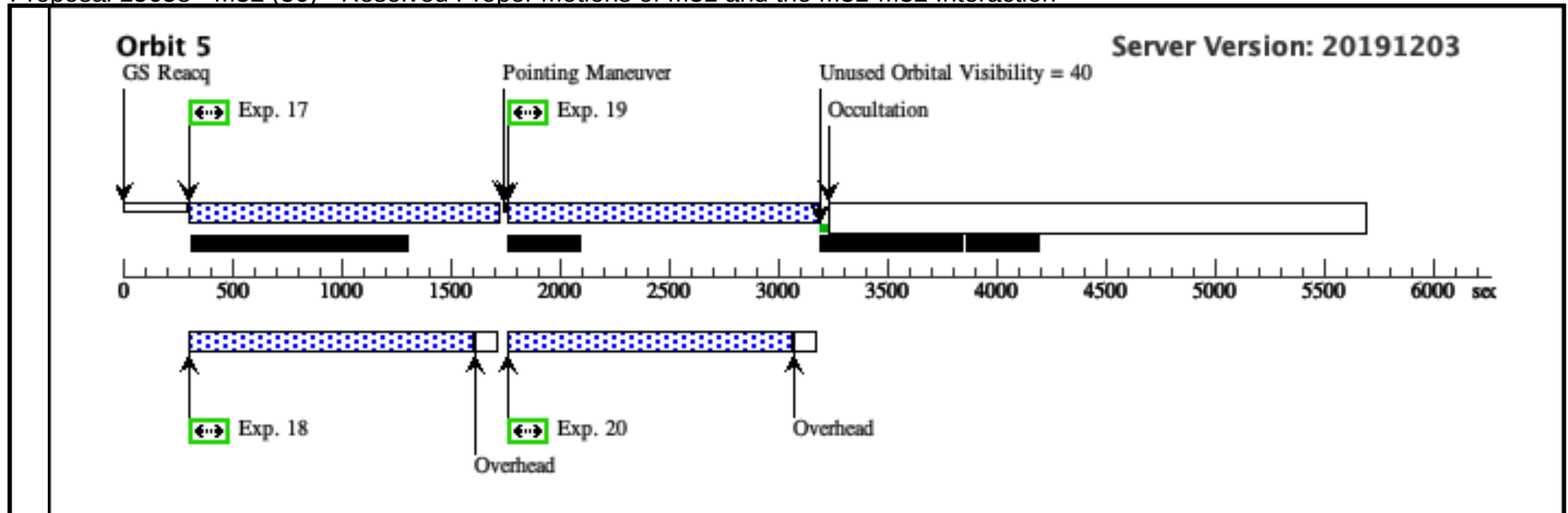
Server Version: 20191203



Orbit 4

Server Version: 20191203





Proposal 15658 - M31-OUTERDISK (52) - Resolved Proper Motions of M31 and the M31-M32 Interaction

Visit	Proposal 15658, M31-OUTERDISK (52), completed Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS, ACS/WFC Special Requirements: ORIENT 67.09D TO 67.09 D; AFTER 01-FEB-2019:00:00:00 <i>Comments: This is the visit for imaging the M31-OUTERDISK field with ACS/WFC as primary and WFC3/UVIS as parallel. We will image both fields only using the F606W filters. Five orbits are required to complete this visit. Each orbit consists of two long exposures. To maximize the time baseline w.r.t. the earlier epochs, we added Timing Requirements of "After 01-FEB-2019" for this visit. We have also added Orient Ranges requirements to align our images with the previous epoch images. We implemented a custom-designed dither pattern via the POS-TARG requirement.</i>					
	Wed Jan 22 17:04:21 GMT 2020					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(2)	M31-OUTERDISK	RA: 00 49 9.9123 (12.2913012d) Dec: +42 45 2.03 (42.75056d) Equinox: J2000	Radial Velocity: -301 km/sec	V=3.44+/-0.03	Reference Frame: ICRS
Fixed Targets	<i>Comments:</i> Category=GALAXY Description=[DISK, HALO, SPIRAL]					

Proposal 15658 - M31-OUTERDISK (52) - Resolved Proper Motions of M31 and the M31-M32 Interaction

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(2) M31-OUTERDISK	ACS/WFC, ACCUM, WFC	F606W		POS TARG 0.1391,0.1689	Sequence 1-4 Non-Int in M31-OUTERDISK (52) Prime + Parallel Group 1-2 in Sequence 1-4 Non-Int in M31-OUTERDISK (52)	1248 Secs (1248 Secs) [==>]	[1]
	2		ANY	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 1-4 Non-Int in M31-OUTERDISK (52) Prime + Parallel Group 1-2 in Sequence 1-4 Non-Int in M31-OUTERDISK (52)	1300 Secs (1300 Secs) [==>]	[1]
	3		(2) M31-OUTERDISK	ACS/WFC, ACCUM, WFC	F606W		POS TARG 0.1550,0.4225	Sequence 1-4 Non-Int in M31-OUTERDISK (52) Prime + Parallel Group 3-4 in Sequence 1-4 Non-Int in M31-OUTERDISK (52)	1248 Secs (1248 Secs) [==>]	[1]
	4		ANY	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 1-4 Non-Int in M31-OUTERDISK (52) Prime + Parallel Group 3-4 in Sequence 1-4 Non-Int in M31-OUTERDISK (52)	1300 Secs (1300 Secs) [==>]	[1]
	5		(2) M31-OUTERDISK	ACS/WFC, ACCUM, WFC	F606W		POS TARG 0.2177,0.0857	Sequence 5-8 Non-Int in M31-OUTERDISK (52) Prime + Parallel Group 5-6 in Sequence 5-8 Non-Int in M31-OUTERDISK (52)	1285 Secs (1285 Secs) [==>]	[2]
	6		ANY	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 5-8 Non-Int in M31-OUTERDISK (52) Prime + Parallel Group 5-6 in Sequence 5-8 Non-Int in M31-OUTERDISK (52)	1300 Secs (1300 Secs) [==>]	[2]
	7		(2) M31-OUTERDISK	ACS/WFC, ACCUM, WFC	F606W		POS TARG 0.2781,0.3427	Sequence 5-8 Non-Int in M31-OUTERDISK (52) Prime + Parallel Group 7-8 in Sequence 5-8 Non-Int in M31-OUTERDISK (52)	1285 Secs (1285 Secs) [==>]	[2]
	8		ANY	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 5-8 Non-Int in M31-OUTERDISK (52) Prime + Parallel Group 7-8 in Sequence 5-8 Non-Int in M31-OUTERDISK (52)	1300 Secs (1300 Secs) [==>]	[2]

Proposal 15658 - M31-OUTERDISK (52) - Resolved Proper Motions of M31 and the M31-M32 Interaction

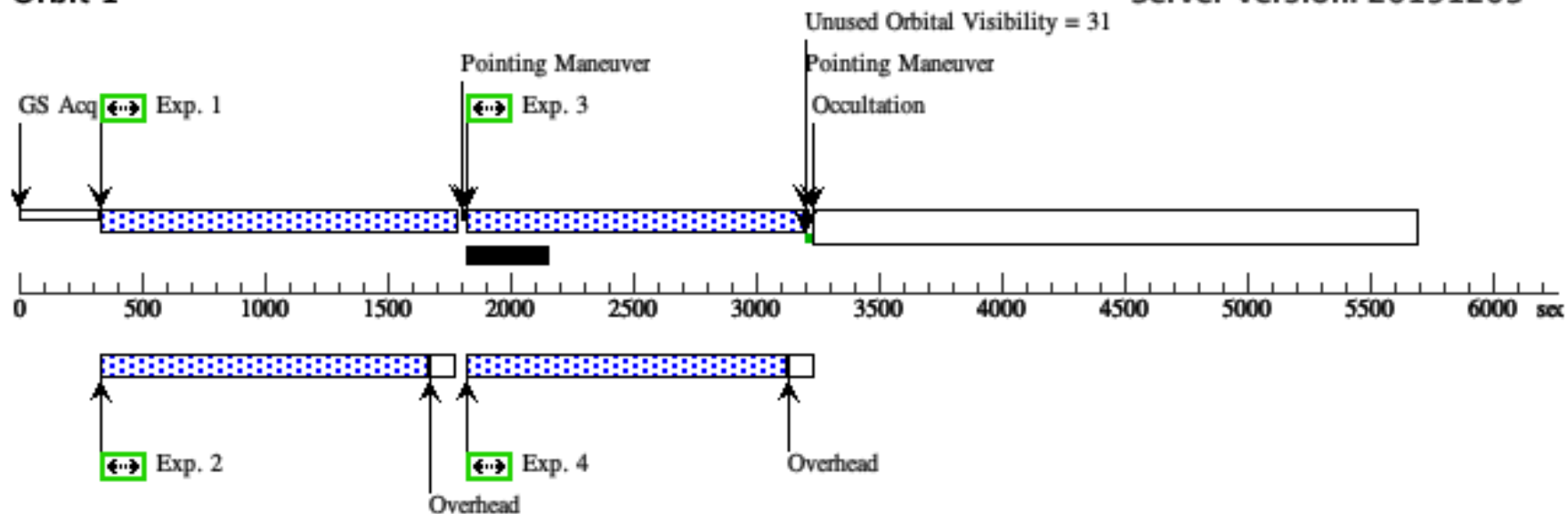
9	(2) M31-OUTERDISK	ACS/WFC, ACCUM, WFC	F606W	POS TARG 0.3414,0 .1544	Sequence 9-12 Non-Int in M31-OUTERDISK (52) Prime + Parallel Group 9-10 in Sequence 9-12 Non-Int in M31-OUTERDISK (52)	1285 Secs (1285 Secs) [==>]	[3]
10	ANY	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 9-12 Non-Int in M31-OUTERDISK (52) Prime + Parallel Group 9-10 in Sequence 9-12 Non-Int in M31-OUTERDISK (52)	1300 Secs (1300 Secs) [==>]	[3]
11	(2) M31-OUTERDISK	ACS/WFC, ACCUM, WFC	F606W	POS TARG 0.3567,0 .2595	Sequence 9-12 Non-Int in M31-OUTERDISK (52) Prime + Parallel Group 11-12 in Sequence 9-12 Non-Int in M31-OUTERDISK (52)	1285 Secs (1285 Secs) [==>]	[3]
12	ANY	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 9-12 Non-Int in M31-OUTERDISK (52) Prime + Parallel Group 11-12 in Sequence 9-12 Non-Int in M31-OUTERDISK (52)	1300 Secs (1300 Secs) [==>]	[3]
13	(2) M31-OUTERDISK	ACS/WFC, ACCUM, WFC	F606W	POS TARG 0.4216,0 .4178	Sequence 13-16 Non-Int in M31-OUTERDISK (52) Prime + Parallel Group 13-14 in Sequence 13-16 Non-Int in M31-OUTERDISK (52)	1285 Secs (1285 Secs) [==>]	[4]
14	ANY	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 13-16 Non-Int in M31-OUTERDISK (52) Prime + Parallel Group 13-14 in Sequence 13-16 Non-Int in M31-OUTERDISK (52)	1300 Secs (1300 Secs) [==>]	[4]
15	(2) M31-OUTERDISK	ACS/WFC, ACCUM, WFC	F606W	POS TARG 0.4802,0 .2787	Sequence 13-16 Non-Int in M31-OUTERDISK (52) Prime + Parallel Group 15-16 in Sequence 13-16 Non-Int in M31-OUTERDISK (52)	1285 Secs (1285 Secs) [==>]	[4]

Proposal 15658 - M31-OUTERDISK (52) - Resolved Proper Motions of M31 and the M31-M32 Interaction

	16	ANY	WFC3/UVIS, ACCUM, UVIS	F606W	Sequence 13-16 Non-Int in M31-OUTERDISK (52) Prime + Parallel Group 15-16 in Sequence 13-16 Non-Int in M31-OUTERDISK (52)	1300 Secs (1300 Secs)	[4]
						[=>]	

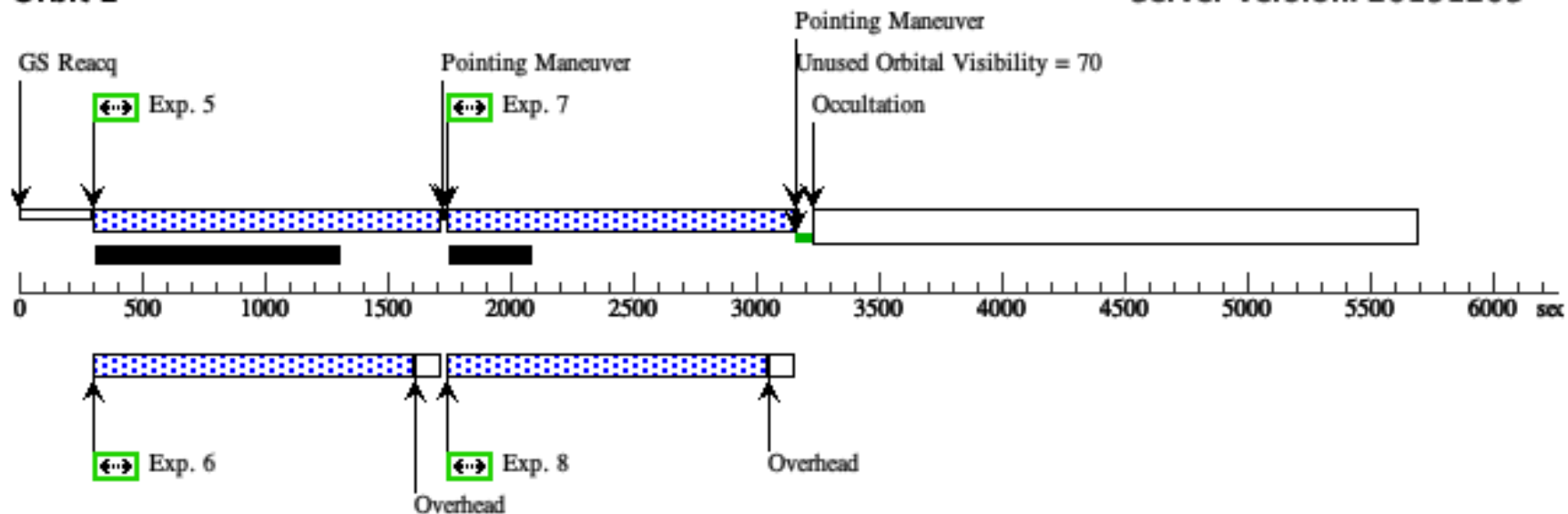
Orbit 1

Server Version: 20191203



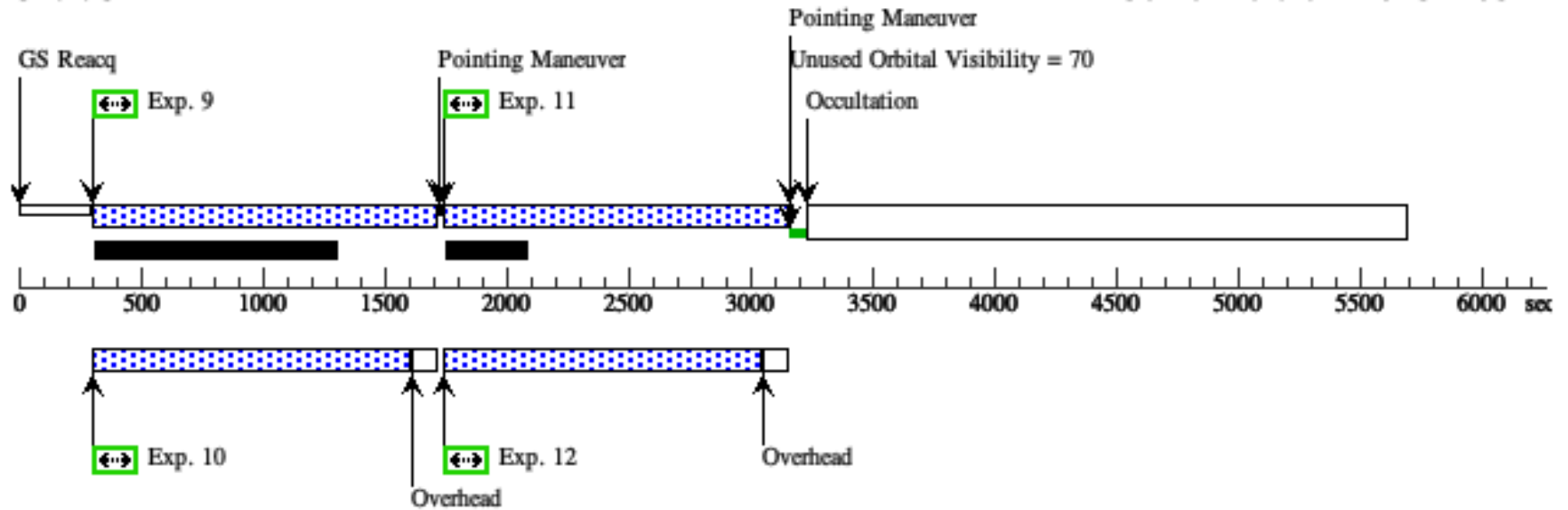
Orbit 2

Server Version: 20191203



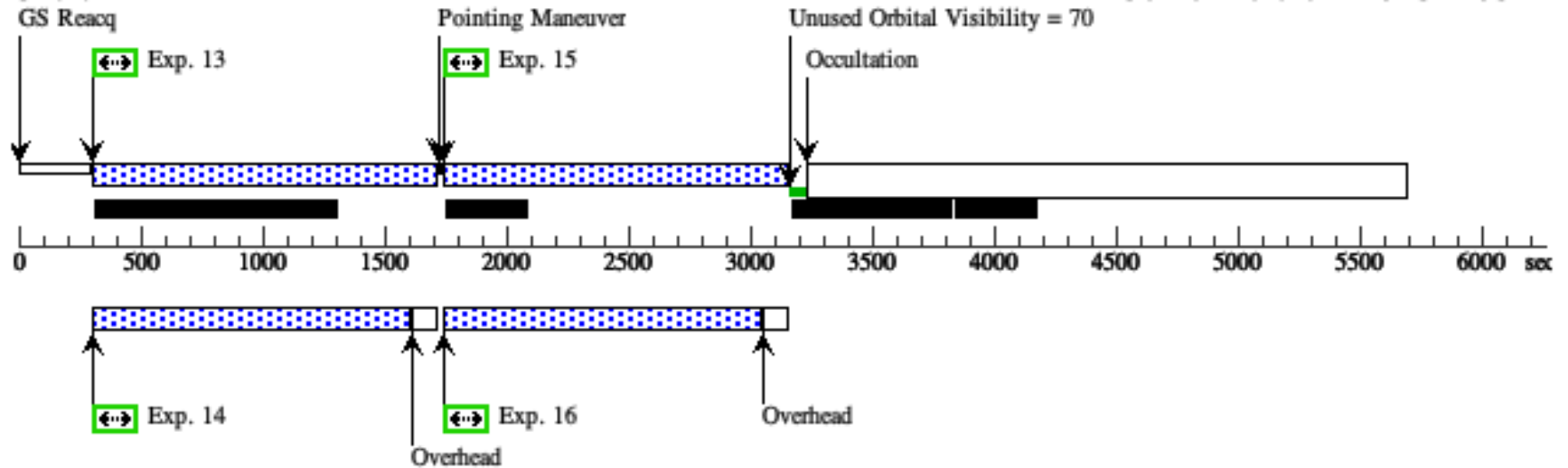
Orbit 3

Server Version: 20191203



Orbit 4

Server Version: 20191203



Proposal 15658 - M31-OUTERDISK (62) - Resolved Proper Motions of M31 and the M31-M32 Interaction

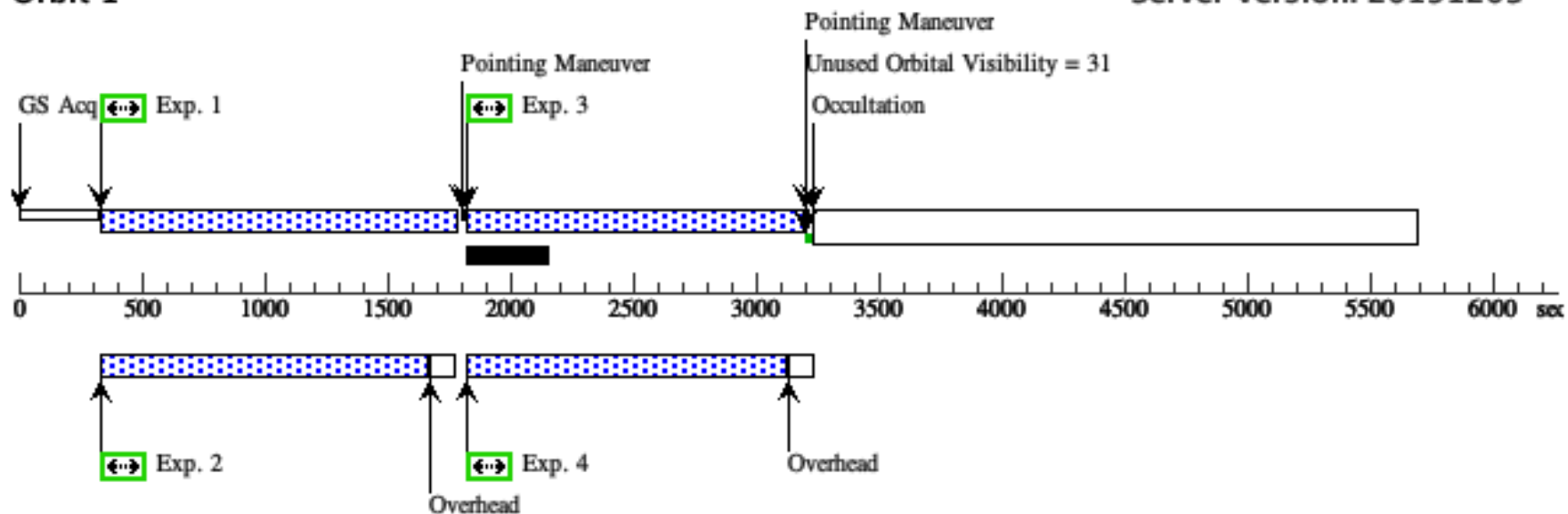
Visit	Proposal 15658, M31-OUTERDISK (62) Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS, ACS/WFC Special Requirements: ORIENT 52.09D TO 82.09 D; AFTER 01-FEB-2019:00:00:00 <i>Comments: This is the visit for imaging the M31-OUTERDISK field with ACS/WFC as primary and WFC3/UVIS as parallel. We will image both fields only using the F606W filters. Five orbits are required to complete this visit. Each orbit consists of two long exposures. To maximize the time baseline w.r.t. the earlier epochs, we added Timing Requirements of "After 01-FEB-2019" for this visit. We have also added Orient Ranges requirements to align our images with the previous epoch images. We implemented a custom-designed dither pattern via the POS-TARG requirement.</i>					
	Wed Jan 22 17:04:21 GMT 2020					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(2)	M31-OUTERDISK	RA: 00 49 9.9123 (12.2913012d) Dec: +42 45 2.03 (42.75056d) Equinox: J2000	Radial Velocity: -301 km/sec	V=3.44+/-0.03	Reference Frame: ICRS
Fixed Targets	<i>Comments:</i> Category=GALAXY Description=[DISK, HALO, SPIRAL]					

Proposal 15658 - M31-OUTERDISK (62) - Resolved Proper Motions of M31 and the M31-M32 Interaction

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(2) M31-OUTERDISK	ACS/WFC, ACCUM, WFC	F606W		POS TARG 0.3414,0.1544	Sequence 1-4 Non-Int in M31-OUTERDISK (62) Prime + Parallel Group 1-2 in Sequence 1-4 Non-Int in M31-OUTERDISK (62)	1248 Secs (1248 Secs) [==>]	[1]
	2		ANY	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 1-4 Non-Int in M31-OUTERDISK (62) Prime + Parallel Group 1-2 in Sequence 1-4 Non-Int in M31-OUTERDISK (62)	1300 Secs (1300 Secs) [==>]	[1]
	3		(2) M31-OUTERDISK	ACS/WFC, ACCUM, WFC	F606W		POS TARG 0.3567,0.2595	Sequence 1-4 Non-Int in M31-OUTERDISK (62) Prime + Parallel Group 3-4 in Sequence 1-4 Non-Int in M31-OUTERDISK (62)	1248 Secs (1248 Secs) [==>]	[1]
	4		ANY	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 1-4 Non-Int in M31-OUTERDISK (62) Prime + Parallel Group 3-4 in Sequence 1-4 Non-Int in M31-OUTERDISK (62)	1300 Secs (1300 Secs) [==>]	[1]
	5		(2) M31-OUTERDISK	ACS/WFC, ACCUM, WFC	F606W		POS TARG 0.4216,0.4178	Sequence 5-8 Non-Int in M31-OUTERDISK (62) Prime + Parallel Group 5-6 in Sequence 5-8 Non-Int in M31-OUTERDISK (62)	1285 Secs (1285 Secs) [==>]	[2]
	6		ANY	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 5-8 Non-Int in M31-OUTERDISK (62) Prime + Parallel Group 5-6 in Sequence 5-8 Non-Int in M31-OUTERDISK (62)	1300 Secs (1300 Secs) [==>]	[2]
	7		(2) M31-OUTERDISK	ACS/WFC, ACCUM, WFC	F606W		POS TARG 0.4802,0.2787	Sequence 5-8 Non-Int in M31-OUTERDISK (62) Prime + Parallel Group 7-8 in Sequence 5-8 Non-Int in M31-OUTERDISK (62)	1285 Secs (1285 Secs) [==>]	[2]
	8		ANY	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 5-8 Non-Int in M31-OUTERDISK (62) Prime + Parallel Group 7-8 in Sequence 5-8 Non-Int in M31-OUTERDISK (62)	1300 Secs (1300 Secs) [==>]	[2]

Orbit 1

Server Version: 20191203



Orbit 2

Server Version: 20191203

