14072 - The Evolution of Metal-rich Asymptotic Giant Branch Stars

Cycle: 23, Proposal Category: GO

(Availability Mode: SUPPORTED)

INVESTIGATORS

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VISITS

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
01	(1) M31-POS01 ANY	ACS/WFC WFC3/IR	1	24-Jul-2015 21:09:32.0	yes
02	(2) M31-POS02 ANY	ACS/WFC WFC3/IR	1	24-Jul-2015 21:09:35.0	yes
03	(3) M31-POS03 ANY	ACS/WFC WFC3/IR	1	24-Jul-2015 21:09:37.0	yes
04	(4) M31-POS04 ANY	ACS/WFC WFC3/IR	1	24-Jul-2015 21:09:40.0	yes
05	(5) M31-POS05 ANY	ACS/WFC WFC3/IR	1	24-Jul-2015 21:09:42.0	yes
06	(6) M31-POS06 ANY	ACS/WFC WFC3/IR	1	24-Jul-2015 21:09:44.0	yes
07	(7) M31-POS07 ANY	ACS/WFC WFC3/IR	1	24-Jul-2015 21:09:46.0	yes
08	(8) M31-POS08 ANY	ACS/WFC WFC3/IR	1	24-Jul-2015 21:09:49.0	yes
09	(9) M31-POS09 ANY	ACS/WFC WFC3/IR	1	24-Jul-2015 21:09:51.0	yes
10	(10) M31-POS10 ANY	ACS/WFC WFC3/IR	1	24-Jul-2015 21:09:55.0	yes
11	(11) M31-POS11 ANY	ACS/WFC WFC3/IR	1	24-Jul-2015 21:09:57.0	yes
12	(12) M31-POS12 ANY	ACS/WFC WFC3/IR	1	24-Jul-2015 21:09:59.0	yes
13	(13) M31-POS13 ANY	ACS/WFC WFC3/IR	1	24-Jul-2015 21:10:01.0	yes
14	(14) M31-POS14 ANY	ACS/WFC WFC3/IR	1	24-Jul-2015 21:10:03.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
15	(15) M31-POS15 ANY	ACS/WFC WFC3/IR	1	24-Jul-2015 21:10:05.0	yes
16	(16) M31-POS16 ANY	ACS/WFC WFC3/IR	1	24-Jul-2015 21:10:07.0	yes
17	(17) M31-POS17 ANY	ACS/WFC WFC3/IR	1	24-Jul-2015 21:10:09.0	yes
18	(18) M31-POS18 ANY	ACS/WFC WFC3/IR	1	24-Jul-2015 21:10:11.0	yes
19	(19) M31-POS19 ANY	ACS/WFC WFC3/IR	1	24-Jul-2015 21:10:13.0	yes
20	(20) M31-POS20 ANY	ACS/WFC WFC3/IR	1	24-Jul-2015 21:10:15.0	yes

20 Total Orbits Used

ABSTRACT

Theoretical models of Asymptotic Giant Branch (AGB) stellar evolution rely on observations of the ratio of carbon-rich (C) to oxygen-rich (M) stars and the carbon star luminosity function (CSLF). Sensitivity and resolution limitations have restricted measurements of C/M and the CSLF to metal-poor environments in nearby galaxies. Unfortunately, while HST WFC3/IR broad-band imaging can detect AGB stars in more distant, metal-rich galaxies, it is impossible to distinguish between different AGB subtypes with only the available broad-band filters. However, our successful Cycle 20 1-orbit pilot program showed that AGB stars can be effectively separated into C and M stars using the WFC3/IR medium-band filters. Thus, detailed studies of AGB stellar evolution are now possible in galaxies that are only resolvable with HST. We propose to use the WFC3/IR medium-band filters to make the very first bias-free measurement of C/M and the CSLF in a metal-rich environment (M31). Our high-precision measurement of the morphology of the CSLF will calibrate the efficiency of the third dredge up and the minimum core mass to form a C star, both of which depend on the metallicity. Our measurements of the C/M ratio will leverage M31's metallicity distribution to determine the metallicity limit above which C stars cannot form. The interpretation of these observations is straightforward owing to the ability to leverage data products from the Panchromatic Andromeda Treasury (PHAT) program. As a result, we can conclusively evaluate AGB evolution models in a never-before-tested, metal-rich environment.

OBSERVING DESCRIPTION

Targets: We will target 20 primary and 20 parallel fields in M31. All primary fields show evidence for star formation in the last 400 Myr, indicating the presence of an AGB star population at the appropriate age for C stars. Some target fields also contain spectroscopically-confirmed C stars. Parallel fields maximize coverage of star-forming regions.

Filters: To take full advantage of the molecular features in near-IR spectra of C-rich stars from 0.9 to 1.7 microns, we require observations with F127M, F139M, and F153M. All three filters are necessary, since combinations with the broad-band optical and near-IR filters do not successfully isolate the carbon stars. Combined with the broad-band WFC3/IR and the optical photometry from PHAT, we will have well-sampled spectral coverage down to 2700 angstroms. The ACS parallels will use F625W and F658N to identify emission line stars.

Required primary exposure times and photometric depth: In order to detect all AGB stars, we must achieve full photometric completeness at the tip of the red giant branch (TRGB). Assuming a typical orbit time of ~57 min for M31, we can achieve the necessary photometric depth within a single orbit (as demonstrated in our pilot program). After accounting for overheads, this allows for total exposure times of about 800-900 s in each filter, resulting in S/N > 7.3 in F139M (optimal S/N > 9.2) for m_F160W = 23 mag, using a Bruzual template for an M6III star. The S/N is even better in the F127M and F153M filters, owing to a higher throughput. For reference, the TRGB in the F160W filter corresponds to ~19 mag at the distance of M31.

For the parallels, we maximize the exposure time in F658N, while also preserving image quality and avoiding buffer dump latency. The remainging available parallel time is filled with F625W for continuum subtraction.

Dithering Strategy for primaries: Dithering diminishes errors associated with where a source is placed on a pixel, undersampling of the WFC3/IR channel, and image artifacts such as cosmic rays. We choose a 4-pt dither pattern to acheive Nyquist sampling of the PSF in F127M. The remaining 2 filters will use a 2-pt dither: we will reduce F127M simultaneously to acheive Nyquist sampling for the 2-pt dithers (e.g., PHAT; Dalcanton et al. 2012). We choose this strategy to allow for ACS buffer dumps in parallel. The dither patterns are entered manually in the position offsets, following the WFC3-IR-DITHER-BOX-MIN pattern values listed in the WFC3 handbook in Table C.3.

For the parallels, each filter is imaged in two of the dither positions. The PHAT data is Nyquist sampled in F814W, and we will re-reduce that data

simultaneously to achieve Nyquist sampling in F625W and F658N.

Avoiding Saturation: Saturation is mitigated by always having at least one short exposure per field/filter, and by the sampling of WFC3/IR. The parallel fields are not in danger of saturation: the F625W filter includes one short exposure (100s), and the width of F658N is narrow enough to allow for long exposures.

Parallels: We are observing with ACS in parallel. Orientation constraints ensure that the parallel fields maximize coverage of star-forming regions and to ensure that the fields fall inside the PHAT coverage.

Visit

Proposal 14072, POS01 (01) Sat Jul 25 01:10:16 GMT 2015

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, ACS/WFC

Special Requirements: ORIENT 215D TO 270 D

Comments: Using a 4pt dither for F127M, and a 2pt dither for F139M and F153M. Nyquist sampling will be recovered in two redder filters by leveraging the dithers in the blue filter - all filters will be reduced simultaneously. This strategy allows for maximum exposure lengths with ACS in parallel, mitigating latency due to buffer dumps.

Orientation requirements set to ensure that the parallel falls within the PHAT coverage & to maximize coverage of star-forming regions. These restrictions can be loosened if schedulability becomes an issue.

Fixed Targets

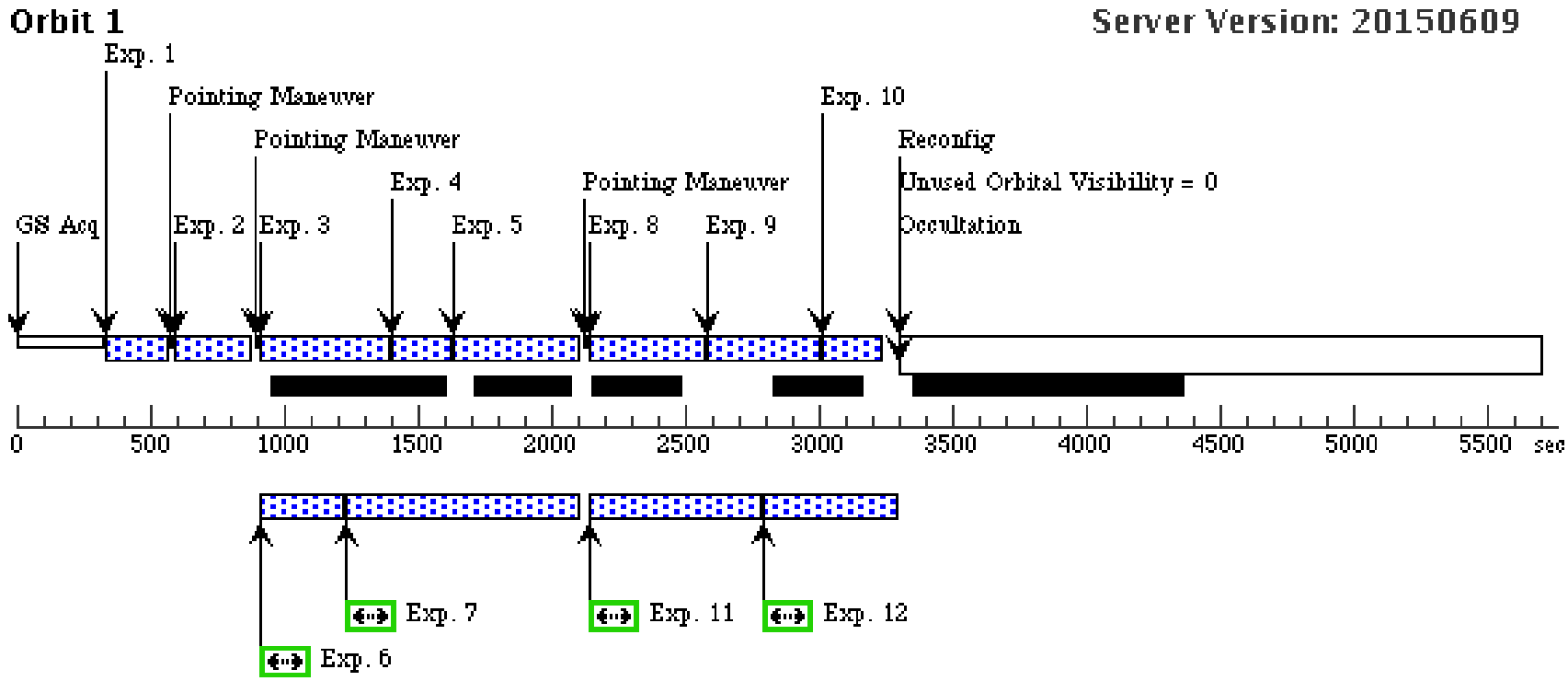
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M31-POS01	RA: 00 43 18.4860 (10.8270250d)		V=18+/-0.5	Reference Frame: ICRS
	Alt Name1: ANDROMEDA-POS01	Dec: +41 26 10.93 (41.43637d)			
		Equinox: J2000			

Comments: This is a star field, with a wide range of V-mags. The brightest star in the optical HST images of M31 from the Panchromatic Hubble Andromeda Treasury (PHAT) is about F475W=18 mag. The stars of interest to this program range from approximately F814W=18-23 mag.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F127M-dither1	(1) M31-POS01	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0.542,0.182		202.934095 Secs (202.934 Secs)	
								[==>]	*[1]*
2	F127M-dither2	(1) M31-POS01	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=6	POS TARG -0.203,0.303		252.934546 Secs (252.935 Secs)	
								[==>]	*[1]*
3	F139M-dither3	(1) M31-POS01	WFC3/IR, MULTIACCUM, IR	F139M	SAMP-SEQ=SPARS50; NSAMP=10	POS TARG 0,0	Prime + Parallel Group 3-7 in POS01 (01)	452.93635 Secs (452.936 Secs)	
								[==>]	*[1]*
4	F127M-dither3	(1) M31-POS01	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0,0	Prime + Parallel Group 3-7 in POS01 (01)	202.934095 Secs (202.934 Secs)	
								[==>]	*[1]*
5	F153M-dither3	(1) M31-POS01	WFC3/IR, MULTIACCUM, IR	F153M	SAMP-SEQ=SPARS50; NSAMP=10	POS TARG 0,0	Prime + Parallel Group 3-7 in POS01 (01)	452.93635 Secs (452.936 Secs)	
								[==>]	*[1]*
6	F625W-dither3	ANY	ACS/WFC, ACCUM, WFC	F625W			Prime + Parallel Group 3-7 in POS01 (01)	100 Secs (100 Secs)	
								[==>]	*[1]*
7	F658N-dither3	ANY	ACS/WFC, ACCUM, WFC	F658N			Prime + Parallel Group 3-7 in POS01 (01)	714 Secs (714 Secs)	
								[==>]	*[1]*
8	F139M-dither4	(1) M31-POS01	WFC3/IR, MULTIACCUM, IR	F139M	SAMP-SEQ=SPARS50; NSAMP=9	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS01 (01)	402.935899 Secs (402.936 Secs)	
								[==>]	*[1]*
9	F153M-dither4	(1) M31-POS01	WFC3/IR, MULTIACCUM, IR	F153M	SAMP-SEQ=SPARS50; NSAMP=9	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS01 (01)	402.935899 Secs (402.936 Secs)	
								[==>]	*[1]*
10	F127M-dither4	(1) M31-POS01	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS01 (01)	202.934095 Secs (202.934 Secs)	
								[==>]	*[1]*
11	F658N-dither4	ANY	ACS/WFC, ACCUM, WFC	F658N			Prime + Parallel Group 8-12 in POS01 (01)	515 Secs (515 Secs)	
								[==>]	*[1]*
12	F625W-dither4	ANY	ACS/WFC, ACCUM, WFC	F625W			Prime + Parallel Group 8-12 in POS01 (01)	340 Secs (340 Secs)	
								[==>]	*[1]*

Orbit Structure



Visit

Proposal 14072, POS02 (02) Sat Jul 25 01:10:16 GMT 2015

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, ACS/WFC

Special Requirements: ORIENT 180D TO 360 D

Comments: Using a 4pt dither for F127M, and a 2pt dither for F139M and F153M. Nyquist sampling will be recovered in two redder filters by leveraging the dithers in the blue filter - all filters will be reduced simultaneously. This strategy allows for maximum exposure lengths with ACS in parallel, mitigating latency due to buffer dumps.

Orientation requirements set to ensure that the parallel falls within the PHAT coverage & to maximize coverage of star-forming regions. These restrictions can be loosened if schedulability becomes an issue.

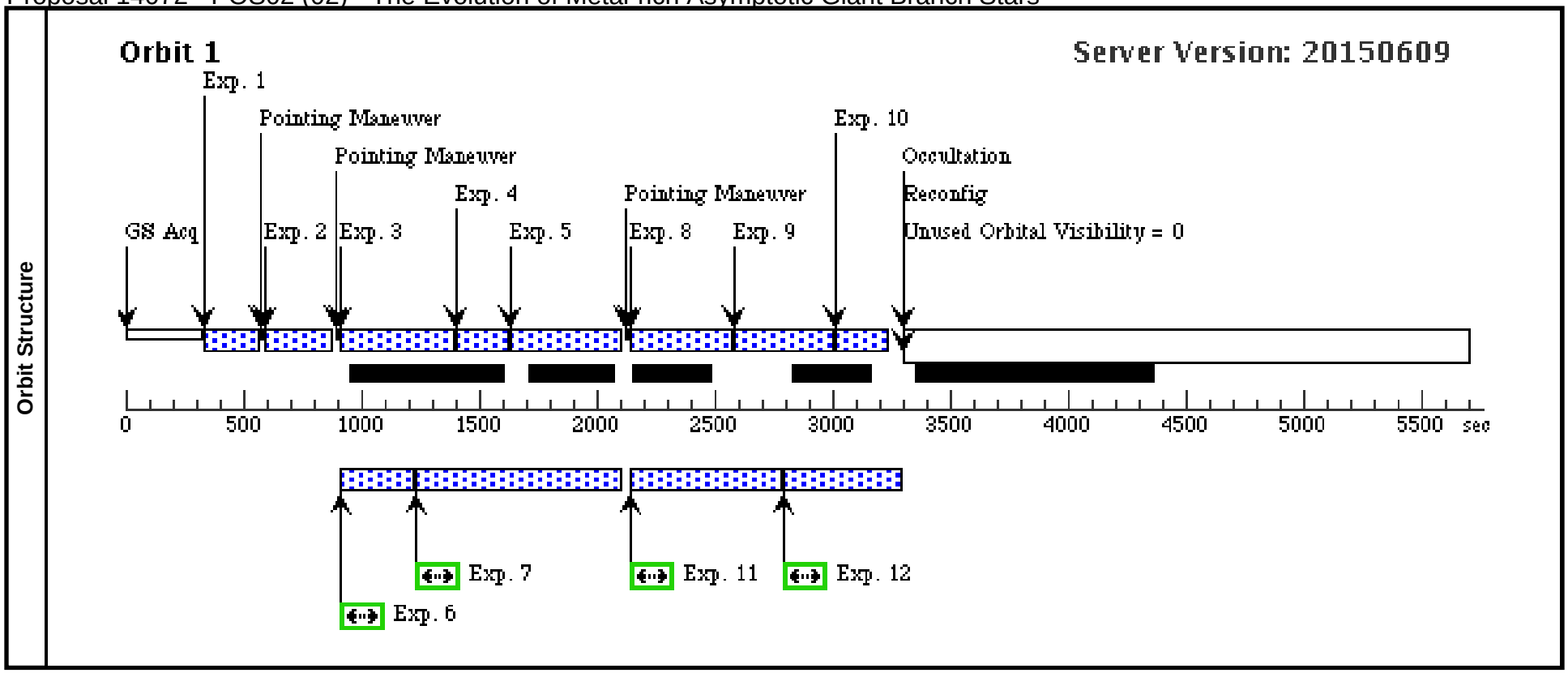
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	M31-POS02	RA: 00 43 18.3320 (10.8263833d)		V=18+/-0.5	Reference Frame: ICRS
	Alt Name1: ANDROMEDA-POS02	Dec: +41 29 29.30 (41.49147d)			
		Equinox: J2000			

Comments: This is a star field, with a wide range of V-mags. The brightest star in the optical HST images of M31 from the Panchromatic Hubble Andromeda Treasury (PHAT) is about F475W=18 mag. The stars of interest to this program range from approximately F814W=18-23 mag.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F127M-dither1	(2) M31-POS02	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0.542,0.182		202.934095 Secs (202.934 Secs)	
								[==>]	*[1]*
2	F127M-dither2	(2) M31-POS02	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=6	POS TARG -0.203,0.303		252.934546 Secs (252.935 Secs)	
								[==>]	*[1]*
3	F139M-dither3	(2) M31-POS02	WFC3/IR, MULTIACCUM, IR	F139M	SAMP-SEQ=SPARS50; NSAMP=10	POS TARG 0,0	Prime + Parallel Group 3-7 in POS02 (02)	452.93635 Secs (452.936 Secs)	
								[==>]	*[1]*
4	F127M-dither3	(2) M31-POS02	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0,0	Prime + Parallel Group 3-7 in POS02 (02)	202.934095 Secs (202.934 Secs)	
								[==>]	*[1]*
5	F153M-dither3	(2) M31-POS02	WFC3/IR, MULTIACCUM, IR	F153M	SAMP-SEQ=SPARS50; NSAMP=10	POS TARG 0,0	Prime + Parallel Group 3-7 in POS02 (02)	452.93635 Secs (452.936 Secs)	
								[==>]	*[1]*
6	F625W-dither3	ANY	ACS/WFC, ACCUM, WFC	F625W			Prime + Parallel Group 3-7 in POS02 (02)	100 Secs (100 Secs)	
								[==>]	*[1]*
7	F658N-dither3	ANY	ACS/WFC, ACCUM, WFC	F658N			Prime + Parallel Group 3-7 in POS02 (02)	714 Secs (714 Secs)	
								[==>]	*[1]*
8	F139M-dither4	(2) M31-POS02	WFC3/IR, MULTIACCUM, IR	F139M	SAMP-SEQ=SPARS50; NSAMP=9	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS02 (02)	402.935899 Secs (402.936 Secs)	
								[==>]	*[1]*
9	F153M-dither4	(2) M31-POS02	WFC3/IR, MULTIACCUM, IR	F153M	SAMP-SEQ=SPARS50; NSAMP=9	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS02 (02)	402.935899 Secs (402.936 Secs)	
								[==>]	*[1]*
10	F127M-dither4	(2) M31-POS02	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS02 (02)	202.934095 Secs (202.934 Secs)	
								[==>]	*[1]*
11	F658N-dither4	ANY	ACS/WFC, ACCUM, WFC	F658N			Prime + Parallel Group 8-12 in POS02 (02)	515 Secs (515 Secs)	
								[==>]	*[1]*
12	F625W-dither4	ANY	ACS/WFC, ACCUM, WFC	F625W			Prime + Parallel Group 8-12 in POS02 (02)	340 Secs (340 Secs)	
								[==>]	*[1]*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Exp. 3
Exp. 5
Exp. 8
Exp. 9
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sec
Exp. 7
Exp. 11
Exp. 12
Exp. 6

Visit

Proposal 14072, POS03 (03) Sat Jul 25 01:10:17 GMT 2015

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, ACS/WFC

Special Requirements: ORIENT 180D TO 280 D

Comments: Using a 4pt dither for F127M, and a 2pt dither for F139M and F153M. Nyquist sampling will be recovered in two redder filters by leveraging the dithers in the blue filter - all filters will be reduced simultaneously. This strategy allows for maximum exposure lengths with ACS in parallel, mitigating latency due to buffer dumps.

Orientation requirements set to ensure that the parallel falls within the PHAT coverage & to maximize coverage of star-forming regions. These restrictions can be loosened if schedulability becomes an issue.

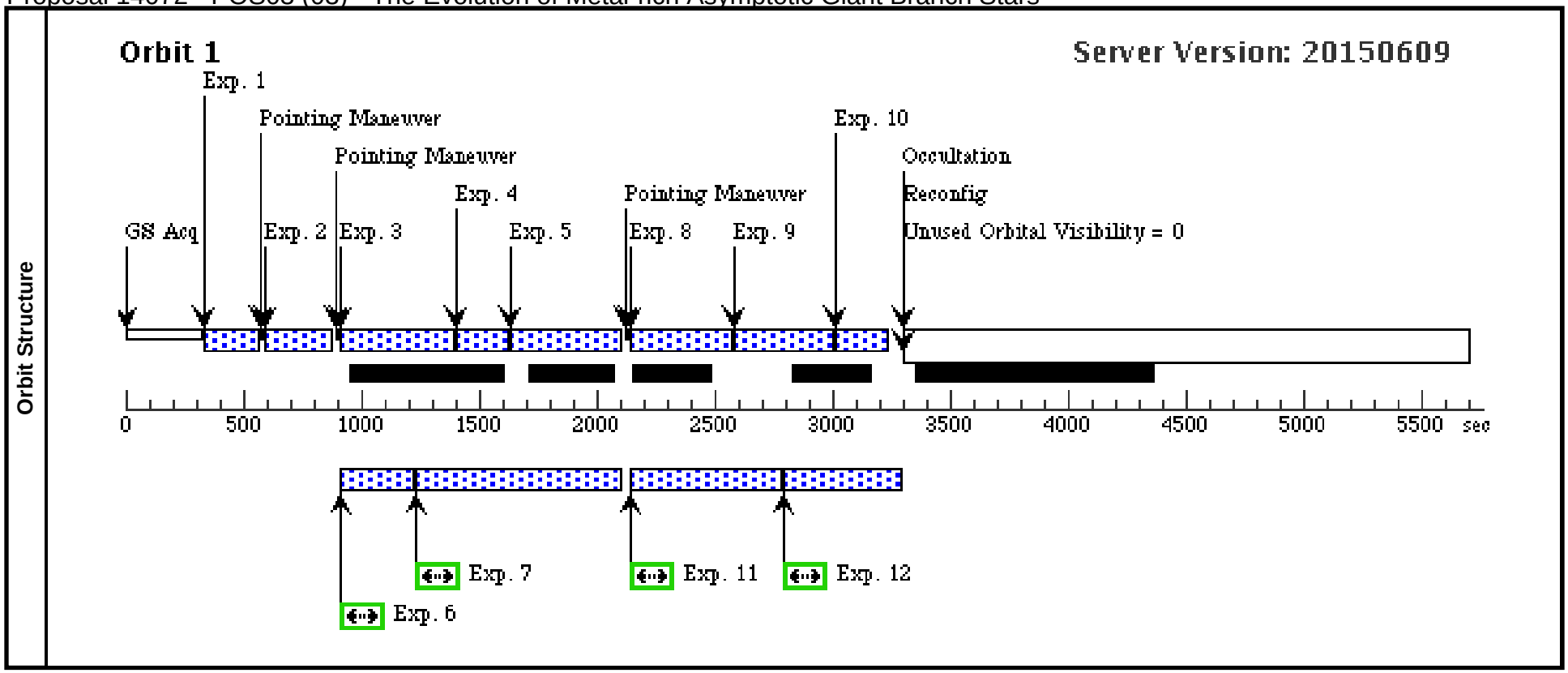
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	M31-POS03	RA: 00 43 31.6740 (10.8819750d)		V=18+/-0.5	Reference Frame: ICRS
	Alt Name1: ANDROMEDA-POS03	Dec: +41 32 28.25 (41.54118d)			
		Equinox: J2000			

Comments: This is a star field, with a wide range of V-mags. The brightest star in the optical HST images of M31 from the Panchromatic Hubble Andromeda Treasury (PHAT) is about F475W=18 mag. The stars of interest to this program range from approximately F814W=18-23 mag.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F127M-dither1	(3) M31-POS03	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0.542,0.182		202.934095 Secs (202.934 Secs)	
								[==>]	***[1]***
2	F127M-dither2	(3) M31-POS03	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=6	POS TARG -0.203,0.303		252.934546 Secs (252.935 Secs)	
								[==>]	***[1]***
3	F139M-dither3	(3) M31-POS03	WFC3/IR, MULTIACCUM, IR	F139M	SAMP-SEQ=SPARS50; NSAMP=10	POS TARG 0,0	Prime + Parallel Group 3-7 in POS03 (03)	452.93635 Secs (452.936 Secs)	
								[==>]	***[1]***
4	F127M-dither3	(3) M31-POS03	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0,0	Prime + Parallel Group 3-7 in POS03 (03)	202.934095 Secs (202.934 Secs)	
								[==>]	***[1]***
5	F153M-dither3	(3) M31-POS03	WFC3/IR, MULTIACCUM, IR	F153M	SAMP-SEQ=SPARS50; NSAMP=10	POS TARG 0,0	Prime + Parallel Group 3-7 in POS03 (03)	452.93635 Secs (452.936 Secs)	
								[==>]	***[1]***
6	F625W-dither3	ANY	ACS/WFC, ACCUM, WFC	F625W			Prime + Parallel Group 3-7 in POS03 (03)	100 Secs (100 Secs)	
								[==>]	***[1]***
7	F658N-dither3	ANY	ACS/WFC, ACCUM, WFC	F658N			Prime + Parallel Group 3-7 in POS03 (03)	714 Secs (714 Secs)	
								[==>]	***[1]***
8	F139M-dither4	(3) M31-POS03	WFC3/IR, MULTIACCUM, IR	F139M	SAMP-SEQ=SPARS50; NSAMP=9	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS03 (03)	402.935899 Secs (402.936 Secs)	
								[==>]	***[1]***
9	F153M-dither4	(3) M31-POS03	WFC3/IR, MULTIACCUM, IR	F153M	SAMP-SEQ=SPARS50; NSAMP=9	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS03 (03)	402.935899 Secs (402.936 Secs)	
								[==>]	***[1]***
10	F127M-dither4	(3) M31-POS03	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS03 (03)	202.934095 Secs (202.934 Secs)	
								[==>]	***[1]***
11	F658N-dither4	ANY	ACS/WFC, ACCUM, WFC	F658N			Prime + Parallel Group 8-12 in POS03 (03)	515 Secs (515 Secs)	
								[==>]	***[1]***
12	F625W-dither4	ANY	ACS/WFC, ACCUM, WFC	F625W			Prime + Parallel Group 8-12 in POS03 (03)	340 Secs (340 Secs)	
								[==>]	***[1]***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Pointing Maneuver
Exp. 4
Pointing Maneuver
Exp. 10
Occultation
Reconfig
GS Acq
Exp. 2
Exp. 3
Exp. 5
Exp. 8
Exp. 9
Unused Orbital Visibility = 0
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1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec
Exp. 7
Exp. 11
Exp. 12
Exp. 6

Visit

Proposal 14072, POS04 (04) Sat Jul 25 01:10:17 GMT 2015

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, ACS/WFC

Special Requirements: ORIENT 220D TO 260 D

Comments: Using a 4pt dither for F127M, and a 2pt dither for F139M and F153M. Nyquist sampling will be recovered in two redder filters by leveraging the dithers in the blue filter - all filters will be reduced simultaneously. This strategy allows for maximum exposure lengths with ACS in parallel, mitigating latency due to buffer dumps.

Orientation requirements set to ensure that the parallel falls within the PHAT coverage & to maximize coverage of star-forming regions. These restrictions can be loosened if schedulability becomes an issue.

Fixed Targets

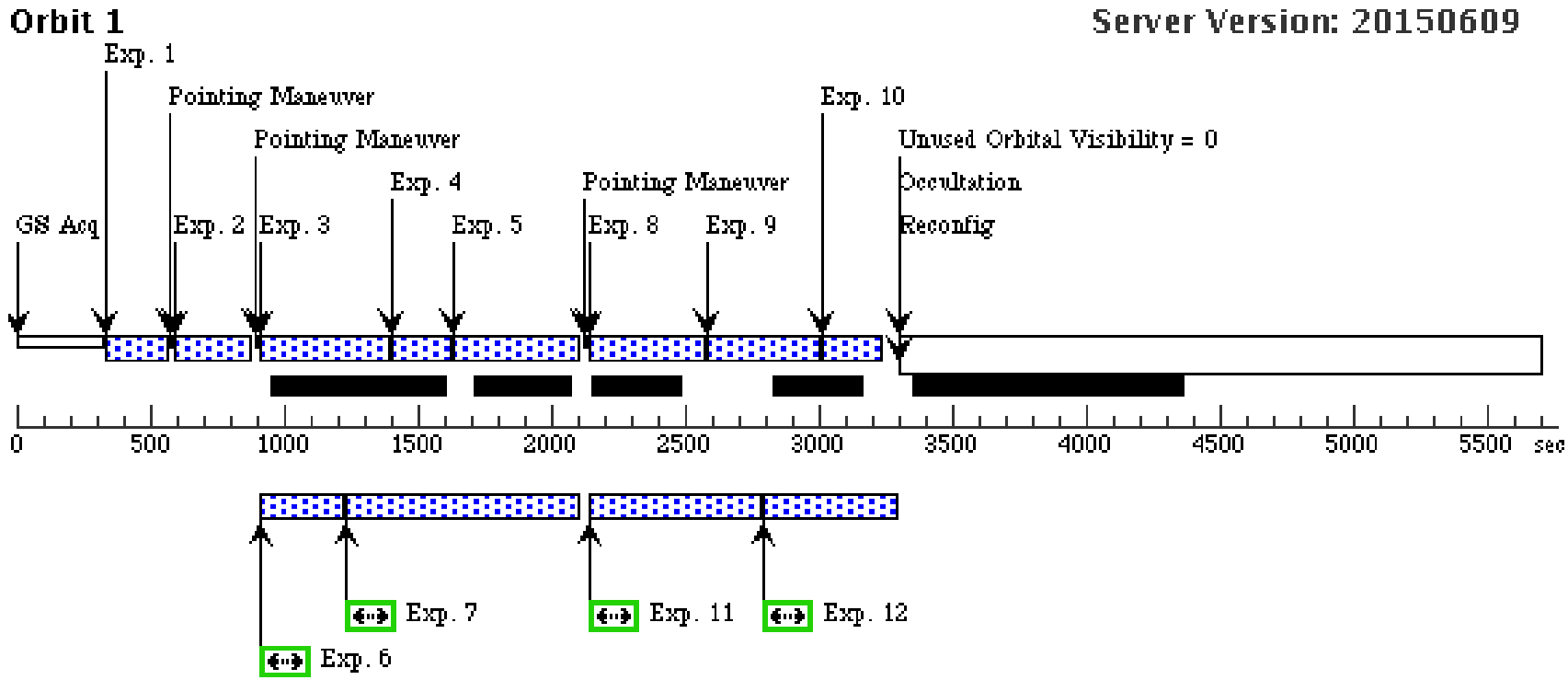
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	M31-POS04	RA: 00 43 40.5840 (10.9191000d)		V=18+/-0.5	Reference Frame: ICRS
	Alt Name1: ANDROMEDA-POS04	Dec: +41 34 56.85 (41.58246d)			
		Equinox: J2000			

Comments: This is a star field, with a wide range of V-mags. The brightest star in the optical HST images of M31 from the Panchromatic Hubble Andromeda Treasury (PHAT) is about F475W=18 mag. The stars of interest to this program range from approximately F814W=18-23 mag.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F127M-dither1	(4) M31-POS04	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0.542,0.182		202.934095 Secs (202.934 Secs)	
								[==>]	***[1]***
2	F127M-dither2	(4) M31-POS04	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=6	POS TARG -0.203,0.303		252.934546 Secs (252.935 Secs)	
								[==>]	***[1]***
3	F139M-dither3	(4) M31-POS04	WFC3/IR, MULTIACCUM, IR	F139M	SAMP-SEQ=SPARS50; NSAMP=10	POS TARG 0,0	Prime + Parallel Group 3-7 in POS04 (04)	452.93635 Secs (452.936 Secs)	
								[==>]	***[1]***
4	F127M-dither3	(4) M31-POS04	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0,0	Prime + Parallel Group 3-7 in POS04 (04)	202.934095 Secs (202.934 Secs)	
								[==>]	***[1]***
5	F153M-dither3	(4) M31-POS04	WFC3/IR, MULTIACCUM, IR	F153M	SAMP-SEQ=SPARS50; NSAMP=10	POS TARG 0,0	Prime + Parallel Group 3-7 in POS04 (04)	452.93635 Secs (452.936 Secs)	
								[==>]	***[1]***
6	F625W-dither3	ANY	ACS/WFC, ACCUM, WFC	F625W			Prime + Parallel Group 3-7 in POS04 (04)	100 Secs (100 Secs)	
								[==>]	***[1]***
7	F658N-dither3	ANY	ACS/WFC, ACCUM, WFC	F658N			Prime + Parallel Group 3-7 in POS04 (04)	714 Secs (714 Secs)	
								[==>]	***[1]***
8	F139M-dither4	(4) M31-POS04	WFC3/IR, MULTIACCUM, IR	F139M	SAMP-SEQ=SPARS50; NSAMP=9	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS04 (04)	402.935899 Secs (402.936 Secs)	
								[==>]	***[1]***
9	F153M-dither4	(4) M31-POS04	WFC3/IR, MULTIACCUM, IR	F153M	SAMP-SEQ=SPARS50; NSAMP=9	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS04 (04)	402.935899 Secs (402.936 Secs)	
								[==>]	***[1]***
10	F127M-dither4	(4) M31-POS04	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS04 (04)	202.934095 Secs (202.934 Secs)	
								[==>]	***[1]***
11	F658N-dither4	ANY	ACS/WFC, ACCUM, WFC	F658N			Prime + Parallel Group 8-12 in POS04 (04)	515 Secs (515 Secs)	
								[==>]	***[1]***
12	F625W-dither4	ANY	ACS/WFC, ACCUM, WFC	F625W			Prime + Parallel Group 8-12 in POS04 (04)	340 Secs (340 Secs)	
								[==>]	***[1]***

Orbit Structure



Visit

Proposal 14072, POS05 (05) Sat Jul 25 01:10:17 GMT 2015

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, ACS/WFC

Special Requirements: ORIENT 230D TO 290 D; ORIENT 165D TO 175 D

Comments: Using a 4pt dither for F127M, and a 2pt dither for F139M and F153M. Nyquist sampling will be recovered in two redder filters by leveraging the dithers in the blue filter - all filters will be reduced simultaneously. This strategy allows for maximum exposure lengths with ACS in parallel, mitigating latency due to buffer dumps.

Orientation requirements set to ensure that the parallel falls within the PHAT coverage & to maximize coverage of star-forming regions. These restrictions can be loosened if schedulability becomes an issue.

Fixed Targets

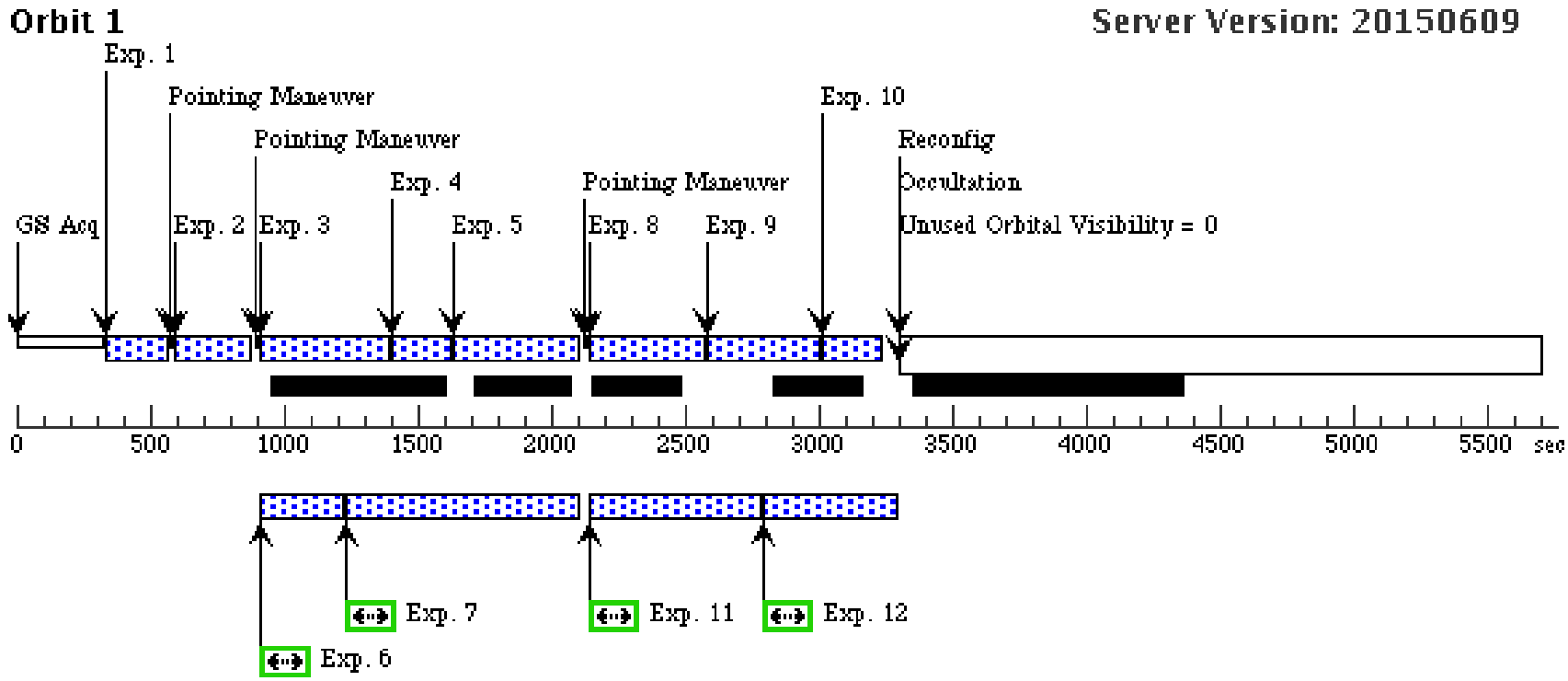
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(5)	M31-POS05	RA: 00 43 48.1770 (10.9507375d)		V=18+/-0.5	Reference Frame: ICRS
	Alt Name1: ANDROMEDA-POS05	Dec: +41 26 22.36 (41.43954d)			
		Equinox: J2000			

Comments: This is a star field, with a wide range of V-mags. The brightest star in the optical HST images of M31 from the Panchromatic Hubble Andromeda Treasury (PHAT) is about F475W=18 mag. The stars of interest to this program range from approximately F814W=18-23 mag.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F127M-dither1	(5) M31-POS05	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0.542,0.182		202.934095 Secs (202.934 Secs)	
								[==>]	***[1]***
2	F127M-dither2	(5) M31-POS05	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=6	POS TARG -0.203,0.303		252.934546 Secs (252.935 Secs)	
								[==>]	***[1]***
3	F139M-dither3	(5) M31-POS05	WFC3/IR, MULTIACCUM, IR	F139M	SAMP-SEQ=SPARS50; NSAMP=10	POS TARG 0,0	Prime + Parallel Group 3-7 in POS05 (05)	452.93635 Secs (452.936 Secs)	
								[==>]	***[1]***
4	F127M-dither3	(5) M31-POS05	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0,0	Prime + Parallel Group 3-7 in POS05 (05)	202.934095 Secs (202.934 Secs)	
								[==>]	***[1]***
5	F153M-dither3	(5) M31-POS05	WFC3/IR, MULTIACCUM, IR	F153M	SAMP-SEQ=SPARS50; NSAMP=10	POS TARG 0,0	Prime + Parallel Group 3-7 in POS05 (05)	452.93635 Secs (452.936 Secs)	
								[==>]	***[1]***
6	F625W-dither3	ANY	ACS/WFC, ACCUM, WFC	F625W			Prime + Parallel Group 3-7 in POS05 (05)	100 Secs (100 Secs)	
								[==>]	***[1]***
7	F658N-dither3	ANY	ACS/WFC, ACCUM, WFC	F658N			Prime + Parallel Group 3-7 in POS05 (05)	714 Secs (714 Secs)	
								[==>]	***[1]***
8	F139M-dither4	(5) M31-POS05	WFC3/IR, MULTIACCUM, IR	F139M	SAMP-SEQ=SPARS50; NSAMP=9	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS05 (05)	402.935899 Secs (402.936 Secs)	
								[==>]	***[1]***
9	F153M-dither4	(5) M31-POS05	WFC3/IR, MULTIACCUM, IR	F153M	SAMP-SEQ=SPARS50; NSAMP=9	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS05 (05)	402.935899 Secs (402.936 Secs)	
								[==>]	***[1]***
10	F127M-dither4	(5) M31-POS05	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS05 (05)	202.934095 Secs (202.934 Secs)	
								[==>]	***[1]***
11	F658N-dither4	ANY	ACS/WFC, ACCUM, WFC	F658N			Prime + Parallel Group 8-12 in POS05 (05)	515 Secs (515 Secs)	
								[==>]	***[1]***
12	F625W-dither4	ANY	ACS/WFC, ACCUM, WFC	F625W			Prime + Parallel Group 8-12 in POS05 (05)	340 Secs (340 Secs)	
								[==>]	***[1]***

Orbit Structure



Visit

Proposal 14072, POS06 (06) Sat Jul 25 01:10:17 GMT 2015

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, ACS/WFC

Special Requirements: ORIENT 220D TO 280 D; ORIENT 143D TO 150 D; ORIENT 335D TO 350 D

Comments: Using a 4pt dither for F127M, and a 2pt dither for F139M and F153M. Nyquist sampling will be recovered in two redder filters by leveraging the dithers in the blue filter - all filters will be reduced simultaneously. This strategy allows for maximum exposure lengths with ACS in parallel, mitigating latency due to buffer dumps.

Orientation requirements set to ensure that the parallel falls within the PHAT coverage & to maximize coverage of star-forming regions. These restrictions can be loosened if schedulability becomes an issue.

Fixed Targets

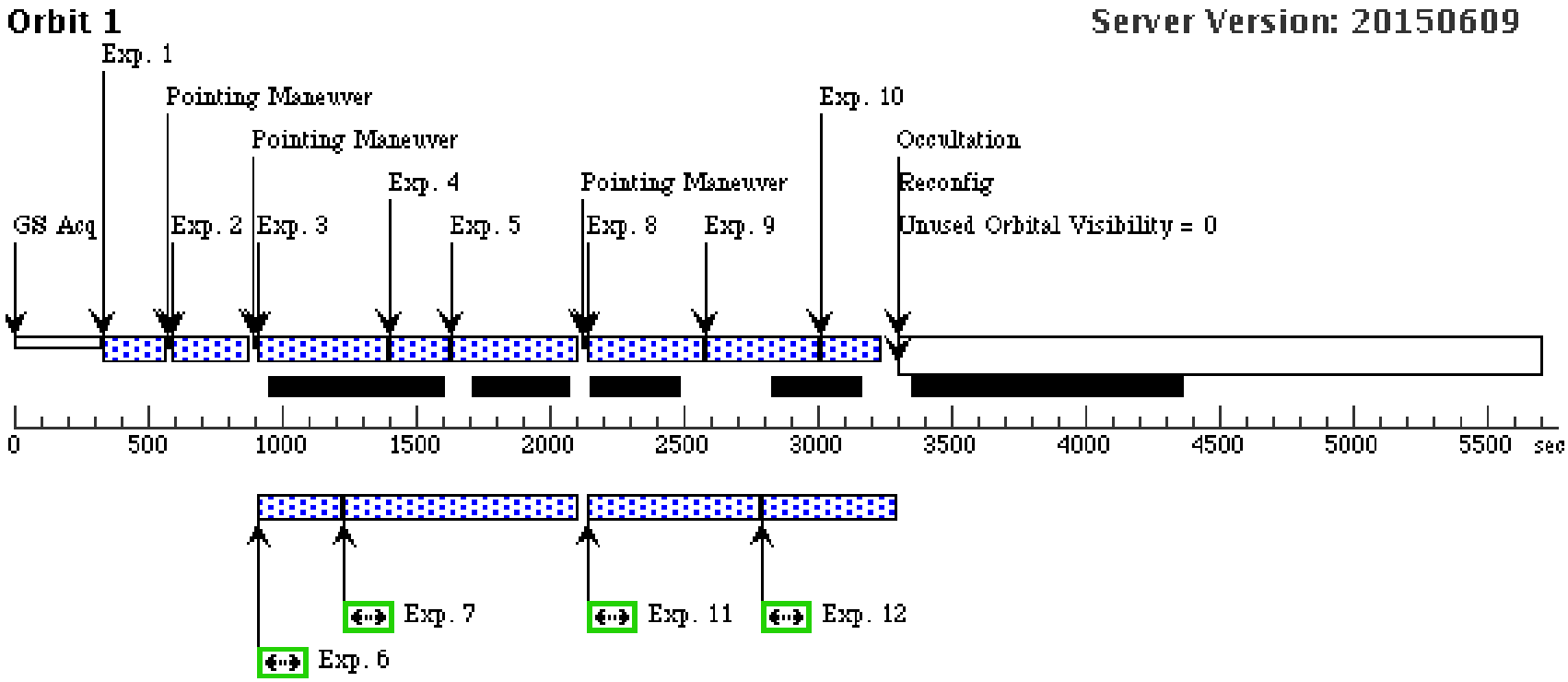
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(6)	M31-POS06	RA: 00 44 7.6440 (11.0318500d)		V=18+/-0.5	Reference Frame: ICRS
	Alt Name1: ANDROMEDA-POS06	Dec: +41 30 9.35 (41.50260d)			
		Equinox: J2000			

Comments: This is a star field, with a wide range of V-mags. The brightest star in the optical HST images of M31 from the Panchromatic Hubble Andromeda Treasury (PHAT) is about F475W=18 mag. The stars of interest to this program range from approximately F814W=18-23 mag.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F127M-dither1	(6) M31-POS06	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0.542,0.182		202.934095 Secs (202.934 Secs)	
								[==>]	***[1]***
2	F127M-dither2	(6) M31-POS06	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=6	POS TARG -0.203,0.303		252.934546 Secs (252.935 Secs)	
								[==>]	***[1]***
3	F139M-dither3	(6) M31-POS06	WFC3/IR, MULTIACCUM, IR	F139M	SAMP-SEQ=SPARS50; NSAMP=10	POS TARG 0,0	Prime + Parallel Group 3-7 in POS06 (06)	452.93635 Secs (452.936 Secs)	
								[==>]	***[1]***
4	F127M-dither3	(6) M31-POS06	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0,0	Prime + Parallel Group 3-7 in POS06 (06)	202.934095 Secs (202.934 Secs)	
								[==>]	***[1]***
5	F153M-dither3	(6) M31-POS06	WFC3/IR, MULTIACCUM, IR	F153M	SAMP-SEQ=SPARS50; NSAMP=10	POS TARG 0,0	Prime + Parallel Group 3-7 in POS06 (06)	452.93635 Secs (452.936 Secs)	
								[==>]	***[1]***
6	F625W-dither3	ANY	ACS/WFC, ACCUM, WFC	F625W			Prime + Parallel Group 3-7 in POS06 (06)	100 Secs (100 Secs)	
								[==>]	***[1]***
7	F658N-dither3	ANY	ACS/WFC, ACCUM, WFC	F658N			Prime + Parallel Group 3-7 in POS06 (06)	714 Secs (714 Secs)	
								[==>]	***[1]***
8	F139M-dither4	(6) M31-POS06	WFC3/IR, MULTIACCUM, IR	F139M	SAMP-SEQ=SPARS50; NSAMP=9	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS06 (06)	402.935899 Secs (402.936 Secs)	
								[==>]	***[1]***
9	F153M-dither4	(6) M31-POS06	WFC3/IR, MULTIACCUM, IR	F153M	SAMP-SEQ=SPARS50; NSAMP=9	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS06 (06)	402.935899 Secs (402.936 Secs)	
								[==>]	***[1]***
10	F127M-dither4	(6) M31-POS06	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS06 (06)	202.934095 Secs (202.934 Secs)	
								[==>]	***[1]***
11	F658N-dither4	ANY	ACS/WFC, ACCUM, WFC	F658N			Prime + Parallel Group 8-12 in POS06 (06)	515 Secs (515 Secs)	
								[==>]	***[1]***
12	F625W-dither4	ANY	ACS/WFC, ACCUM, WFC	F625W			Prime + Parallel Group 8-12 in POS06 (06)	340 Secs (340 Secs)	
								[==>]	***[1]***

Orbit Structure



Visit

Proposal 14072, POS07 (07) Sat Jul 25 01:10:17 GMT 2015

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, ACS/WFC

Special Requirements: ORIENT 188D TO 220 D; ORIENT 300D TO 330 D

Comments: Using a 4pt dither for F127M, and a 2pt dither for F139M and F153M. Nyquist sampling will be recovered in two redder filters by leveraging the dithers in the blue filter - all filters will be reduced simultaneously. This strategy allows for maximum exposure lengths with ACS in parallel, mitigating latency due to buffer dumps.

Orientation requirements set to ensure that the parallel falls within the PHAT coverage & to maximize coverage of star-forming regions. These restrictions can be loosened if schedulability becomes an issue.

Fixed Targets

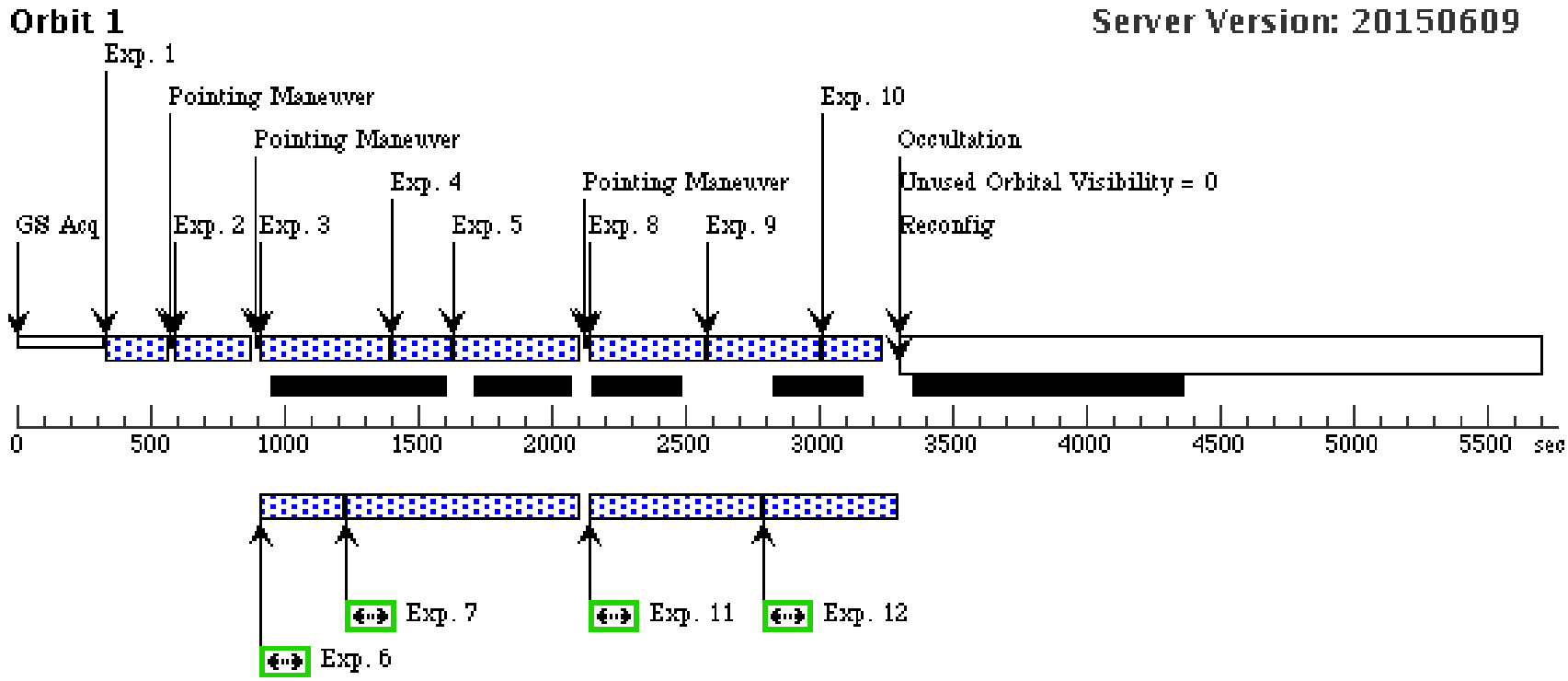
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(7)	M31-POS07	RA: 00 43 51.5710 (10.9648792d)		V=18+/-0.5	Reference Frame: ICRS
	Alt Name1: ANDROMEDA-POS07	Dec: +41 19 12.57 (41.32016d)			
		Equinox: J2000			

Comments: This is a star field, with a wide range of V-mags. The brightest star in the optical HST images of M31 from the Panchromatic Hubble Andromeda Treasury (PHAT) is about F475W=18 mag. The stars of interest to this program range from approximately F814W=18-23 mag.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F127M-dither1	(7) M31-POS07	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0.542,0.182		202.934095 Secs (202.934 Secs)	
								[==>]	***[1]***
2	F127M-dither2	(7) M31-POS07	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=6	POS TARG -0.203,0.303		252.934546 Secs (252.935 Secs)	
								[==>]	***[1]***
3	F139M-dither3	(7) M31-POS07	WFC3/IR, MULTIACCUM, IR	F139M	SAMP-SEQ=SPARS50; NSAMP=10	POS TARG 0,0	Prime + Parallel Group 3-7 in POS07 (07)	452.93635 Secs (452.936 Secs)	
								[==>]	***[1]***
4	F127M-dither3	(7) M31-POS07	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0,0	Prime + Parallel Group 3-7 in POS07 (07)	202.934095 Secs (202.934 Secs)	
								[==>]	***[1]***
5	F153M-dither3	(7) M31-POS07	WFC3/IR, MULTIACCUM, IR	F153M	SAMP-SEQ=SPARS50; NSAMP=10	POS TARG 0,0	Prime + Parallel Group 3-7 in POS07 (07)	452.93635 Secs (452.936 Secs)	
								[==>]	***[1]***
6	F625W-dither3	ANY	ACS/WFC, ACCUM, WFC	F625W			Prime + Parallel Group 3-7 in POS07 (07)	100 Secs (100 Secs)	
								[==>]	***[1]***
7	F658N-dither3	ANY	ACS/WFC, ACCUM, WFC	F658N			Prime + Parallel Group 3-7 in POS07 (07)	714 Secs (714 Secs)	
								[==>]	***[1]***
8	F139M-dither4	(7) M31-POS07	WFC3/IR, MULTIACCUM, IR	F139M	SAMP-SEQ=SPARS50; NSAMP=9	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS07 (07)	402.935899 Secs (402.936 Secs)	
								[==>]	***[1]***
9	F153M-dither4	(7) M31-POS07	WFC3/IR, MULTIACCUM, IR	F153M	SAMP-SEQ=SPARS50; NSAMP=9	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS07 (07)	402.935899 Secs (402.936 Secs)	
								[==>]	***[1]***
10	F127M-dither4	(7) M31-POS07	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS07 (07)	202.934095 Secs (202.934 Secs)	
								[==>]	***[1]***
11	F658N-dither4	ANY	ACS/WFC, ACCUM, WFC	F658N			Prime + Parallel Group 8-12 in POS07 (07)	515 Secs (515 Secs)	
								[==>]	***[1]***
12	F625W-dither4	ANY	ACS/WFC, ACCUM, WFC	F625W			Prime + Parallel Group 8-12 in POS07 (07)	340 Secs (340 Secs)	
								[==>]	***[1]***

Orbit Structure



Visit

Proposal 14072, POS08 (08) Sat Jul 25 01:10:17 GMT 2015

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, ACS/WFC

Special Requirements: ORIENT 180D TO 215 D; ORIENT 290D TO 340 D

Comments: Using a 4pt dither for F127M, and a 2pt dither for F139M and F153M. Nyquist sampling will be recovered in two redder filters by leveraging the dithers in the blue filter - all filters will be reduced simultaneously. This strategy allows for maximum exposure lengths with ACS in parallel, mitigating latency due to buffer dumps.

Orientation requirements set to ensure that the parallel falls within the PHAT coverage & to maximize coverage of star-forming regions. These restrictions can be loosened if schedulability becomes an issue.

Fixed Targets

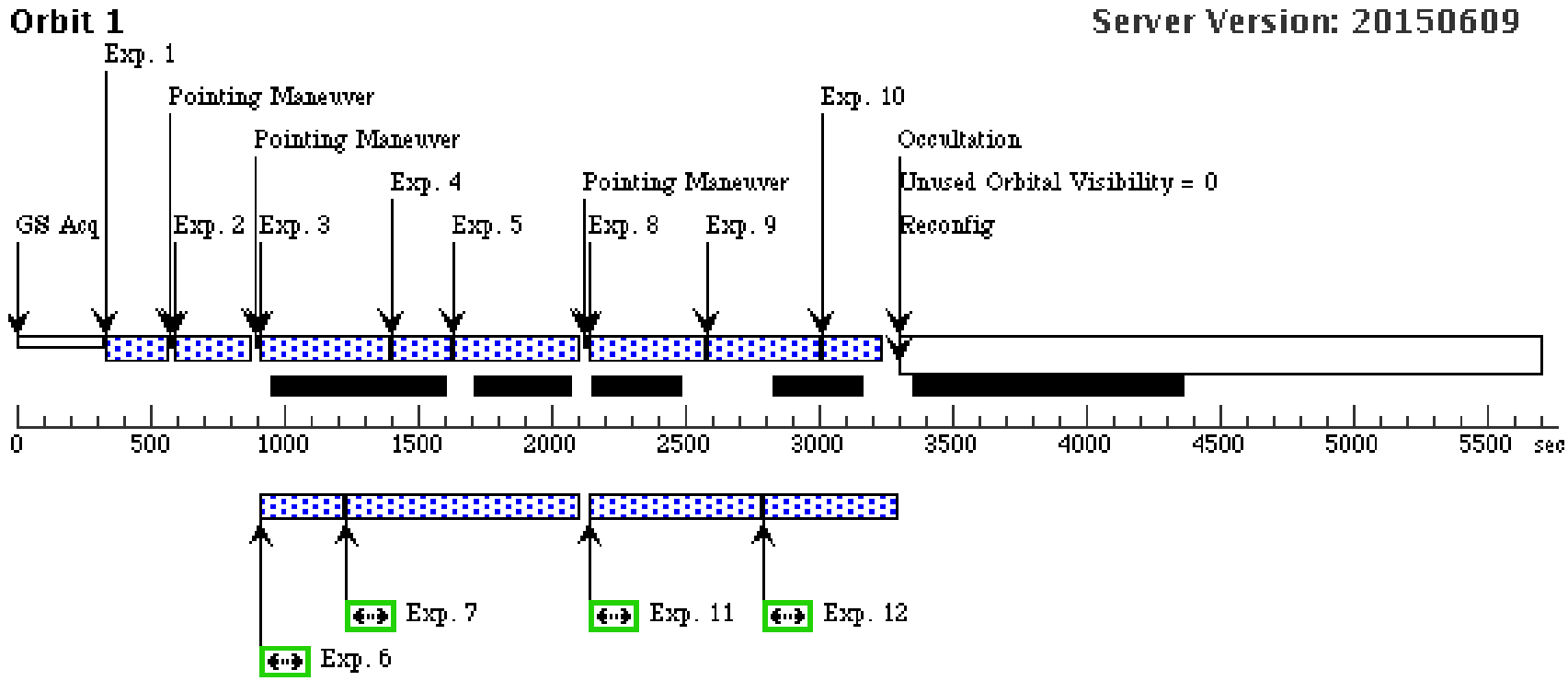
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(8)	M31-POS08	RA: 00 44 8.2330 (11.0343042d)		V=18+/-0.8	Reference Frame: ICRS
	Alt Name1: ANDROMEDA-POS08	Dec: +41 22 22.14 (41.37282d)			
		Equinox: J2000			

Comments: This is a star field, with a wide range of V-mags. The brightest star in the optical HST images of M31 from the Panchromatic Hubble Andromeda Treasury (PHAT) is about F475W=18 mag. The stars of interest to this program range from approximately F814W=18-23 mag.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F127M-dither1	(8) M31-POS08	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0.542,0.182		202.934095 Secs (202.934 Secs)	
								[==>]	***[1]***
2	F127M-dither2	(8) M31-POS08	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=6	POS TARG -0.203,0.303		252.934546 Secs (252.935 Secs)	
								[==>]	***[1]***
3	F139M-dither3	(8) M31-POS08	WFC3/IR, MULTIACCUM, IR	F139M	SAMP-SEQ=SPARS50; NSAMP=10	POS TARG 0,0	Prime + Parallel Group 3-7 in POS08 (08)	452.93635 Secs (452.936 Secs)	
								[==>]	***[1]***
4	F127M-dither3	(8) M31-POS08	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0,0	Prime + Parallel Group 3-7 in POS08 (08)	202.934095 Secs (202.934 Secs)	
								[==>]	***[1]***
5	F153M-dither3	(8) M31-POS08	WFC3/IR, MULTIACCUM, IR	F153M	SAMP-SEQ=SPARS50; NSAMP=10	POS TARG 0,0	Prime + Parallel Group 3-7 in POS08 (08)	452.93635 Secs (452.936 Secs)	
								[==>]	***[1]***
6	F625W-dither3	ANY	ACS/WFC, ACCUM, WFC	F625W			Prime + Parallel Group 3-7 in POS08 (08)	100 Secs (100 Secs)	
								[==>]	***[1]***
7	F658N-dither3	ANY	ACS/WFC, ACCUM, WFC	F658N			Prime + Parallel Group 3-7 in POS08 (08)	714 Secs (714 Secs)	
								[==>]	***[1]***
8	F139M-dither4	(8) M31-POS08	WFC3/IR, MULTIACCUM, IR	F139M	SAMP-SEQ=SPARS50; NSAMP=9	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS08 (08)	402.935899 Secs (402.936 Secs)	
								[==>]	***[1]***
9	F153M-dither4	(8) M31-POS08	WFC3/IR, MULTIACCUM, IR	F153M	SAMP-SEQ=SPARS50; NSAMP=9	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS08 (08)	402.935899 Secs (402.936 Secs)	
								[==>]	***[1]***
10	F127M-dither4	(8) M31-POS08	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS08 (08)	202.934095 Secs (202.934 Secs)	
								[==>]	***[1]***
11	F658N-dither4	ANY	ACS/WFC, ACCUM, WFC	F658N			Prime + Parallel Group 8-12 in POS08 (08)	515 Secs (515 Secs)	
								[==>]	***[1]***
12	F625W-dither4	ANY	ACS/WFC, ACCUM, WFC	F625W			Prime + Parallel Group 8-12 in POS08 (08)	340 Secs (340 Secs)	
								[==>]	***[1]***

Orbit Structure



Visit

Proposal 14072, POS09 (09) Sat Jul 25 01:10:17 GMT 2015

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, ACS/WFC

Special Requirements: ORIENT 180D TO 220 D; ORIENT 285D TO 340 D

Comments: Using a 4pt dither for F127M, and a 2pt dither for F139M and F153M. Nyquist sampling will be recovered in two redder filters by leveraging the dithers in the blue filter - all filters will be reduced simultaneously. This strategy allows for maximum exposure lengths with ACS in parallel, mitigating latency due to buffer dumps.

Orientation requirements set to ensure that the parallel falls within the PHAT coverage & to maximize coverage of star-forming regions. These restrictions can be loosened if schedulability becomes an issue.

Fixed Targets

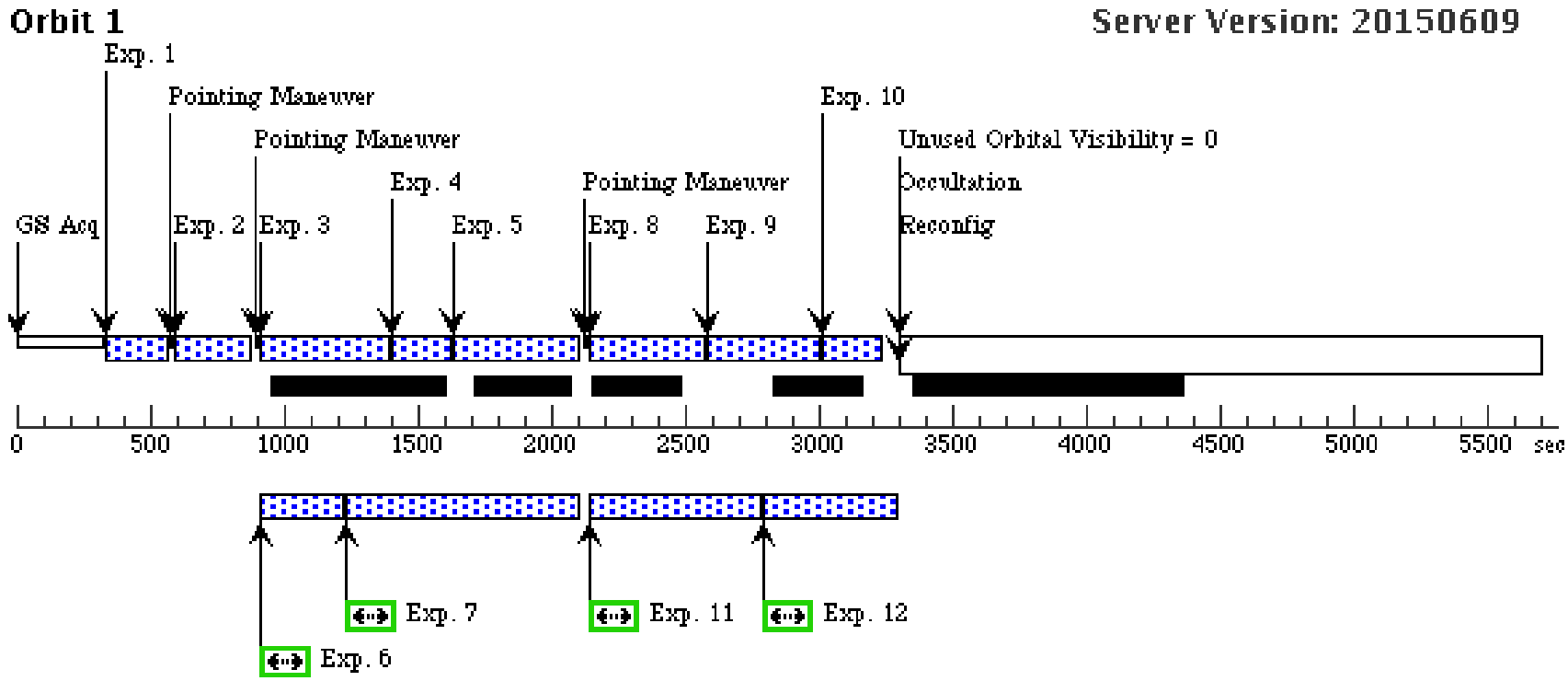
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(9)	M31-POS09	RA: 00 44 17.6510 (11.0735458d)		V=18+/-0.5	Reference Frame: ICRS
	Alt Name1: ANDROMEDA-POS09	Dec: +41 25 8.57 (41.41905d)			
		Equinox: J2000			

Comments: This is a star field, with a wide range of V-mags. The brightest star in the optical HST images of M31 from the Panchromatic Hubble Andromeda Treasury (PHAT) is about F475W=18 mag. The stars of interest to this program range from approximately F814W=18-23 mag.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F127M-dither1	(9) M31-POS09	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0.542,0.182		202.934095 Secs (202.934 Secs)	
								[==>]	***[1]***
2	F127M-dither2	(9) M31-POS09	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=6	POS TARG -0.203,0.303		252.934546 Secs (252.935 Secs)	
								[==>]	***[1]***
3	F139M-dither3	(9) M31-POS09	WFC3/IR, MULTIACCUM, IR	F139M	SAMP-SEQ=SPARS50; NSAMP=10	POS TARG 0,0	Prime + Parallel Group 3-7 in POS09 (09)	452.93635 Secs (452.936 Secs)	
								[==>]	***[1]***
4	F127M-dither3	(9) M31-POS09	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0,0	Prime + Parallel Group 3-7 in POS09 (09)	202.934095 Secs (202.934 Secs)	
								[==>]	***[1]***
5	F153M-dither3	(9) M31-POS09	WFC3/IR, MULTIACCUM, IR	F153M	SAMP-SEQ=SPARS50; NSAMP=10	POS TARG 0,0	Prime + Parallel Group 3-7 in POS09 (09)	452.93635 Secs (452.936 Secs)	
								[==>]	***[1]***
6	F625W-dither3	ANY	ACS/WFC, ACCUM, WFC	F625W			Prime + Parallel Group 3-7 in POS09 (09)	100 Secs (100 Secs)	
								[==>]	***[1]***
7	F658N-dither3	ANY	ACS/WFC, ACCUM, WFC	F658N			Prime + Parallel Group 3-7 in POS09 (09)	714 Secs (714 Secs)	
								[==>]	***[1]***
8	F139M-dither4	(9) M31-POS09	WFC3/IR, MULTIACCUM, IR	F139M	SAMP-SEQ=SPARS50; NSAMP=9	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS09 (09)	402.935899 Secs (402.936 Secs)	
								[==>]	***[1]***
9	F153M-dither4	(9) M31-POS09	WFC3/IR, MULTIACCUM, IR	F153M	SAMP-SEQ=SPARS50; NSAMP=9	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS09 (09)	402.935899 Secs (402.936 Secs)	
								[==>]	***[1]***
10	F127M-dither4	(9) M31-POS09	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS09 (09)	202.934095 Secs (202.934 Secs)	
								[==>]	***[1]***
11	F658N-dither4	ANY	ACS/WFC, ACCUM, WFC	F658N			Prime + Parallel Group 8-12 in POS09 (09)	515 Secs (515 Secs)	
								[==>]	***[1]***
12	F625W-dither4	ANY	ACS/WFC, ACCUM, WFC	F625W			Prime + Parallel Group 8-12 in POS09 (09)	340 Secs (340 Secs)	
								[==>]	***[1]***

Orbit Structure



Visit

Proposal 14072, POS10 (10) Sat Jul 25 01:10:17 GMT 2015

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, ACS/WFC

Special Requirements: ORIENT 175D TO 200 D; ORIENT 315D TO 340 D

Comments: Using a 4pt dither for F127M, and a 2pt dither for F139M and F153M. Nyquist sampling will be recovered in two redder filters by leveraging the dithers in the blue filter - all filters will be reduced simultaneously. This strategy allows for maximum exposure lengths with ACS in parallel, mitigating latency due to buffer dumps.

Orientation requirements set to ensure that the parallel falls within the PHAT coverage & to maximize coverage of star-forming regions. These restrictions can be loosened if schedulability becomes an issue.

Fixed Targets

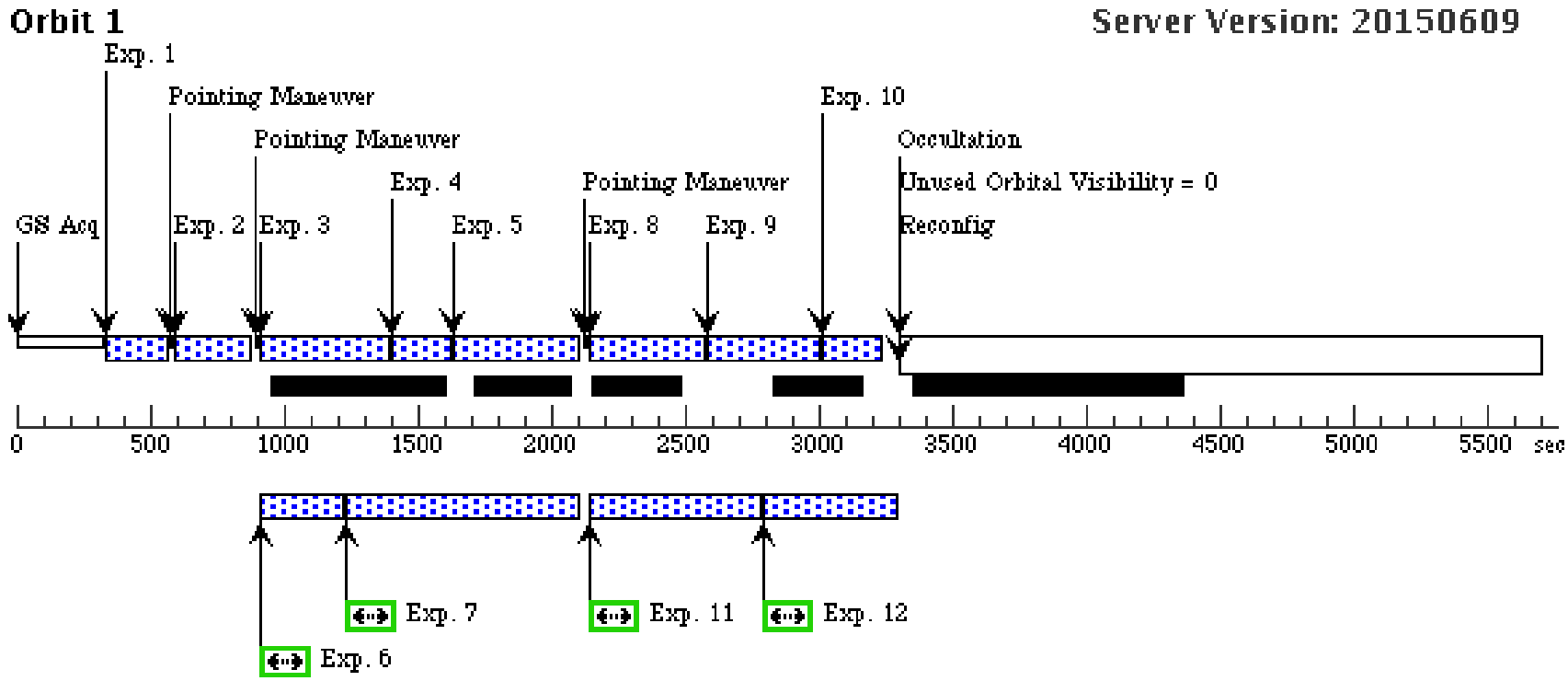
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(10)	M31-POS10 Alt Name1: ANDROMEDA-POS10	RA: 00 44 39.2710 (11.1636292d) Dec: +41 29 32.64 (41.49240d) Equinox: J2000		V=18+/-0.5	Reference Frame: ICRS

Comments: This is a star field, with a wide range of V-mags. The brightest star in the optical HST images of M31 from the Panchromatic Hubble Andromeda Treasury (PHAT) is about F475W=18 mag. The stars of interest to this program range from approximately F814W=18-23 mag.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F127M-dither1	(10) M31-POS10	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0.542,0.182		202.934095 Secs (202.934 Secs) *[==>]*	*[1]*
2	F127M-dither2	(10) M31-POS10	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=6	POS TARG -0.203,0.303		252.934546 Secs (252.935 Secs) *[==>]*	*[1]*
3	F139M-dither3	(10) M31-POS10	WFC3/IR, MULTIACCUM, IR	F139M	SAMP-SEQ=SPARS50; NSAMP=10	POS TARG 0,0	Prime + Parallel Group 3-7 in POS10 (10)	452.93635 Secs (452.936 Secs) *[==>]*	*[1]*
4	F127M-dither3	(10) M31-POS10	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0,0	Prime + Parallel Group 3-7 in POS10 (10)	202.934095 Secs (202.934 Secs) *[==>]*	*[1]*
5	F153M-dither3	(10) M31-POS10	WFC3/IR, MULTIACCUM, IR	F153M	SAMP-SEQ=SPARS50; NSAMP=10	POS TARG 0,0	Prime + Parallel Group 3-7 in POS10 (10)	452.93635 Secs (452.936 Secs) *[==>]*	*[1]*
6	F625W-dither3	ANY	ACS/WFC, ACCUM, WFC	F625W			Prime + Parallel Group 3-7 in POS10 (10)	100 Secs (100 Secs) *[==>]*	*[1]*
7	F658N-dither3	ANY	ACS/WFC, ACCUM, WFC	F658N			Prime + Parallel Group 3-7 in POS10 (10)	714 Secs (714 Secs) *[==>]*	*[1]*
8	F139M-dither4	(10) M31-POS10	WFC3/IR, MULTIACCUM, IR	F139M	SAMP-SEQ=SPARS50; NSAMP=9	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS10 (10)	402.935899 Secs (402.936 Secs) *[==>]*	*[1]*
9	F153M-dither4	(10) M31-POS10	WFC3/IR, MULTIACCUM, IR	F153M	SAMP-SEQ=SPARS50; NSAMP=9	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS10 (10)	402.935899 Secs (402.936 Secs) *[==>]*	*[1]*
10	F127M-dither4	(10) M31-POS10	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS10 (10)	202.934095 Secs (202.934 Secs) *[==>]*	*[1]*
11	F658N-dither4	ANY	ACS/WFC, ACCUM, WFC	F658N			Prime + Parallel Group 8-12 in POS10 (10)	515 Secs (515 Secs) *[==>]*	*[1]*
12	F625W-dither4	ANY	ACS/WFC, ACCUM, WFC	F625W			Prime + Parallel Group 8-12 in POS10 (10)	340 Secs (340 Secs) *[==>]*	*[1]*

Orbit Structure



Visit

Proposal 14072, POS11 (11) Sat Jul 25 01:10:18 GMT 2015

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, ACS/WFC

Special Requirements: ORIENT 130D TO 30 D

Comments: Using a 4pt dither for F127M, and a 2pt dither for F139M and F153M. Nyquist sampling will be recovered in two redder filters by leveraging the dithers in the blue filter - all filters will be reduced simultaneously. This strategy allows for maximum exposure lengths with ACS in parallel, mitigating latency due to buffer dumps.

Orientation requirements set to ensure that the parallel falls within the PHAT coverage & to maximize coverage of star-forming regions. These restrictions can be loosened if schedulability becomes an issue.

Fixed Targets

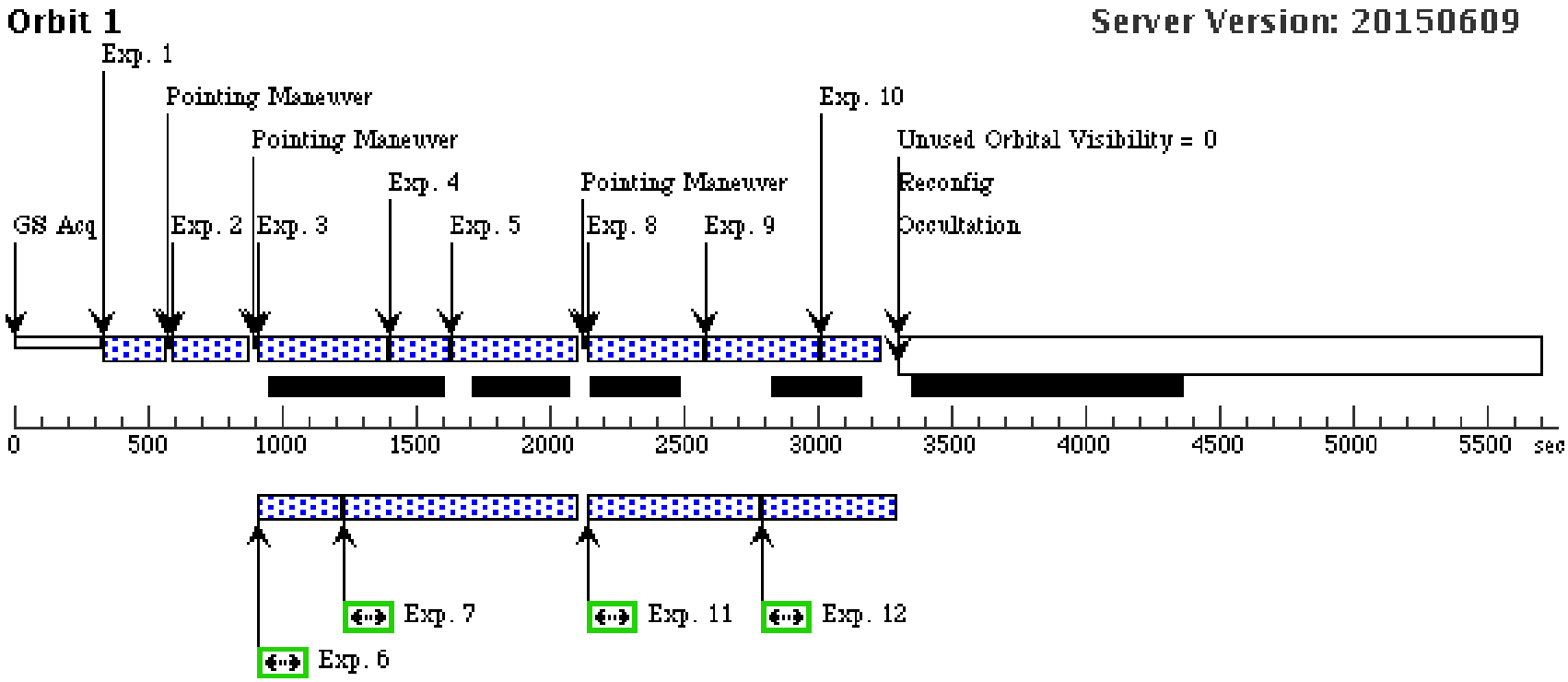
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(11)	M31-POS11	RA: 00 44 13.9900 (11.0582917d)		V=18+/-0.5	Reference Frame: ICRS
	Alt Name1: ANDROMEDA-POS11	Dec: +41 37 10.61 (41.61961d)			
		Equinox: J2000			

Comments: This is a star field, with a wide range of V-mags. The brightest star in the optical HST images of M31 from the Panchromatic Hubble Andromeda Treasury (PHAT) is about F475W=18 mag. The stars of interest to this program range from approximately F814W=18-23 mag.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F127M-dither1	(11) M31-POS11	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0.542,0.182		202.934095 Secs (202.934 Secs)	
								[==>]	***[1]***
2	F127M-dither2	(11) M31-POS11	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=6	POS TARG -0.203,0.303		252.934546 Secs (252.935 Secs)	
								[==>]	***[1]***
3	F139M-dither3	(11) M31-POS11	WFC3/IR, MULTIACCUM, IR	F139M	SAMP-SEQ=SPARS50; NSAMP=10	POS TARG 0,0	Prime + Parallel Group 3-7 in POS11 (11)	452.93635 Secs (452.936 Secs)	
								[==>]	***[1]***
4	F127M-dither3	(11) M31-POS11	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0,0	Prime + Parallel Group 3-7 in POS11 (11)	202.934095 Secs (202.934 Secs)	
								[==>]	***[1]***
5	F153M-dither3	(11) M31-POS11	WFC3/IR, MULTIACCUM, IR	F153M	SAMP-SEQ=SPARS50; NSAMP=10	POS TARG 0,0	Prime + Parallel Group 3-7 in POS11 (11)	452.93635 Secs (452.936 Secs)	
								[==>]	***[1]***
6	F625W-dither3	ANY	ACS/WFC, ACCUM, WFC	F625W			Prime + Parallel Group 3-7 in POS11 (11)	100 Secs (100 Secs)	
								[==>]	***[1]***
7	F658N-dither3	ANY	ACS/WFC, ACCUM, WFC	F658N			Prime + Parallel Group 3-7 in POS11 (11)	714 Secs (714 Secs)	
								[==>]	***[1]***
8	F139M-dither4	(11) M31-POS11	WFC3/IR, MULTIACCUM, IR	F139M	SAMP-SEQ=SPARS50; NSAMP=9	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS11 (11)	402.935899 Secs (402.936 Secs)	
								[==>]	***[1]***
9	F153M-dither4	(11) M31-POS11	WFC3/IR, MULTIACCUM, IR	F153M	SAMP-SEQ=SPARS50; NSAMP=9	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS11 (11)	402.935899 Secs (402.936 Secs)	
								[==>]	***[1]***
10	F127M-dither4	(11) M31-POS11	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS11 (11)	202.934095 Secs (202.934 Secs)	
								[==>]	***[1]***
11	F658N-dither4	ANY	ACS/WFC, ACCUM, WFC	F658N			Prime + Parallel Group 8-12 in POS11 (11)	515 Secs (515 Secs)	
								[==>]	***[1]***
12	F625W-dither4	ANY	ACS/WFC, ACCUM, WFC	F625W			Prime + Parallel Group 8-12 in POS11 (11)	340 Secs (340 Secs)	
								[==>]	***[1]***

Orbit Structure



Visit

Proposal 14072, POS12 (12) Sat Jul 25 01:10:18 GMT 2015

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, ACS/WFC

Special Requirements: ORIENT 312D TO 345 D; ORIENT 159D TO 180 D; ORIENT 55D TO 62 D

Comments: Using a 4pt dither for F127M, and a 2pt dither for F139M and F153M. Nyquist sampling will be recovered in two redder filters by leveraging the dithers in the blue filter - all filters will be reduced simultaneously. This strategy allows for maximum exposure lengths with ACS in parallel, mitigating latency due to buffer dumps.

Orientation requirements set to ensure that the parallel falls within the PHAT coverage & to maximize coverage of star-forming regions. These restrictions can be loosened if schedulability becomes an issue.

Fixed Targets

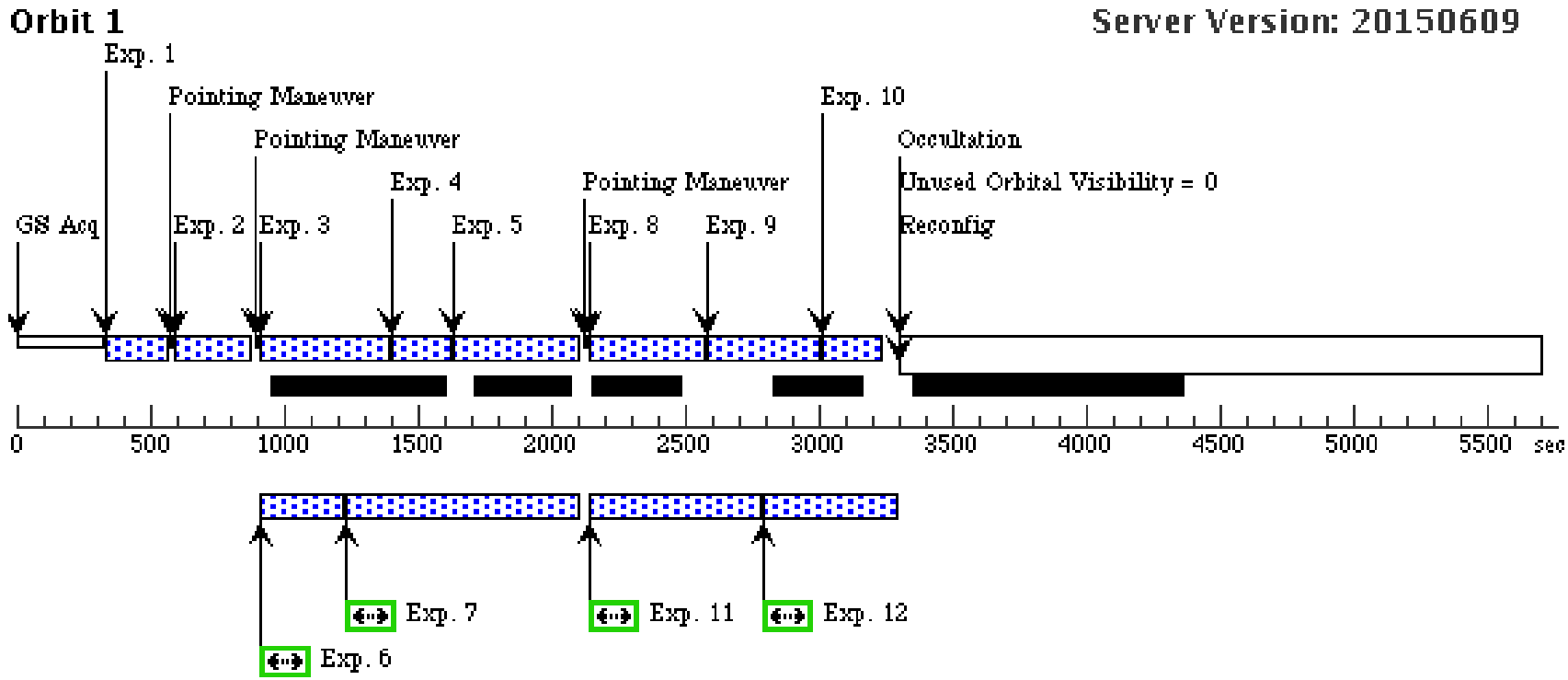
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(12)	M31-POS12 Alt Name1: ANDROMEDA-POS12	RA: 00 45 2.8430 (11.2618458d) Dec: +41 36 0.27 (41.60008d) Equinox: J2000		V=18+/-0.5	Reference Frame: ICRS

Comments: This is a star field, with a wide range of V-mags. The brightest star in the optical HST images of M31 from the Panchromatic Hubble Andromeda Treasury (PHAT) is about F475W=18 mag. The stars of interest to this program range from approximately F814W=18-23 mag.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F127M-dither1	(12) M31-POS12	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0.542,0.182		202.934095 Secs (202.934 Secs) *[==>]*	*[1]*
2	F127M-dither2	(12) M31-POS12	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=6	POS TARG -0.203,0.303		252.934546 Secs (252.935 Secs) *[==>]*	*[1]*
3	F139M-dither3	(12) M31-POS12	WFC3/IR, MULTIACCUM, IR	F139M	SAMP-SEQ=SPARS50; NSAMP=10	POS TARG 0,0	Prime + Parallel Group 3-7 in POS12 (12)	452.93635 Secs (452.936 Secs) *[==>]*	*[1]*
4	F127M-dither3	(12) M31-POS12	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0,0	Prime + Parallel Group 3-7 in POS12 (12)	202.934095 Secs (202.934 Secs) *[==>]*	*[1]*
5	F153M-dither3	(12) M31-POS12	WFC3/IR, MULTIACCUM, IR	F153M	SAMP-SEQ=SPARS50; NSAMP=10	POS TARG 0,0	Prime + Parallel Group 3-7 in POS12 (12)	452.93635 Secs (452.936 Secs) *[==>]*	*[1]*
6	F625W-dither3	ANY	ACS/WFC, ACCUM, WFC	F625W			Prime + Parallel Group 3-7 in POS12 (12)	100 Secs (100 Secs) *[==>]*	*[1]*
7	F658N-dither3	ANY	ACS/WFC, ACCUM, WFC	F658N			Prime + Parallel Group 3-7 in POS12 (12)	714 Secs (714 Secs) *[==>]*	*[1]*
8	F139M-dither4	(12) M31-POS12	WFC3/IR, MULTIACCUM, IR	F139M	SAMP-SEQ=SPARS50; NSAMP=9	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS12 (12)	402.935899 Secs (402.936 Secs) *[==>]*	*[1]*
9	F153M-dither4	(12) M31-POS12	WFC3/IR, MULTIACCUM, IR	F153M	SAMP-SEQ=SPARS50; NSAMP=9	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS12 (12)	402.935899 Secs (402.936 Secs) *[==>]*	*[1]*
10	F127M-dither4	(12) M31-POS12	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS12 (12)	202.934095 Secs (202.934 Secs) *[==>]*	*[1]*
11	F658N-dither4	ANY	ACS/WFC, ACCUM, WFC	F658N			Prime + Parallel Group 8-12 in POS12 (12)	515 Secs (515 Secs) *[==>]*	*[1]*
12	F625W-dither4	ANY	ACS/WFC, ACCUM, WFC	F625W			Prime + Parallel Group 8-12 in POS12 (12)	340 Secs (340 Secs) *[==>]*	*[1]*

Orbit Structure



Visit

Proposal 14072, POS13 (13) Sat Jul 25 01:10:18 GMT 2015

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, ACS/WFC

Special Requirements: ORIENT 180D TO 209 D; ORIENT 9D TO 25 D; ORIENT 270D TO 283 D

Comments: Using a 4pt dither for F127M, and a 2pt dither for F139M and F153M. Nyquist sampling will be recovered in two redder filters by leveraging the dithers in the blue filter - all filters will be reduced simultaneously. This strategy allows for maximum exposure lengths with ACS in parallel, mitigating latency due to buffer dumps.

Orientation requirements set to ensure that the parallel falls within the PHAT coverage & to maximize coverage of star-forming regions. These restrictions can be loosened if schedulability becomes an issue.

Fixed Targets

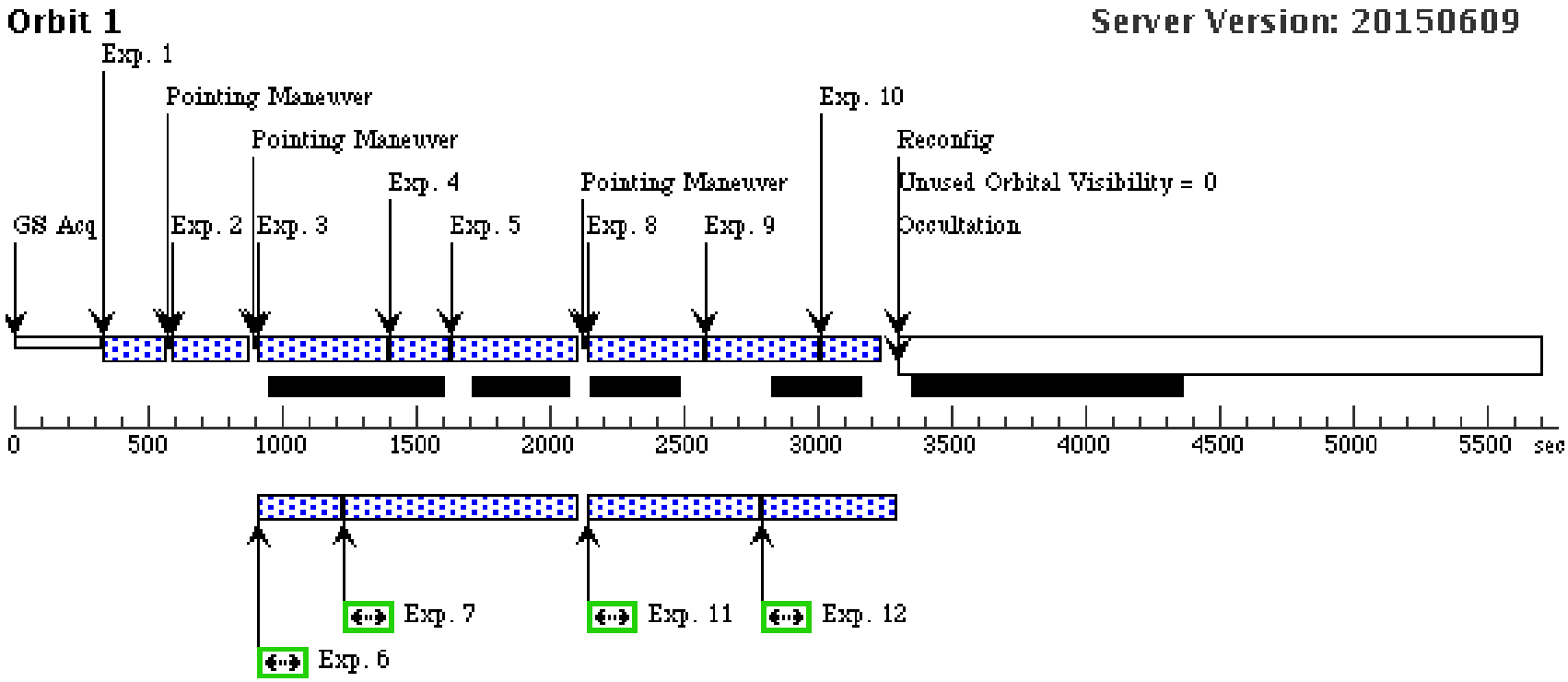
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(13)	M31-POS13	RA: 00 44 57.0930 (11.2378875d)		V=18+/-0.5	Reference Frame: ICRS
	Alt Name1: ANDROMEDA-POS13	Dec: +41 40 46.35 (41.67954d)			
		Equinox: J2000			

Comments: This is a star field, with a wide range of V-mags. The brightest star in the optical HST images of M31 from the Panchromatic Hubble Andromeda Treasury (PHAT) is about F475W=18 mag. The stars of interest to this program range from approximately F814W=18-23 mag.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F127M-dither1	(13) M31-POS13	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0.542,0.182		202.934095 Secs (202.934 Secs)	
								[==>]	*[1]*
2	F127M-dither2	(13) M31-POS13	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=6	POS TARG -0.203,0.303		252.934546 Secs (252.935 Secs)	
								[==>]	*[1]*
3	F139M-dither3	(13) M31-POS13	WFC3/IR, MULTIACCUM, IR	F139M	SAMP-SEQ=SPARS50; NSAMP=10	POS TARG 0,0	Prime + Parallel Group 3-7 in POS13 (13)	452.93635 Secs (452.936 Secs)	
								[==>]	*[1]*
4	F127M-dither3	(13) M31-POS13	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0,0	Prime + Parallel Group 3-7 in POS13 (13)	202.934095 Secs (202.934 Secs)	
								[==>]	*[1]*
5	F153M-dither3	(13) M31-POS13	WFC3/IR, MULTIACCUM, IR	F153M	SAMP-SEQ=SPARS50; NSAMP=10	POS TARG 0,0	Prime + Parallel Group 3-7 in POS13 (13)	452.93635 Secs (452.936 Secs)	
								[==>]	*[1]*
6	F625W-dither3	ANY	ACS/WFC, ACCUM, WFC	F625W			Prime + Parallel Group 3-7 in POS13 (13)	100 Secs (100 Secs)	
								[==>]	*[1]*
7	F658N-dither3	ANY	ACS/WFC, ACCUM, WFC	F658N			Prime + Parallel Group 3-7 in POS13 (13)	714 Secs (714 Secs)	
								[==>]	*[1]*
8	F139M-dither4	(13) M31-POS13	WFC3/IR, MULTIACCUM, IR	F139M	SAMP-SEQ=SPARS50; NSAMP=9	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS13 (13)	402.935899 Secs (402.936 Secs)	
								[==>]	*[1]*
9	F153M-dither4	(13) M31-POS13	WFC3/IR, MULTIACCUM, IR	F153M	SAMP-SEQ=SPARS50; NSAMP=9	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS13 (13)	402.935899 Secs (402.936 Secs)	
								[==>]	*[1]*
10	F127M-dither4	(13) M31-POS13	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS13 (13)	202.934095 Secs (202.934 Secs)	
								[==>]	*[1]*
11	F658N-dither4	ANY	ACS/WFC, ACCUM, WFC	F658N			Prime + Parallel Group 8-12 in POS13 (13)	515 Secs (515 Secs)	
								[==>]	*[1]*
12	F625W-dither4	ANY	ACS/WFC, ACCUM, WFC	F625W			Prime + Parallel Group 8-12 in POS13 (13)	340 Secs (340 Secs)	
								[==>]	*[1]*

Orbit Structure



Visit

Proposal 14072, POS14 (14) Sat Jul 25 01:10:18 GMT 2015

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, ACS/WFC

Special Requirements: ORIENT 65D TO 100 D

Comments: Using a 4pt dither for F127M, and a 2pt dither for F139M and F153M. Nyquist sampling will be recovered in two redder filters by leveraging the dithers in the blue filter - all filters will be reduced simultaneously. This strategy allows for maximum exposure lengths with ACS in parallel, mitigating latency due to buffer dumps.

Orientation requirements set to ensure that the parallel falls within the PHAT coverage & to maximize coverage of star-forming regions. These restrictions can be loosened if schedulability becomes an issue.

Fixed Targets

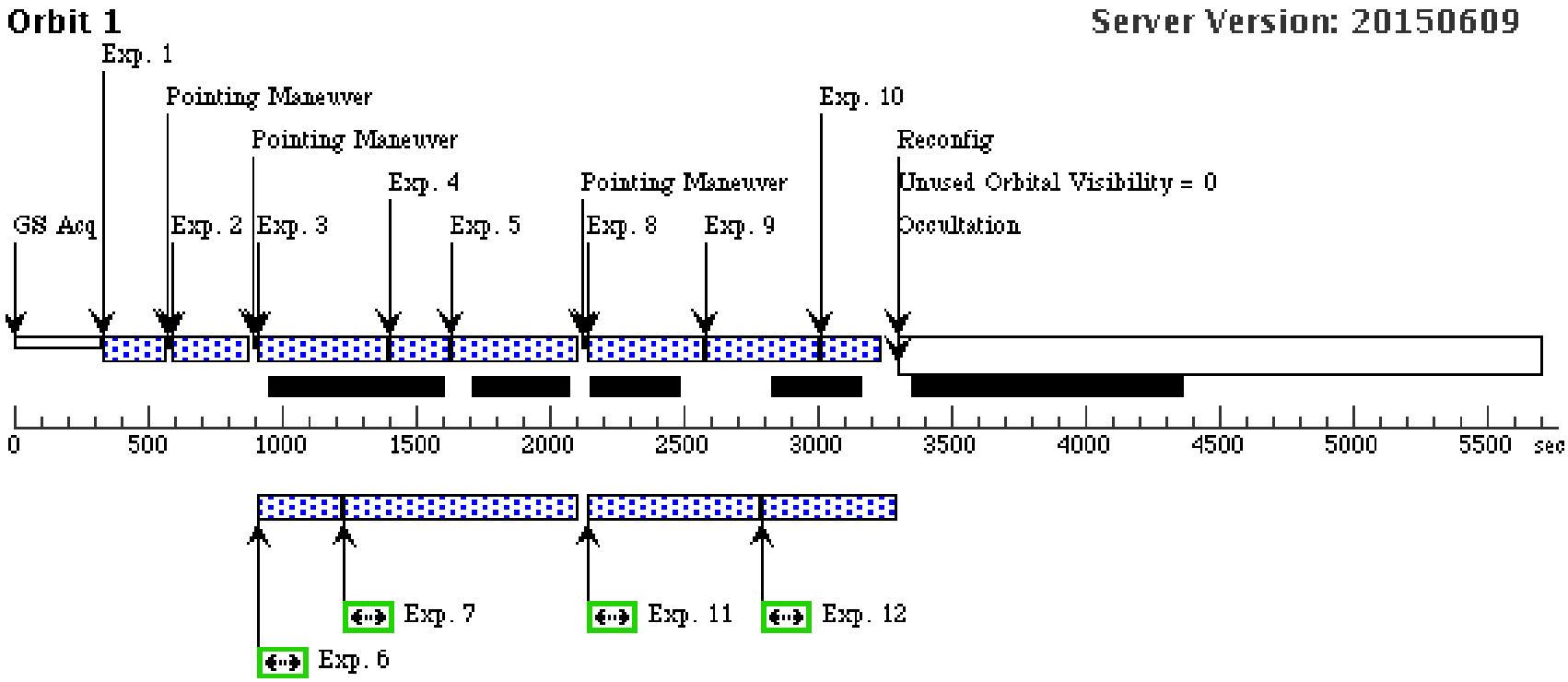
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(14)	M31-POS14	RA: 00 44 56.1270 (11.2338625d)		V=18+/-0.5	Reference Frame: ICRS
	Alt Name1: ANDROMEDA-POS14	Dec: +41 46 17.24 (41.77146d)			
		Equinox: J2000			

Comments: This is a star field, with a wide range of V-mags. The brightest star in the optical HST images of M31 from the Panchromatic Hubble Andromeda Treasury (PHAT) is about F475W=18 mag. The stars of interest to this program range from approximately F814W=18-23 mag.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F127M-dither1	(14) M31-POS14	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0.542,0.182		202.934095 Secs (202.934 Secs)	
								[==>]	*[1]*
2	F127M-dither2	(14) M31-POS14	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=6	POS TARG -0.203,0.303		252.934546 Secs (252.935 Secs)	
								[==>]	*[1]*
3	F139M-dither3	(14) M31-POS14	WFC3/IR, MULTIACCUM, IR	F139M	SAMP-SEQ=SPARS50; NSAMP=10	POS TARG 0,0	Prime + Parallel Group 3-7 in POS14 (14)	452.93635 Secs (452.936 Secs)	
								[==>]	*[1]*
4	F127M-dither3	(14) M31-POS14	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0,0	Prime + Parallel Group 3-7 in POS14 (14)	202.934095 Secs (202.934 Secs)	
								[==>]	*[1]*
5	F153M-dither3	(14) M31-POS14	WFC3/IR, MULTIACCUM, IR	F153M	SAMP-SEQ=SPARS50; NSAMP=10	POS TARG 0,0	Prime + Parallel Group 3-7 in POS14 (14)	452.93635 Secs (452.936 Secs)	
								[==>]	*[1]*
6	F625W-dither3	ANY	ACS/WFC, ACCUM, WFC	F625W			Prime + Parallel Group 3-7 in POS14 (14)	100 Secs (100 Secs)	
								[==>]	*[1]*
7	F658N-dither3	ANY	ACS/WFC, ACCUM, WFC	F658N			Prime + Parallel Group 3-7 in POS14 (14)	714 Secs (714 Secs)	
								[==>]	*[1]*
8	F139M-dither4	(14) M31-POS14	WFC3/IR, MULTIACCUM, IR	F139M	SAMP-SEQ=SPARS50; NSAMP=9	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS14 (14)	402.935899 Secs (402.936 Secs)	
								[==>]	*[1]*
9	F153M-dither4	(14) M31-POS14	WFC3/IR, MULTIACCUM, IR	F153M	SAMP-SEQ=SPARS50; NSAMP=9	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS14 (14)	402.935899 Secs (402.936 Secs)	
								[==>]	*[1]*
10	F127M-dither4	(14) M31-POS14	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS14 (14)	202.934095 Secs (202.934 Secs)	
								[==>]	*[1]*
11	F658N-dither4	ANY	ACS/WFC, ACCUM, WFC	F658N			Prime + Parallel Group 8-12 in POS14 (14)	515 Secs (515 Secs)	
								[==>]	*[1]*
12	F625W-dither4	ANY	ACS/WFC, ACCUM, WFC	F625W			Prime + Parallel Group 8-12 in POS14 (14)	340 Secs (340 Secs)	
								[==>]	*[1]*

Orbit Structure



Visit

Proposal 14072, POS15 (15) Sat Jul 25 01:10:18 GMT 2015

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, ACS/WFC

Special Requirements: ORIENT 0D TO 35 D; ORIENT 160D TO 260 D

Comments: Using a 4pt dither for F127M, and a 2pt dither for F139M and F153M. Nyquist sampling will be recovered in two redder filters by leveraging the dithers in the blue filter - all filters will be reduced simultaneously. This strategy allows for maximum exposure lengths with ACS in parallel, mitigating latency due to buffer dumps.

Orientation requirements set to ensure that the parallel falls within the PHAT coverage & to maximize coverage of star-forming regions. These restrictions can be loosened if schedulability becomes an issue.

Fixed Targets

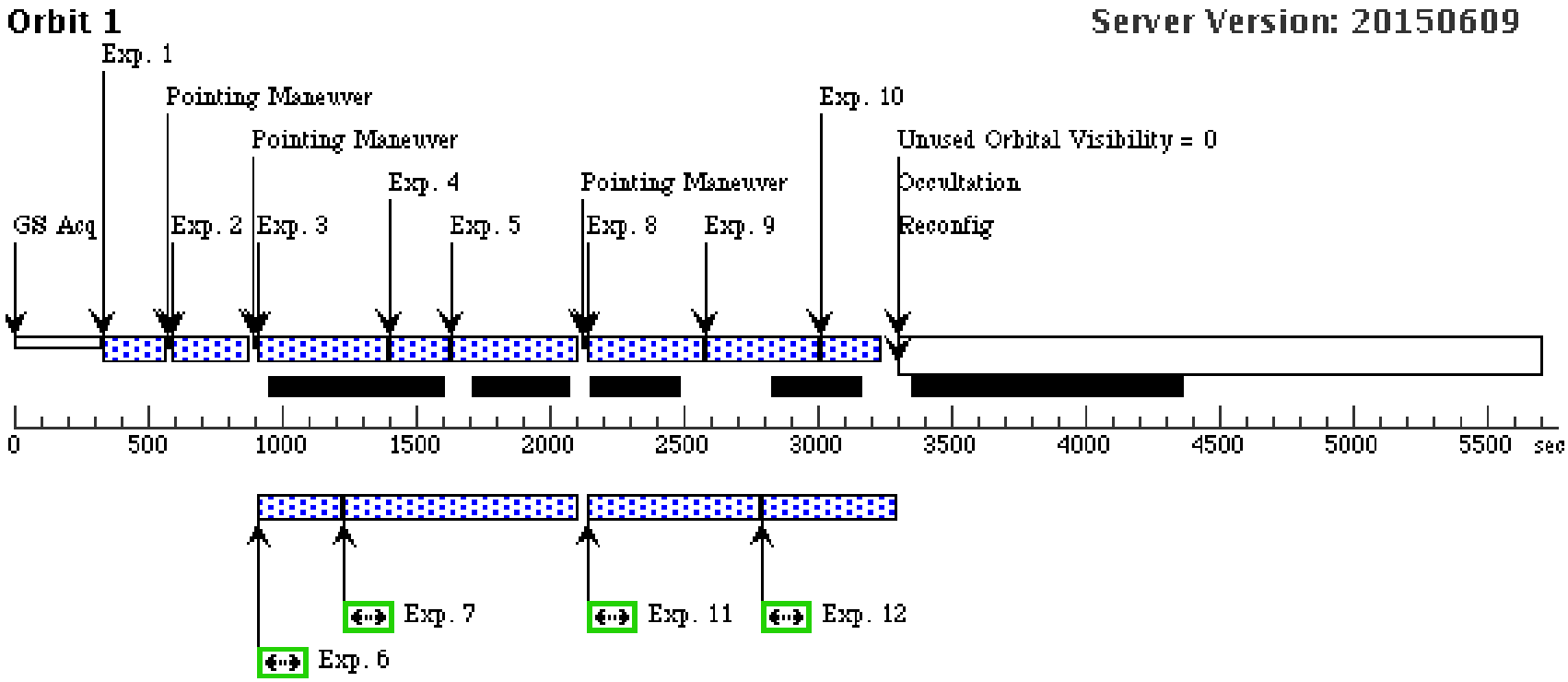
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(15)	M31-POS15	RA: 00 44 55.9730 (11.2332208d)		V=18+/-0.5	Reference Frame: ICRS
	Alt Name1: ANDROMEDA-POS15	Dec: +41 53 42.79 (41.89522d)			
		Equinox: J2000			

Comments: This is a star field, with a wide range of V-mags. The brightest star in the optical HST images of M31 from the Panchromatic Hubble Andromeda Treasury (PHAT) is about F475W=18 mag. The stars of interest to this program range from approximately F814W=18-23 mag.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F127M-dither1	(15) M31-POS15	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0.542,0.182		202.934095 Secs (202.934 Secs)	
								[==>]	***[1]***
2	F127M-dither2	(15) M31-POS15	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=6	POS TARG -0.203,0.303		252.934546 Secs (252.935 Secs)	
								[==>]	***[1]***
3	F139M-dither3	(15) M31-POS15	WFC3/IR, MULTIACCUM, IR	F139M	SAMP-SEQ=SPARS50; NSAMP=10	POS TARG 0,0	Prime + Parallel Group 3-7 in POS15 (15)	452.93635 Secs (452.936 Secs)	
								[==>]	***[1]***
4	F127M-dither3	(15) M31-POS15	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0,0	Prime + Parallel Group 3-7 in POS15 (15)	202.934095 Secs (202.934 Secs)	
								[==>]	***[1]***
5	F153M-dither3	(15) M31-POS15	WFC3/IR, MULTIACCUM, IR	F153M	SAMP-SEQ=SPARS50; NSAMP=10	POS TARG 0,0	Prime + Parallel Group 3-7 in POS15 (15)	452.93635 Secs (452.936 Secs)	
								[==>]	***[1]***
6	F625W-dither3	ANY	ACS/WFC, ACCUM, WFC	F625W			Prime + Parallel Group 3-7 in POS15 (15)	100 Secs (100 Secs)	
								[==>]	***[1]***
7	F658N-dither3	ANY	ACS/WFC, ACCUM, WFC	F658N			Prime + Parallel Group 3-7 in POS15 (15)	714 Secs (714 Secs)	
								[==>]	***[1]***
8	F139M-dither4	(15) M31-POS15	WFC3/IR, MULTIACCUM, IR	F139M	SAMP-SEQ=SPARS50; NSAMP=9	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS15 (15)	402.935899 Secs (402.936 Secs)	
								[==>]	***[1]***
9	F153M-dither4	(15) M31-POS15	WFC3/IR, MULTIACCUM, IR	F153M	SAMP-SEQ=SPARS50; NSAMP=9	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS15 (15)	402.935899 Secs (402.936 Secs)	
								[==>]	***[1]***
10	F127M-dither4	(15) M31-POS15	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS15 (15)	202.934095 Secs (202.934 Secs)	
								[==>]	***[1]***
11	F658N-dither4	ANY	ACS/WFC, ACCUM, WFC	F658N			Prime + Parallel Group 8-12 in POS15 (15)	515 Secs (515 Secs)	
								[==>]	***[1]***
12	F625W-dither4	ANY	ACS/WFC, ACCUM, WFC	F625W			Prime + Parallel Group 8-12 in POS15 (15)	340 Secs (340 Secs)	
								[==>]	***[1]***

Orbit Structure



Visit

Proposal 14072, POS16 (16) Sat Jul 25 01:10:18 GMT 2015

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, ACS/WFC

Special Requirements: ORIENT 45D TO 105 D; ORIENT 160D TO 215 D; ORIENT 265D TO 310 D

Comments: Using a 4pt dither for F127M, and a 2pt dither for F139M and F153M. Nyquist sampling will be recovered in two redder filters by leveraging the dithers in the blue filter - all filters will be reduced simultaneously. This strategy allows for maximum exposure lengths with ACS in parallel, mitigating latency due to buffer dumps.

Orientation requirements set to ensure that the parallel falls within the PHAT coverage & to maximize coverage of star-forming regions. These restrictions can be loosened if schedulability becomes an issue.

Fixed Targets

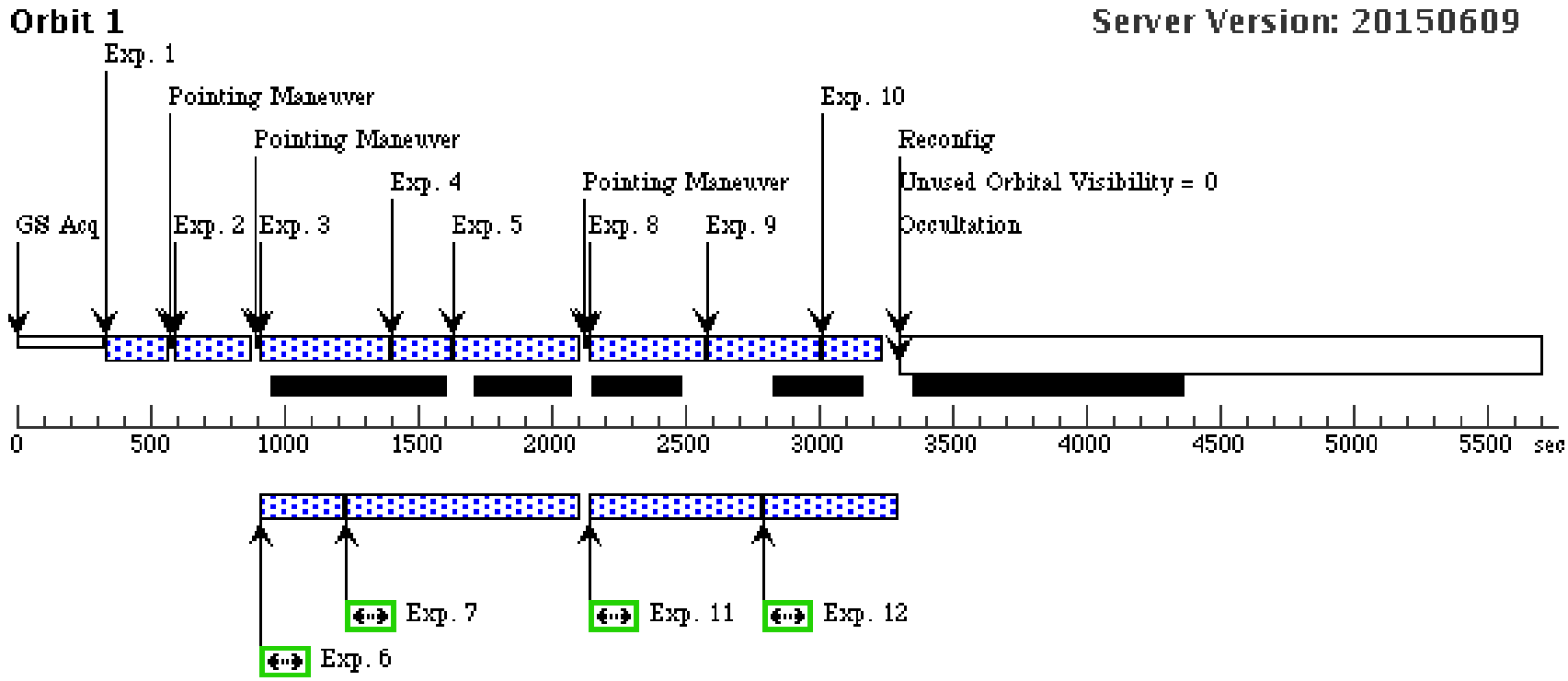
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(16)	M31-POS16	RA: 00 45 17.4290 (11.3226208d)		V=18+/-0.5	Reference Frame: ICRS
	Alt Name1: ANDROMEDA-POS16	Dec: +41 51 13.67 (41.85380d)			
		Equinox: J2000			

Comments: This is a star field, with a wide range of V-mags. The brightest star in the optical HST images of M31 from the Panchromatic Hubble Andromeda Treasury (PHAT) is about F475W=18 mag. The stars of interest to this program range from approximately F814W=18-23 mag.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F127M-dither1	(16) M31-POS16	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0.542,0.182		202.934095 Secs (202.934 Secs)	
								[==>]	***[1]***
2	F127M-dither2	(16) M31-POS16	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=6	POS TARG -0.203,0.303		252.934546 Secs (252.935 Secs)	
								[==>]	***[1]***
3	F139M-dither3	(16) M31-POS16	WFC3/IR, MULTIACCUM, IR	F139M	SAMP-SEQ=SPARS50; NSAMP=10	POS TARG 0,0	Prime + Parallel Group 3-7 in POS16 (16)	452.93635 Secs (452.936 Secs)	
								[==>]	***[1]***
4	F127M-dither3	(16) M31-POS16	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0,0	Prime + Parallel Group 3-7 in POS16 (16)	202.934095 Secs (202.934 Secs)	
								[==>]	***[1]***
5	F153M-dither3	(16) M31-POS16	WFC3/IR, MULTIACCUM, IR	F153M	SAMP-SEQ=SPARS50; NSAMP=10	POS TARG 0,0	Prime + Parallel Group 3-7 in POS16 (16)	452.93635 Secs (452.936 Secs)	
								[==>]	***[1]***
6	F625W-dither3	ANY	ACS/WFC, ACCUM, WFC	F625W			Prime + Parallel Group 3-7 in POS16 (16)	100 Secs (100 Secs)	
								[==>]	***[1]***
7	F658N-dither3	ANY	ACS/WFC, ACCUM, WFC	F658N			Prime + Parallel Group 3-7 in POS16 (16)	714 Secs (714 Secs)	
								[==>]	***[1]***
8	F139M-dither4	(16) M31-POS16	WFC3/IR, MULTIACCUM, IR	F139M	SAMP-SEQ=SPARS50; NSAMP=9	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS16 (16)	402.935899 Secs (402.936 Secs)	
								[==>]	***[1]***
9	F153M-dither4	(16) M31-POS16	WFC3/IR, MULTIACCUM, IR	F153M	SAMP-SEQ=SPARS50; NSAMP=9	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS16 (16)	402.935899 Secs (402.936 Secs)	
								[==>]	***[1]***
10	F127M-dither4	(16) M31-POS16	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS16 (16)	202.934095 Secs (202.934 Secs)	
								[==>]	***[1]***
11	F658N-dither4	ANY	ACS/WFC, ACCUM, WFC	F658N			Prime + Parallel Group 8-12 in POS16 (16)	515 Secs (515 Secs)	
								[==>]	***[1]***
12	F625W-dither4	ANY	ACS/WFC, ACCUM, WFC	F625W			Prime + Parallel Group 8-12 in POS16 (16)	340 Secs (340 Secs)	
								[==>]	***[1]***

Orbit Structure



Visit

Proposal 14072, POS17 (17) Sat Jul 25 01:10:18 GMT 2015

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, ACS/WFC

Special Requirements: ORIENT 102D TO 160 D; ORIENT 320D TO 330 D

Comments: Using a 4pt dither for F127M, and a 2pt dither for F139M and F153M. Nyquist sampling will be recovered in two redder filters by leveraging the dithers in the blue filter - all filters will be reduced simultaneously. This strategy allows for maximum exposure lengths with ACS in parallel, mitigating latency due to buffer dumps.

Orientation requirements set to ensure that the parallel falls within the PHAT coverage & to maximize coverage of star-forming regions. These restrictions can be loosened if schedulability becomes an issue.

Fixed Targets

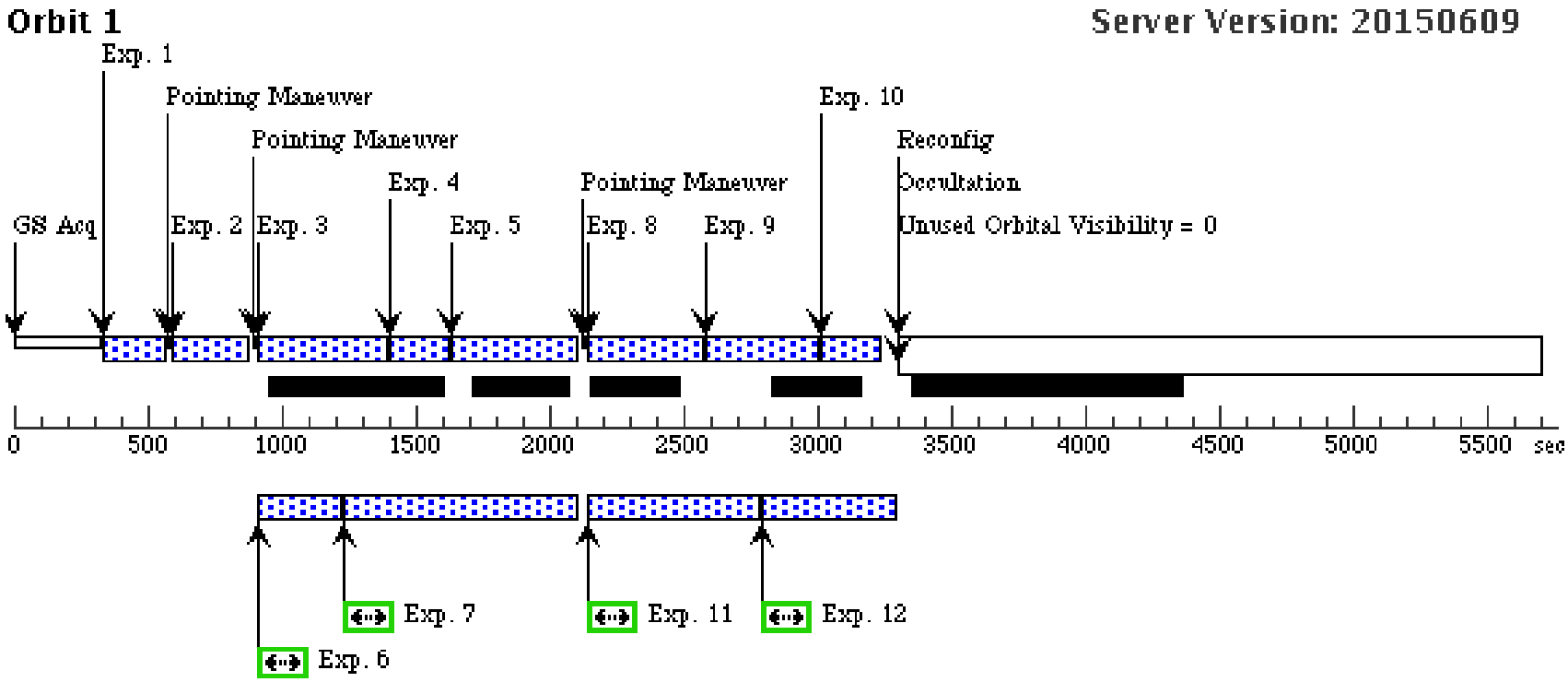
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(17)	M31-POS17	RA: 00 45 29.1840 (11.3716000d)		V=18+/-0.5	Reference Frame: ICRS
	Alt Name1: ANDROMEDA-POS17	Dec: +41 46 11.95 (41.76999d)			
		Equinox: J2000			

Comments: This is a star field, with a wide range of V-mags. The brightest star in the optical HST images of M31 from the Panchromatic Hubble Andromeda Treasury (PHAT) is about F475W=18 mag. The stars of interest to this program range from approximately F814W=18-23 mag.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F127M-dither1	(17) M31-POS17	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0.542,0.182		202.934095 Secs (202.934 Secs)	
								[==>]	*[1]*
2	F127M-dither2	(17) M31-POS17	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=6	POS TARG -0.203,0.303		252.934546 Secs (252.935 Secs)	
								[==>]	*[1]*
3	F139M-dither3	(17) M31-POS17	WFC3/IR, MULTIACCUM, IR	F139M	SAMP-SEQ=SPARS50; NSAMP=10	POS TARG 0,0	Prime + Parallel Group 3-7 in POS17 (17)	452.93635 Secs (452.936 Secs)	
								[==>]	*[1]*
4	F127M-dither3	(17) M31-POS17	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0,0	Prime + Parallel Group 3-7 in POS17 (17)	202.934095 Secs (202.934 Secs)	
								[==>]	*[1]*
5	F153M-dither3	(17) M31-POS17	WFC3/IR, MULTIACCUM, IR	F153M	SAMP-SEQ=SPARS50; NSAMP=10	POS TARG 0,0	Prime + Parallel Group 3-7 in POS17 (17)	452.93635 Secs (452.936 Secs)	
								[==>]	*[1]*
6	F625W-dither3	ANY	ACS/WFC, ACCUM, WFC	F625W			Prime + Parallel Group 3-7 in POS17 (17)	100 Secs (100 Secs)	
								[==>]	*[1]*
7	F658N-dither3	ANY	ACS/WFC, ACCUM, WFC	F658N			Prime + Parallel Group 3-7 in POS17 (17)	714 Secs (714 Secs)	
								[==>]	*[1]*
8	F139M-dither4	(17) M31-POS17	WFC3/IR, MULTIACCUM, IR	F139M	SAMP-SEQ=SPARS50; NSAMP=9	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS17 (17)	402.935899 Secs (402.936 Secs)	
								[==>]	*[1]*
9	F153M-dither4	(17) M31-POS17	WFC3/IR, MULTIACCUM, IR	F153M	SAMP-SEQ=SPARS50; NSAMP=9	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS17 (17)	402.935899 Secs (402.936 Secs)	
								[==>]	*[1]*
10	F127M-dither4	(17) M31-POS17	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS17 (17)	202.934095 Secs (202.934 Secs)	
								[==>]	*[1]*
11	F658N-dither4	ANY	ACS/WFC, ACCUM, WFC	F658N			Prime + Parallel Group 8-12 in POS17 (17)	515 Secs (515 Secs)	
								[==>]	*[1]*
12	F625W-dither4	ANY	ACS/WFC, ACCUM, WFC	F625W			Prime + Parallel Group 8-12 in POS17 (17)	340 Secs (340 Secs)	
								[==>]	*[1]*

Orbit Structure



Visit

Proposal 14072, POS18 (18) Sat Jul 25 01:10:18 GMT 2015

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, ACS/WFC

Special Requirements: ORIENT 285D TO 110 D

Comments: Using a 4pt dither for F127M, and a 2pt dither for F139M and F153M. Nyquist sampling will be recovered in two redder filters by leveraging the dithers in the blue filter - all filters will be reduced simultaneously. This strategy allows for maximum exposure lengths with ACS in parallel, mitigating latency due to buffer dumps.

Orientation requirements set to ensure that the parallel falls within the PHAT coverage & to maximize coverage of star-forming regions. These restrictions can be loosened if schedulability becomes an issue.

Fixed Targets

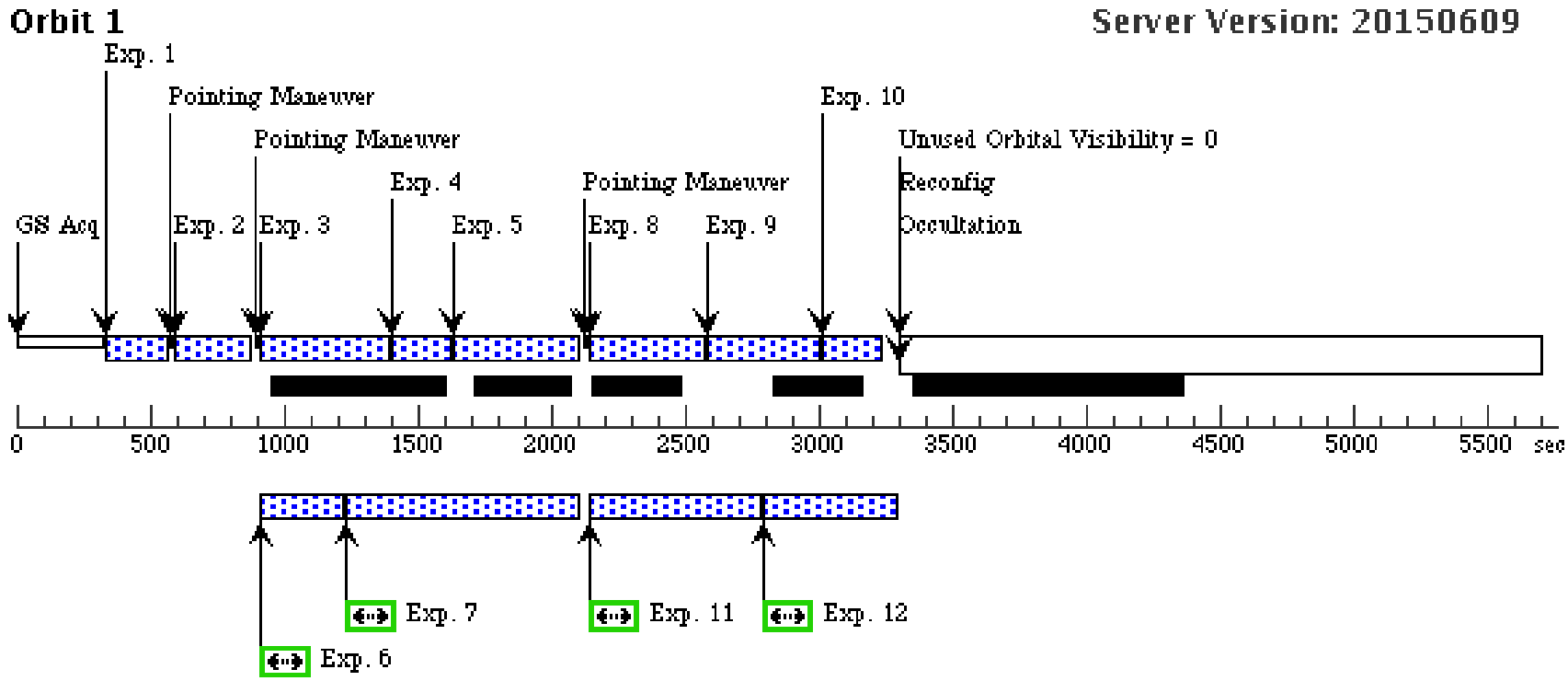
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(18)	M31-POS18 Alt Name1: ANDROMEDA-POS18	RA: 00 45 31.4750 (11.3811458d) Dec: +41 57 16.25 (41.95451d) Equinox: J2000		V=18+/-0.5	Reference Frame: ICRS

Comments: This is a star field, with a wide range of V-mags. The brightest star in the optical HST images of M31 from the Panchromatic Hubble Andromeda Treasury (PHAT) is about F475W=18 mag. The stars of interest to this program range from approximately F814W=18-23 mag.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F127M-dither1	(18) M31-POS18	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0.542,0.182		202.934095 Secs (202.934 Secs) *[==>]*	*[1]*
2	F127M-dither2	(18) M31-POS18	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=6	POS TARG -0.203,0.303		252.934546 Secs (252.935 Secs) *[==>]*	*[1]*
3	F139M-dither3	(18) M31-POS18	WFC3/IR, MULTIACCUM, IR	F139M	SAMP-SEQ=SPARS50; NSAMP=10	POS TARG 0,0	Prime + Parallel Group 3-7 in POS18 (18)	452.93635 Secs (452.936 Secs) *[==>]*	*[1]*
4	F127M-dither3	(18) M31-POS18	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0,0	Prime + Parallel Group 3-7 in POS18 (18)	202.934095 Secs (202.934 Secs) *[==>]*	*[1]*
5	F153M-dither3	(18) M31-POS18	WFC3/IR, MULTIACCUM, IR	F153M	SAMP-SEQ=SPARS50; NSAMP=10	POS TARG 0,0	Prime + Parallel Group 3-7 in POS18 (18)	452.93635 Secs (452.936 Secs) *[==>]*	*[1]*
6	F625W-dither3	ANY	ACS/WFC, ACCUM, WFC	F625W			Prime + Parallel Group 3-7 in POS18 (18)	100 Secs (100 Secs) *[==>]*	*[1]*
7	F658N-dither3	ANY	ACS/WFC, ACCUM, WFC	F658N			Prime + Parallel Group 3-7 in POS18 (18)	714 Secs (714 Secs) *[==>]*	*[1]*
8	F139M-dither4	(18) M31-POS18	WFC3/IR, MULTIACCUM, IR	F139M	SAMP-SEQ=SPARS50; NSAMP=9	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS18 (18)	402.935899 Secs (402.936 Secs) *[==>]*	*[1]*
9	F153M-dither4	(18) M31-POS18	WFC3/IR, MULTIACCUM, IR	F153M	SAMP-SEQ=SPARS50; NSAMP=9	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS18 (18)	402.935899 Secs (402.936 Secs) *[==>]*	*[1]*
10	F127M-dither4	(18) M31-POS18	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS18 (18)	202.934095 Secs (202.934 Secs) *[==>]*	*[1]*
11	F658N-dither4	ANY	ACS/WFC, ACCUM, WFC	F658N			Prime + Parallel Group 8-12 in POS18 (18)	515 Secs (515 Secs) *[==>]*	*[1]*
12	F625W-dither4	ANY	ACS/WFC, ACCUM, WFC	F625W			Prime + Parallel Group 8-12 in POS18 (18)	340 Secs (340 Secs) *[==>]*	*[1]*

Orbit Structure



Visit

Proposal 14072, POS19 (19) Sat Jul 25 01:10:18 GMT 2015

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, ACS/WFC

Special Requirements: ORIENT 315D TO 25 D; ORIENT 100D TO 120 D; ORIENT 54D TO 61 D

Comments: Using a 4pt dither for F127M, and a 2pt dither for F139M and F153M. Nyquist sampling will be recovered in two redder filters by leveraging the dithers in the blue filter - all filters will be reduced simultaneously. This strategy allows for maximum exposure lengths with ACS in parallel, mitigating latency due to buffer dumps.

Orientation requirements set to ensure that the parallel falls within the PHAT coverage & to maximize coverage of star-forming regions. These restrictions can be loosened if schedulability becomes an issue.

Fixed Targets

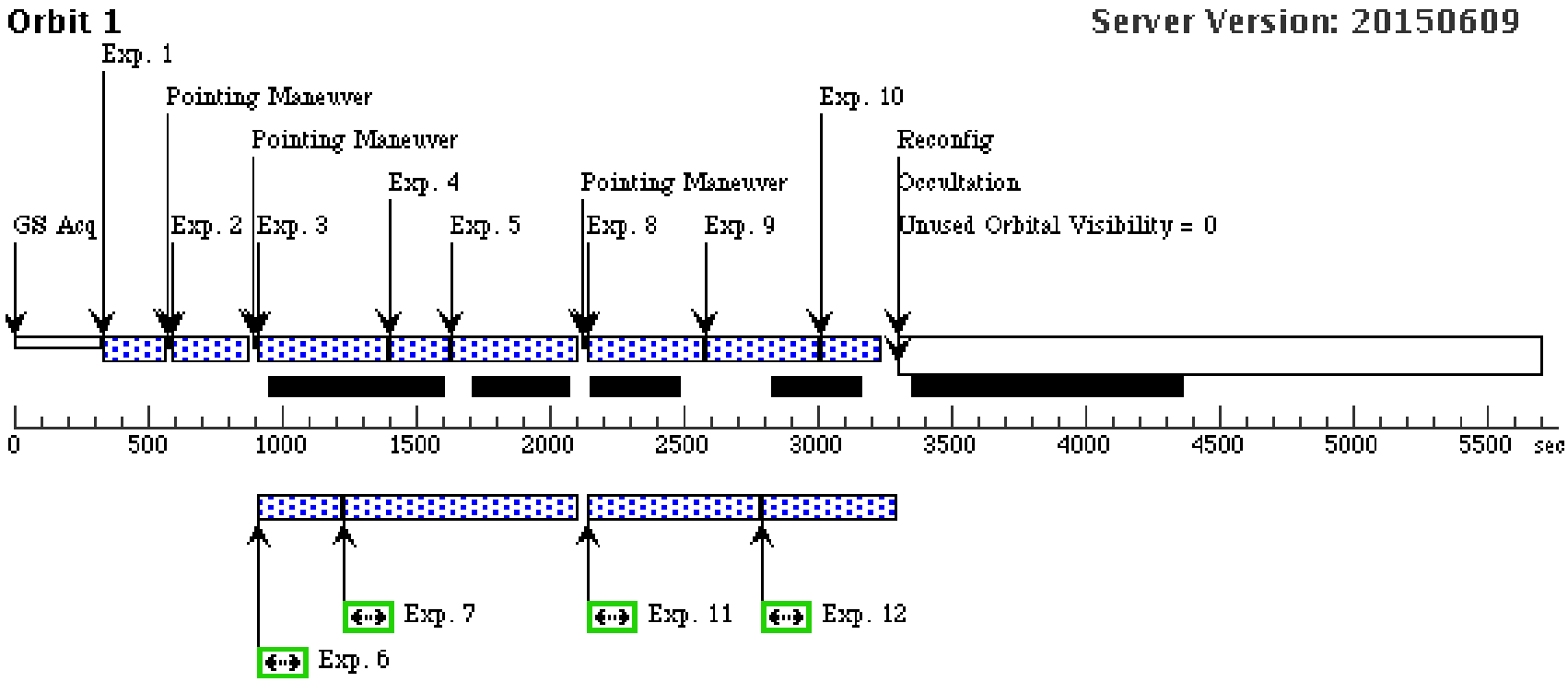
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(19)	M31-POS19 Alt Name1: ANDROMEDA-POS19	RA: 00 45 42.8610 (11.4285875d) Dec: +41 53 48.79 (41.89689d) Equinox: J2000		V=18+/-0.5	Reference Frame: ICRS

Comments: This is a star field, with a wide range of V-mags. The brightest star in the optical HST images of M31 from the Panchromatic Hubble Andromeda Treasury (PHAT) is about F475W=18 mag. The stars of interest to this program range from approximately F814W=18-23 mag.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F127M-dither1	(19) M31-POS19	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0.542,0.182		202.934095 Secs (202.934 Secs) *[==>]*	*[1]*
2	F127M-dither2	(19) M31-POS19	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=6	POS TARG -0.203,0.303		252.934546 Secs (252.935 Secs) *[==>]*	*[1]*
3	F139M-dither3	(19) M31-POS19	WFC3/IR, MULTIACCUM, IR	F139M	SAMP-SEQ=SPARS50; NSAMP=10	POS TARG 0,0	Prime + Parallel Group 3-7 in POS19 (19)	452.93635 Secs (452.936 Secs) *[==>]*	*[1]*
4	F127M-dither3	(19) M31-POS19	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0,0	Prime + Parallel Group 3-7 in POS19 (19)	202.934095 Secs (202.934 Secs) *[==>]*	*[1]*
5	F153M-dither3	(19) M31-POS19	WFC3/IR, MULTIACCUM, IR	F153M	SAMP-SEQ=SPARS50; NSAMP=10	POS TARG 0,0	Prime + Parallel Group 3-7 in POS19 (19)	452.93635 Secs (452.936 Secs) *[==>]*	*[1]*
6	F625W-dither3	ANY	ACS/WFC, ACCUM, WFC	F625W			Prime + Parallel Group 3-7 in POS19 (19)	100 Secs (100 Secs) *[==>]*	*[1]*
7	F658N-dither3	ANY	ACS/WFC, ACCUM, WFC	F658N			Prime + Parallel Group 3-7 in POS19 (19)	714 Secs (714 Secs) *[==>]*	*[1]*
8	F139M-dither4	(19) M31-POS19	WFC3/IR, MULTIACCUM, IR	F139M	SAMP-SEQ=SPARS50; NSAMP=9	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS19 (19)	402.935899 Secs (402.936 Secs) *[==>]*	*[1]*
9	F153M-dither4	(19) M31-POS19	WFC3/IR, MULTIACCUM, IR	F153M	SAMP-SEQ=SPARS50; NSAMP=9	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS19 (19)	402.935899 Secs (402.936 Secs) *[==>]*	*[1]*
10	F127M-dither4	(19) M31-POS19	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS19 (19)	202.934095 Secs (202.934 Secs) *[==>]*	*[1]*
11	F658N-dither4	ANY	ACS/WFC, ACCUM, WFC	F658N			Prime + Parallel Group 8-12 in POS19 (19)	515 Secs (515 Secs) *[==>]*	*[1]*
12	F625W-dither4	ANY	ACS/WFC, ACCUM, WFC	F625W			Prime + Parallel Group 8-12 in POS19 (19)	340 Secs (340 Secs) *[==>]*	*[1]*

Orbit Structure



Visit

Proposal 14072, POS20 (20) Sat Jul 25 01:10:18 GMT 2015

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, ACS/WFC

Special Requirements: ORIENT 0D TO 45 D

Comments: Using a 4pt dither for F127M, and a 2pt dither for F139M and F153M. Nyquist sampling will be recovered in two redder filters by leveraging the dithers in the blue filter - all filters will be reduced simultaneously. This strategy allows for maximum exposure lengths with ACS in parallel, mitigating latency due to buffer dumps.

Orientation requirements set to ensure that the parallel falls within the PHAT coverage & to maximize coverage of star-forming regions. These restrictions can be loosened if schedulability becomes an issue.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(20)	M31-POS20	RA: 00 46 15.9380 (11.5664083d)		V=18+/-0.5	Reference Frame: ICRS
	Alt Name1: ANDROMEDA-POS20	Dec: +41 57 27.09 (41.95753d)			
		Equinox: J2000			

Comments: This is a star field, with a wide range of V-mags. The brightest star in the optical HST images of M31 from the Panchromatic Hubble Andromeda Treasury (PHAT) is about F475W=18 mag. The stars of interest to this program range from approximately F814W=18-23 mag.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F127M-dither1	(20) M31-POS20	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0.542,0.182		202.934095 Secs (202.934 Secs)	
								[==>]	***[1]***
2	F127M-dither2	(20) M31-POS20	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=6	POS TARG -0.203,0.303		252.934546 Secs (252.935 Secs)	
								[==>]	***[1]***
3	F139M-dither3	(20) M31-POS20	WFC3/IR, MULTIACCUM, IR	F139M	SAMP-SEQ=SPARS50; NSAMP=10	POS TARG 0,0	Prime + Parallel Group 3-7 in POS20 (20)	452.93635 Secs (452.936 Secs)	
								[==>]	***[1]***
4	F127M-dither3	(20) M31-POS20	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0,0	Prime + Parallel Group 3-7 in POS20 (20)	202.934095 Secs (202.934 Secs)	
								[==>]	***[1]***
5	F153M-dither3	(20) M31-POS20	WFC3/IR, MULTIACCUM, IR	F153M	SAMP-SEQ=SPARS50; NSAMP=10	POS TARG 0,0	Prime + Parallel Group 3-7 in POS20 (20)	452.93635 Secs (452.936 Secs)	
								[==>]	***[1]***
6	F625W-dither3	ANY	ACS/WFC, ACCUM, WFC	F625W			Prime + Parallel Group 3-7 in POS20 (20)	100 Secs (100 Secs)	
								[==>]	***[1]***
7	F658N-dither3	ANY	ACS/WFC, ACCUM, WFC	F658N			Prime + Parallel Group 3-7 in POS20 (20)	714 Secs (714 Secs)	
								[==>]	***[1]***
8	F139M-dither4	(20) M31-POS20	WFC3/IR, MULTIACCUM, IR	F139M	SAMP-SEQ=SPARS50; NSAMP=9	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS20 (20)	402.935899 Secs (402.936 Secs)	
								[==>]	***[1]***
9	F153M-dither4	(20) M31-POS20	WFC3/IR, MULTIACCUM, IR	F153M	SAMP-SEQ=SPARS50; NSAMP=9	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS20 (20)	402.935899 Secs (402.936 Secs)	
								[==>]	***[1]***
10	F127M-dither4	(20) M31-POS20	WFC3/IR, MULTIACCUM, IR	F127M	SAMP-SEQ=SPARS50; NSAMP=5	POS TARG 0.339,0.485	Prime + Parallel Group 8-12 in POS20 (20)	202.934095 Secs (202.934 Secs)	
								[==>]	***[1]***
11	F658N-dither4	ANY	ACS/WFC, ACCUM, WFC	F658N			Prime + Parallel Group 8-12 in POS20 (20)	515 Secs (515 Secs)	
								[==>]	***[1]***
12	F625W-dither4	ANY	ACS/WFC, ACCUM, WFC	F625W			Prime + Parallel Group 8-12 in POS20 (20)	340 Secs (340 Secs)	
								[==>]	***[1]***

Orbit Structure