14717 - What is Enhancing the Tidal Disruption Rate of Stars in Post-Starburst Galaxies?

Cycle: 24, 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) PTF09GE-HOST	WFC3/UVIS	2	13-Mar-2017 21:00:57.0	yes
02	(1) PTF09GE-HOST	WFC3/UVIS	1	13-Mar-2017 21:00:58.0	yes
03	(1) PTF09GE-HOST	WFC3/UVIS	1	13-Mar-2017 21:00:59.0	yes
04	(4) ASASSN-14AE-HOST	WFC3/UVIS	2	13-Mar-2017 21:01:00.0	yes
05	(4) ASASSN-14AE-HOST	WFC3/UVIS	1	13-Mar-2017 21:01:00.0	yes
06	(4) ASASSN-14AE-HOST	WFC3/UVIS	1	13-Mar-2017 21:01:01.0	yes
07	(6) ASASSN-14LI-HOST	WFC3/UVIS	1	13-Mar-2017 21:01:02.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
08	(6) ASASSN-14LI-HOST	WFC3/UVIS	1	13-Mar-2017 21:01:02.0	yes
09	(6) ASASSN-14LI-HOST	WFC3/UVIS	1	13-Mar-2017 21:01:03.0	yes
10	(5) IPTF15AF-HOST	WFC3/UVIS	3	13-Mar-2017 21:01:04.0	yes
11	(5) IPTF15AF-HOST	WFC3/UVIS	2	13-Mar-2017 21:01:05.0	yes
12	(5) IPTF15AF-HOST	WFC3/UVIS	1	13-Mar-2017 21:01:05.0	yes
13	(1) PTF09GE-HOST CCDFLAT	STIS/CCD	2	13-Mar-2017 21:01:07.0	yes
14	(4) ASASSN-14AE-HOST CCDFLAT	STIS/CCD	3	13-Mar-2017 21:01:08.0	yes
15	(6) ASASSN-14LI-HOST CCDFLAT	STIS/CCD	1	13-Mar-2017 21:01:10.0	yes
16	(5) IPTF15AF-HOST CCDFLAT	STIS/CCD	2	13-Mar-2017 21:01:11.0	yes

25 Total Orbits Used

ABSTRACT

The search for the tidal disruption of stars by supermassive black holes (tidal disruption events; TDEs) is now yielding exciting results. Recently, we tied several events together into a coherent class of outbursts. This picture offers a surprising new insight: TDEs show a strong (200x) preference for post-starburst galaxies. Why is this? As likely post-merger galaxies, they could harbor a binary black hole in their center, which is expected to increase the rate of TDEs, but only at certain ages after the merger and for certain merger mass ratios. Alternatively, a disturbed central potential or nuclear gas reservoirs may be affecting stellar orbits in the core of the galaxy. Finally, a nuclear over-abundance of A stars (which dominate ground-based galaxy-integrated spectra), evolving to giants, could increase the global cross section for tidal disruption. HST spatial resolution and low surface brightness sensitivity allows us to test each of these options for four post-starburst TDE host galaxies. We will measure post-merger tidal tails, age-date the starburst using individual star cluster colors, map the luminosity profile of the inner ~100pc to test for asphericity or double nuclei, and localize the weak line emission and A-star population seen in our galaxy-integrated spectra. We will also perform bulge-disk decompositions to estimate the mass of the central black hole, a crucial test of TDE emission models. Our group has successfully carried out HST analyses of the star cluster populations, tidal tails, and core surface brightness profiles of (non-TDE-host) post-starburst galaxies, a sample which will serve as a control for the observations proposed here.

OBSERVING DESCRIPTION

We request UVIS imaging and STIS spectroscopy of four post-starburst galaxies. Our galaxies are ~5"-10" in size.

Imaging Goals:

1. Measure or set limits on extended tidal tails down to 27 mag/arcsec^2. The tails could extend out to ~25" form the host galaxy center. We therefore use the UVIS2 pointing which puts us ~40" from the nearest chip edge.

2. Measure the color and luminosity of globular clusters for more accurate age-dating of the starburst. For this we require the F438W and F625W filters, and our exposure times are set to achieve a color error of <0.2 mag for clusters brighter than -11 mag at the redshift of our galaxies. We require high spatial resultion in order to detect the globular clusters (the clusters will be unresolved point sources, our need for HST is not to resolve the clusters, but rather for the improved point source sensitivity).

3. Map the luminosity profile of the inner few tens of parsecs to constrain nuclear asphericity and perform disk/bulge decompositions for bulge to black hole mass estimates. We require a limiting surface brightness of 23 mag/arcsec^2 in both F438W and F814W fiters needed to fit the HST data with <10% errors using galfit models. To improve spatial resultion, we implement dithering patterns for all our exposures.

We separate our exposures into different visits for each target and filter to imrpove scheduling flexibility (as the different filters do not necesarily have to be obtained consecutively). However, if different visits of the same target can be combined, the time saved for re-acquiring could be used to increase the exposure time on target and improve the signal to noise.

Spectroscopy Goals:

1. Perform a spatially resolved characterization of the stellar population as a function of distance from the galactic nucleus for our two brightest targets (ASASSN-14li and ASASSN-14ae). The main spectral lines required for this analysis are those of H (6563, 4861, 4341, 4102, 3970 Ang), Ca H+K (3934, 3969 Ang) and Mg I (3832, 3838, 4571, 5167, 5173 Ang). For this purpose we request to align the slit along the long axis of each of these galaxies (as specified in the orient angles).

2. Localize the weak emission lines in all our targets. Here we wish to use the O I (6300 Ang), Fe X (6437 Ang), N II (6548, 6583 Ang), S II (6716, 6730 Ang) and O III (5007 Ang) lines, in addition to the Balmer sequence (specifically the Hbeta/O III line ratio). We have already detected these lines in ground-based integrated spectra of the hosts but we require HST in order to localize the line emitting region and constrain a likely association to the nucleus.

We split each of our spectroscopy exposures in 3 (if an acquisition block is present in the same orbit) or 4 (if acquisition was performed in a previous orbit of the same visit) for cosmic-ray rejection.

Visit

Proposal 14717, PTF09GE-F438W (01), scheduling Tue Mar 14 01:01:12 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: ORIENT 0D TO 131 D; ORIENT 151D TO 220 D; ORIENT 240D TO 359 D

Comments: Note there is a bright (V_mag 11.8) object off the CCD to the north-west (object ID N66000068 in the bright object tool). It is not clear to us whether this object could affect other instruments or if it could cause difraction spikes in our image. We request advice.

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false		(1)

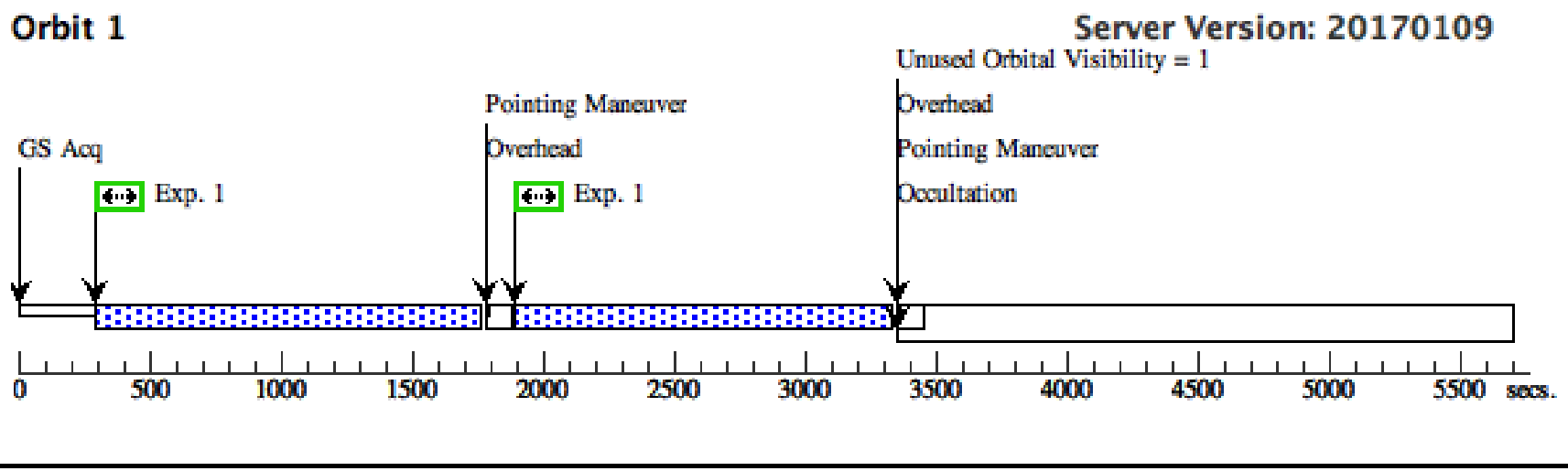
Fixed Targets

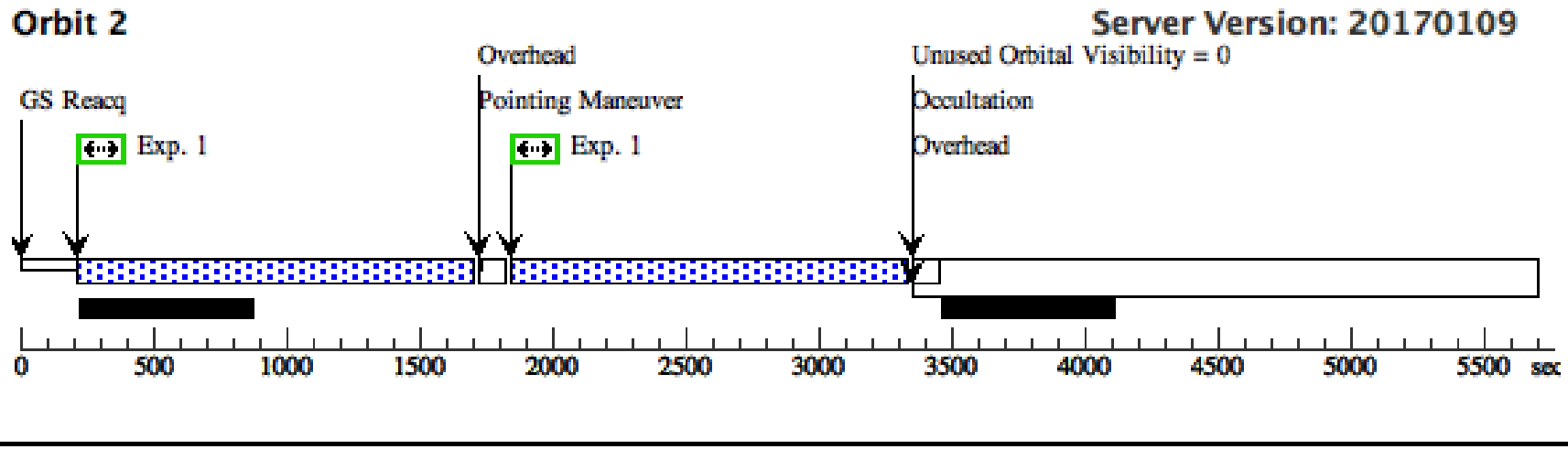
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	PTF09GE-HOST	RA: 14 57 3.1700 (224.2632083d) Dec: +49 36 40.96 (49.61138d) Equinox: J2000		V=18.0	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F438W	(1) PTF09GE-HOST	WFC3/UVIS, ACCUM, UVIS2	F438W			Pattern 1, Exps 1-1 in PTF09GE-F438W (01) (1)	1200 Secs (5876 Secs)	
								[==>1441.0 Secs (Pattern 1)] *[==>1441.0 Secs (Pattern 2)]*	***[1]***
								[==>1497.0 Secs (Pattern 3)] *[==>1497.0 Secs (Pattern 4)]*	***[2]***

Orbit Structure





Visit

Proposal 14717, PTF09GE-F625W (02), scheduled Tue Mar 14 01:01:12 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: ORIENT 0D TO 131 D; ORIENT 151D TO 220 D; ORIENT 240D TO 359 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false		(1)

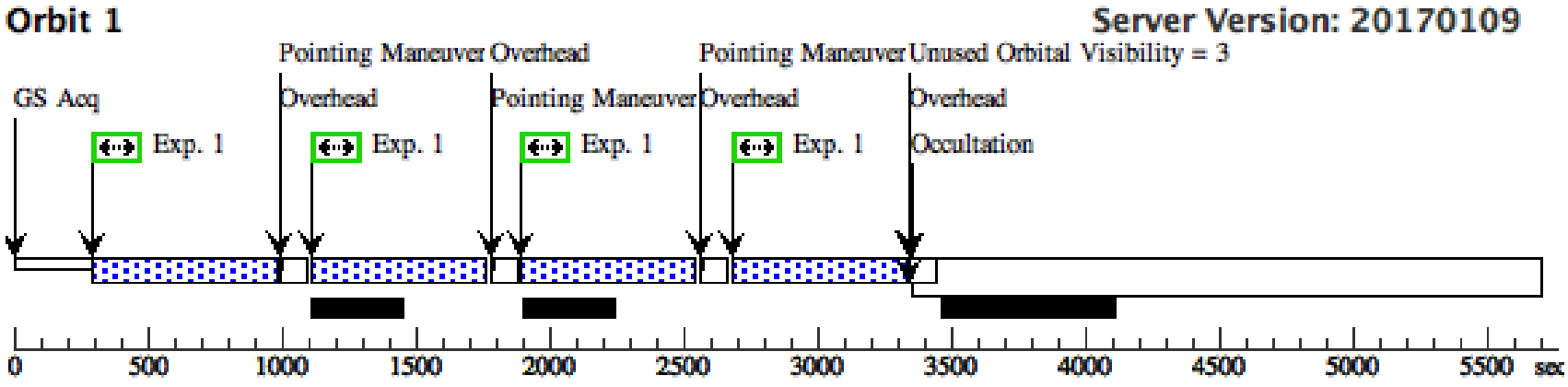
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	PTF09GE-HOST	RA: 14 57 3.1700 (224.2632083d) Dec: +49 36 40.96 (49.61138d) Equinox: J2000		V=18.0	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F625W	(1) PTF09GE-HOST	WFC3/UVIS, ACCUM, UVIS2	F625W			Pattern 1, Exps 1-1 in PTF09GE-F625W (02) (1)	600 Secs (2624 Secs) *[==>656.0 Secs (Pattern 1)]* *[==>656.0 Secs (Pattern 2)]* *[==>656.0 Secs (Pattern 3)]* *[==>656.0 Secs (Pattern 4)]*	***[1]***

Orbit Structure



Visit

Proposal 14717, PTF09GE-F814W (03), completed Tue Mar 14 01:01:12 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: ORIENT 0D TO 131 D; ORIENT 151D TO 220 D; ORIENT 240D TO 359 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false		(1)

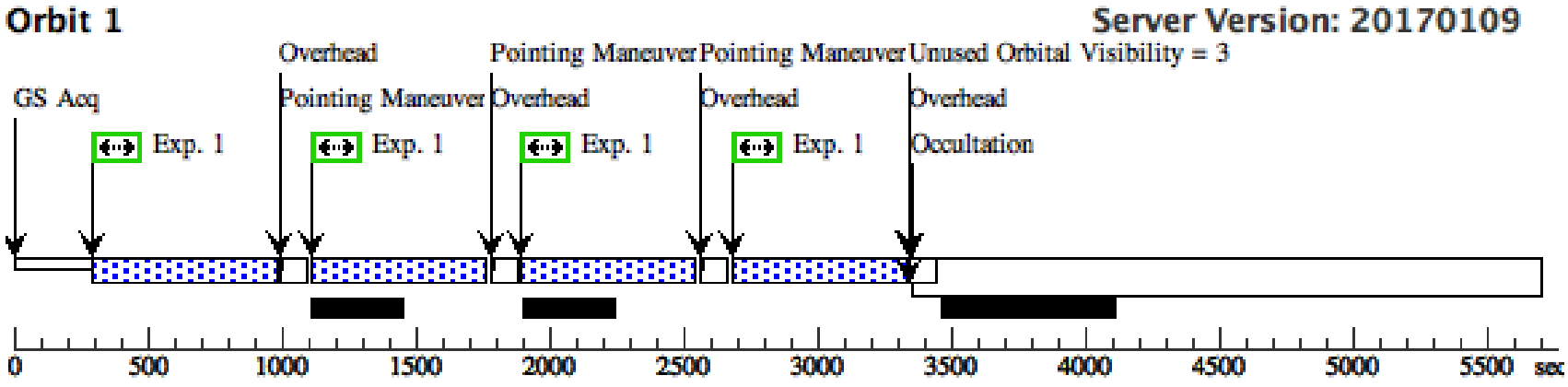
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	PTF09GE-HOST	RA: 14 57 3.1700 (224.2632083d) Dec: +49 36 40.96 (49.61138d) Equinox: J2000		V=18.0	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F814W	(1) PTF09GE-HOST	WFC3/UVIS, ACCUM, UVIS2	F814W			Pattern 1, Exps 1-1 in PTF09GE-F814W (03) (1)	600 Secs (2624 Secs) *[==>656.0 Secs (Pattern 1)]* *[==>656.0 Secs (Pattern 2)]* *[==>656.0 Secs (Pattern 3)]* *[==>656.0 Secs (Pattern 4)]*	*[1]*

Orbit Structure



Visit

Proposal 14717, ASASSN14AE-F438W (04), scheduling Tue Mar 14 01:01:12 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: (none)

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false		(1)

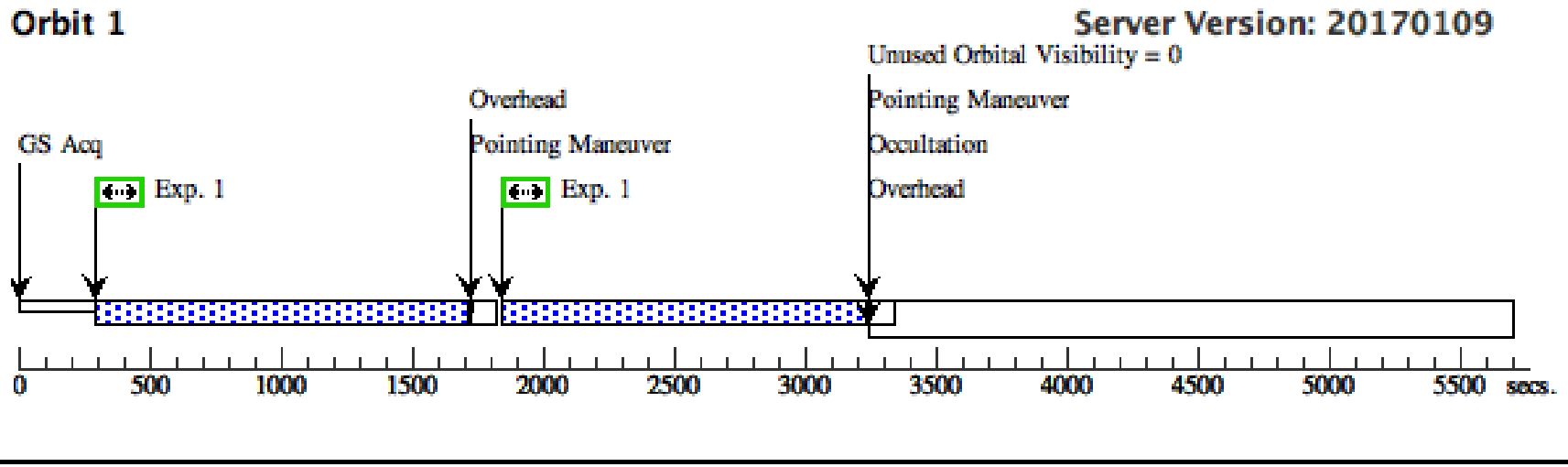
Fixed Targets

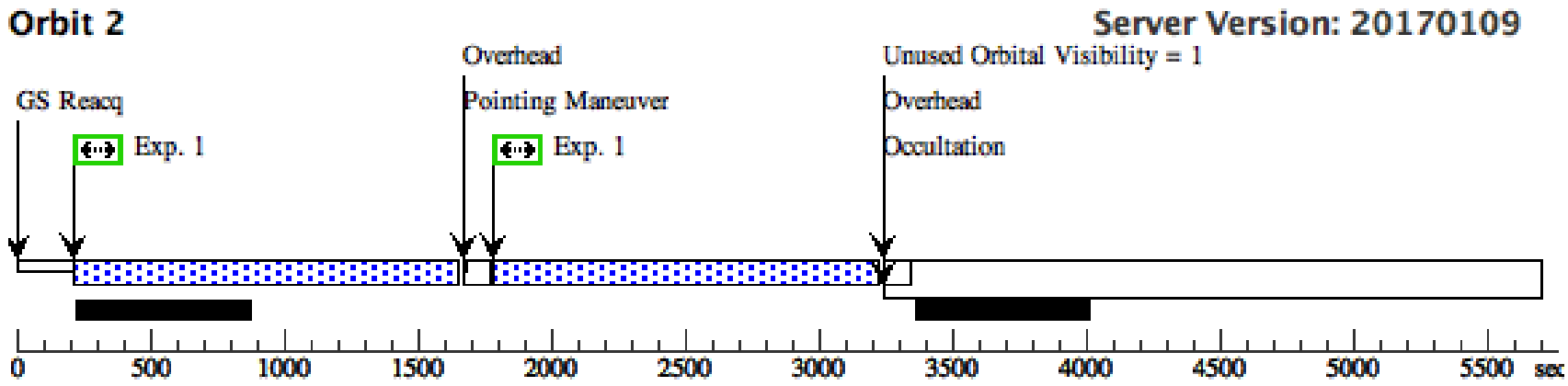
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	ASASSN-14AE-HOST	RA: 11 08 40.1100 (167.1671250d) Dec: +34 05 52.22 (34.09784d) Equinox: J2000		V=17.3	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F438W	(4) ASASSN-14AE-HOST	WFC3/UVIS, ACCUM, UVIS2	F438W			Pattern 1, Exps 1-1 in ASASSN14AE-F438W (04) (1)	1200 Secs (5662 Secs)	
								[==>1388.0 Secs (Pattern 1)] *[==>1388.0 Secs (Pattern 2)]*	***[1]***
								[==>1443.0 Secs (Pattern 3)] *[==>1443.0 Secs (Pattern 4)]*	***[2]***

Orbit Structure





Visit

Proposal 14717, ASASSN14AE-F625W (05), scheduling Tue Mar 14 01:01:13 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: (none)

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false		(1)

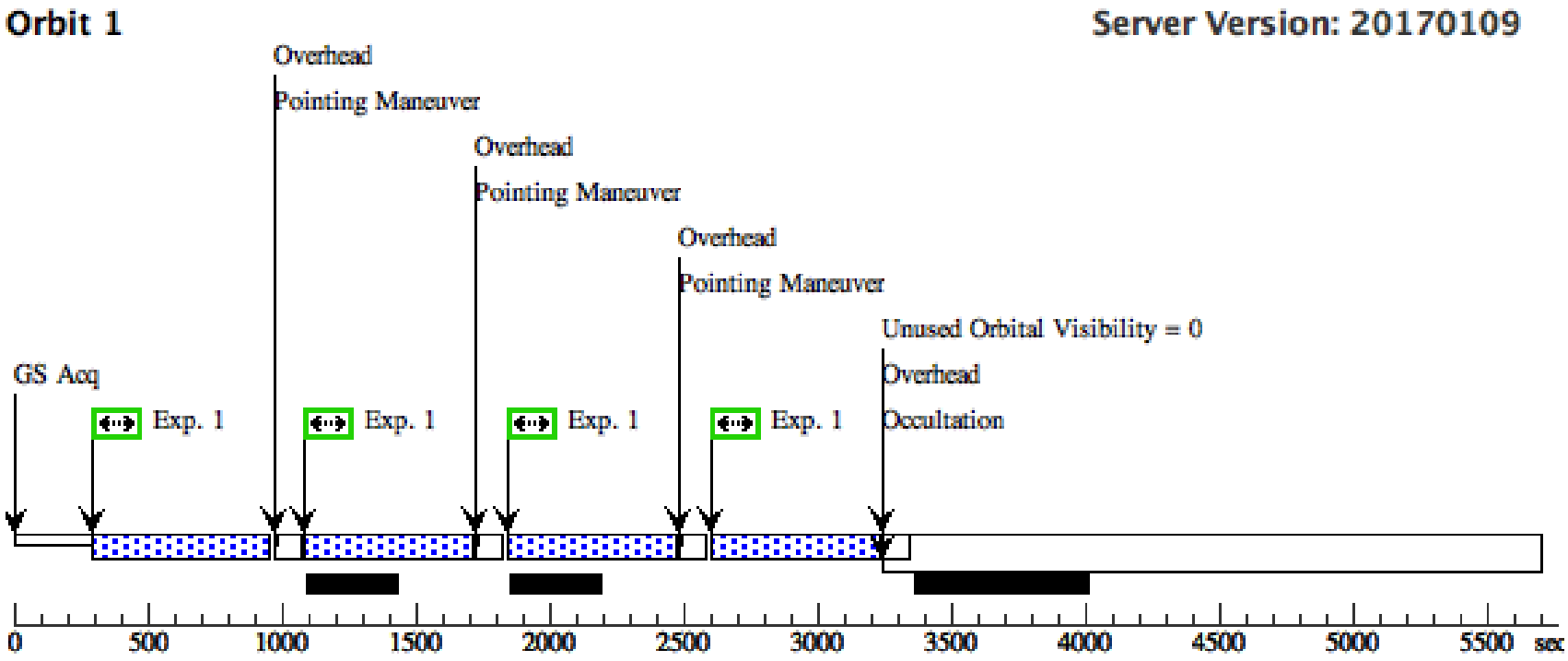
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	ASASSN-14AE-HOST	RA: 11 08 40.1100 (167.1671250d) Dec: +34 05 52.22 (34.09784d) Equinox: J2000		V=17.3	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F625W	(4) ASASSN-14AE-HOST	WFC3/UVIS, ACCUM, UVIS2	F625W			Pattern 1, Exps 1-1 in ASASSN14AE-F625W (05) (1)	600 Secs (2520 Secs) *[==>630.0 Secs (Pattern 1)]* *[==>630.0 Secs (Pattern 2)]* *[==>630.0 Secs (Pattern 3)]* *[==>630.0 Secs (Pattern 4)]*	***[1]***

Orbit Structure



Visit

Proposal 14717, ASASSN14AE-F814W (06), completed Tue Mar 14 01:01:13 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: (none)

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false		(1)

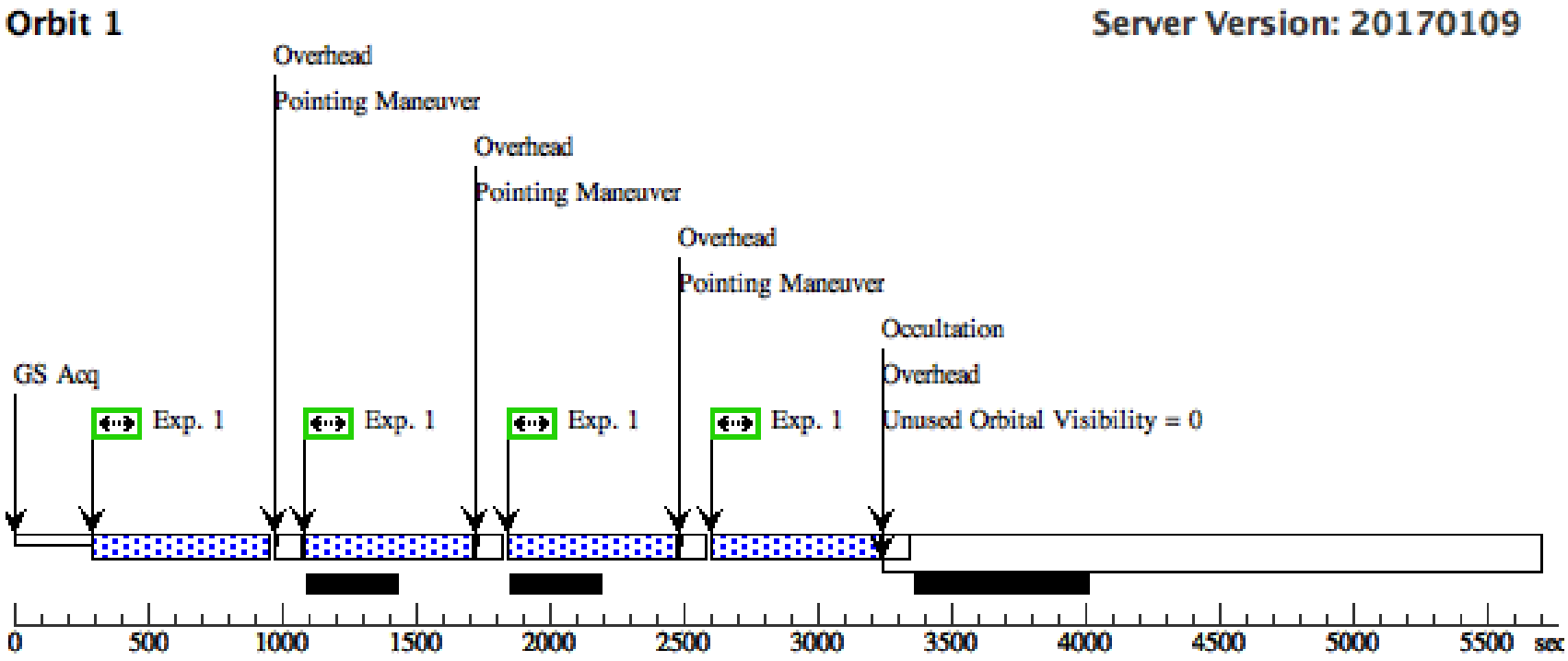
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	ASASSN-14AE-HOST	RA: 11 08 40.1100 (167.1671250d) Dec: +34 05 52.22 (34.09784d) Equinox: J2000		V=17.3	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F814W	(4) ASASSN-14AE-HOST	WFC3/UVIS, ACCUM, UVIS2	F814W			Pattern 1, Exps 1-1 in ASASSN14AE-F814W (06) (1)	600 Secs (2520 Secs) *[==>630.0 Secs (Pattern 1)]* *[==>630.0 Secs (Pattern 2)]* *[==>630.0 Secs (Pattern 3)]* *[==>630.0 Secs (Pattern 4)]*	***[1]***

Orbit Structure



Visit

Proposal 14717, ASASSN14LI-F438W (07), scheduling Tue Mar 14 01:01:13 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: (none)

Patterns

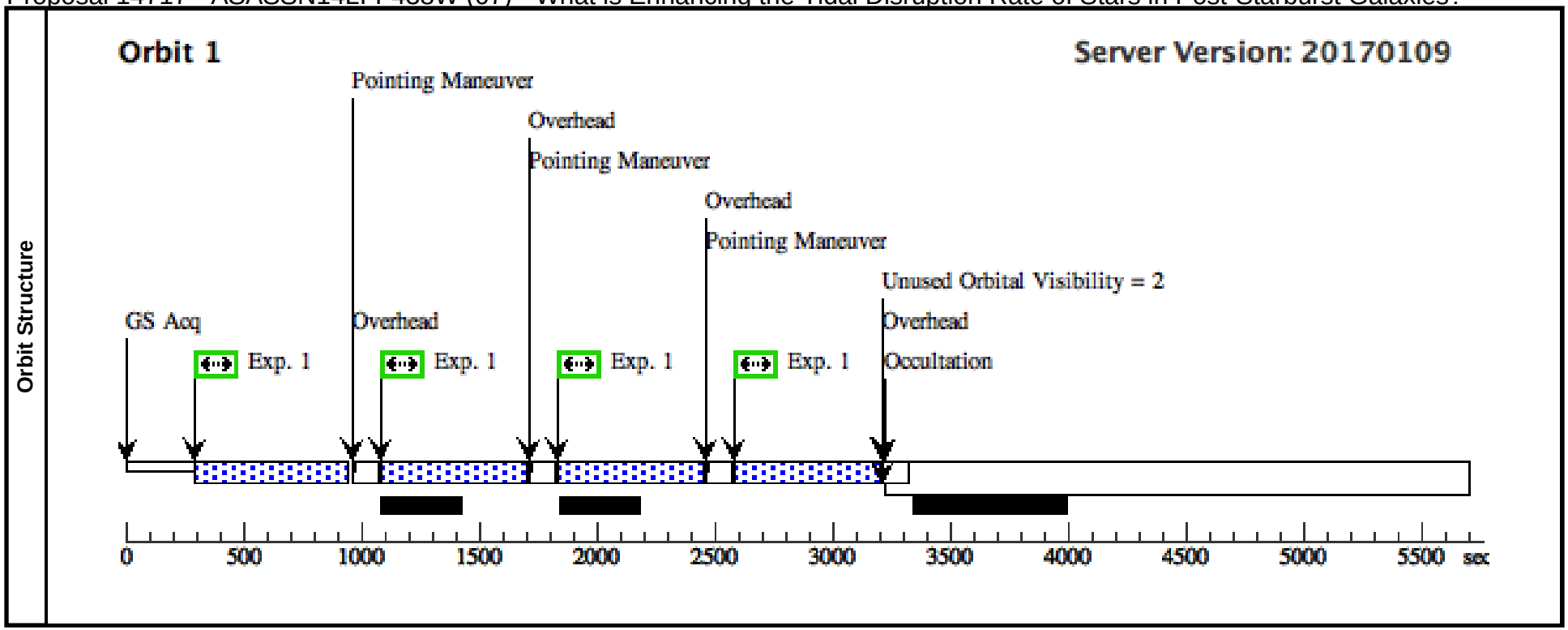
#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false		(1)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(6)	ASASSN-14LI-HOST	RA: 12 48 15.2300 (192.0634583d) Dec: +17 46 26.48 (17.77402d) Equinox: J2000		V=16	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F438W	(6) ASASSN-14LI-HOST	WFC3/UVIS, ACCUM, UVIS2	F438W	FLASH=8		Pattern 1, Exps 1-1 in ASASSN14LI-F438W (07) (1)	600 Secs (2476 Secs) *[==>619.0 Secs (Pattern 1)]* *[==>619.0 Secs (Pattern 2)]* *[==>619.0 Secs (Pattern 3)]* *[==>619.0 Secs (Pattern 4)]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20170109
Pointing Maneuver
Overhead
Pointing Maneuver
Overhead
Pointing Maneuver
Unused Orbital Visibility = 2
GS Acq
Exp. 1
Overhead
Exp. 1
Exp. 1
Exp. 1
Overhead
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14717, ASASSN14LI-F625W (08), scheduling Tue Mar 14 01:01:13 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: (none)

Patterns

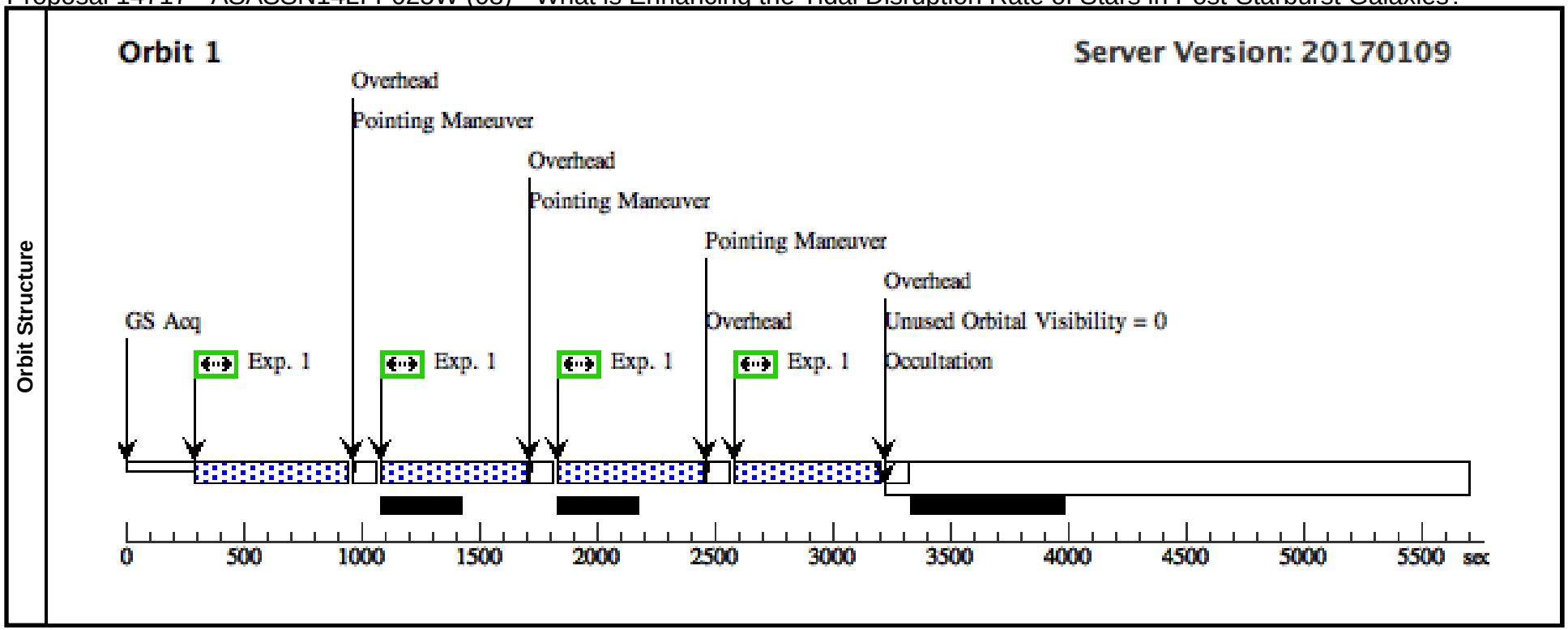
#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false		(1)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(6)	ASASSN-14LI-HOST	RA: 12 48 15.2300 (192.0634583d) Dec: +17 46 26.48 (17.77402d) Equinox: J2000		V=16	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F625W	(6) ASASSN-14LI-HOST	WFC3/UVIS, ACCUM, UVIS2	F625W			Pattern 1, Exps 1-1 in ASASSN14LI-F625W (08) (1)	600 Secs (2496 Secs) *[==>624.0 Secs (Pattern 1)]* *[==>624.0 Secs (Pattern 2)]* *[==>624.0 Secs (Pattern 3)]* *[==>624.0 Secs (Pattern 4)]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20170109
Overhead
Pointing Maneuver
Overhead
Pointing Maneuver
Pointing Maneuver
Overhead
Overhead
Unused Orbital Visibility = 0
GS Acq
Exp. 1
Exp. 1
Exp. 1
Exp. 1
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14717, ASASSN14LI-F814W (09), scheduling Tue Mar 14 01:01:13 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: (none)

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false		(1)

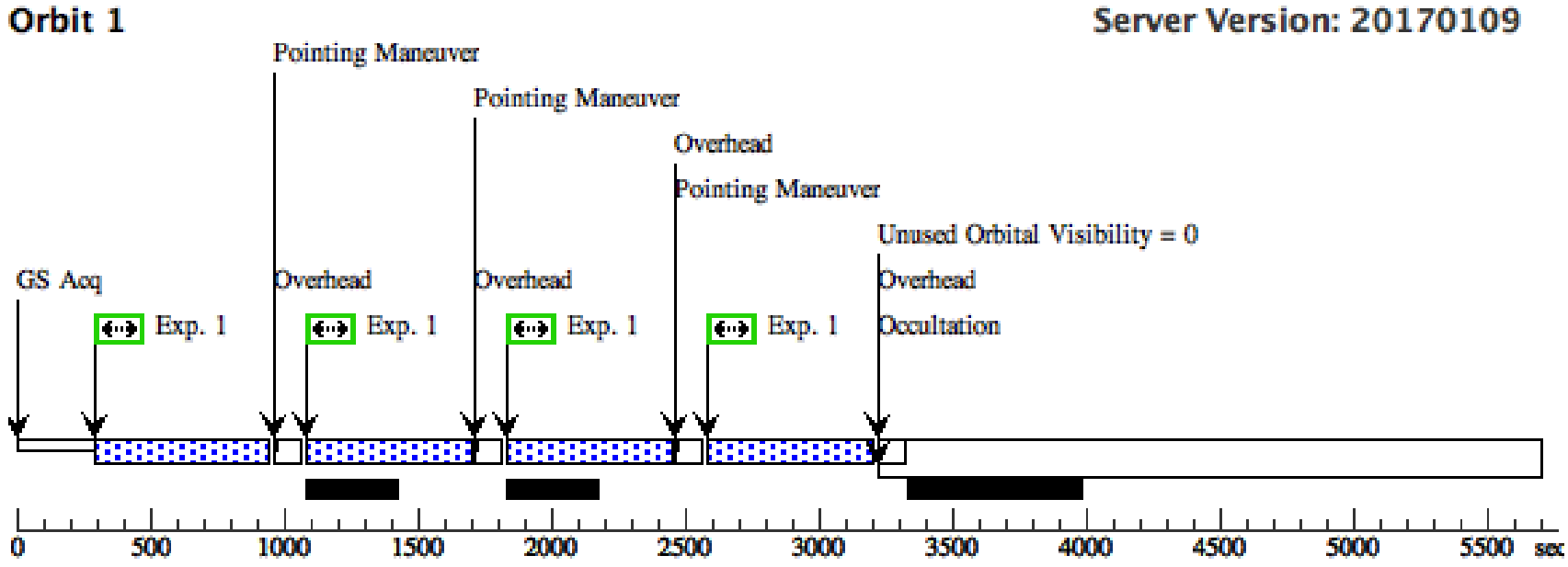
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(6)	ASASSN-14LI-HOST	RA: 12 48 15.2300 (192.0634583d) Dec: +17 46 26.48 (17.77402d) Equinox: J2000		V=16	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F814W	(6) ASASSN-14LI-HOST	WFC3/UVIS, ACCUM, UVIS2	F814W			Pattern 1, Exps 1-1 in ASASSN14LI-F814W (09) (1)	600 Secs (2496 Secs) *[==>624.0 Secs (Pattern 1)]* *[==>624.0 Secs (Pattern 2)]* *[==>624.0 Secs (Pattern 3)]* *[==>624.0 Secs (Pattern 4)]*	*[1]*

Orbit Structure



Visit

Proposal 14717, IPTF15AF-F438W (10), completed Tue Mar 14 01:01:13 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: (none)

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.135 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1), (2)

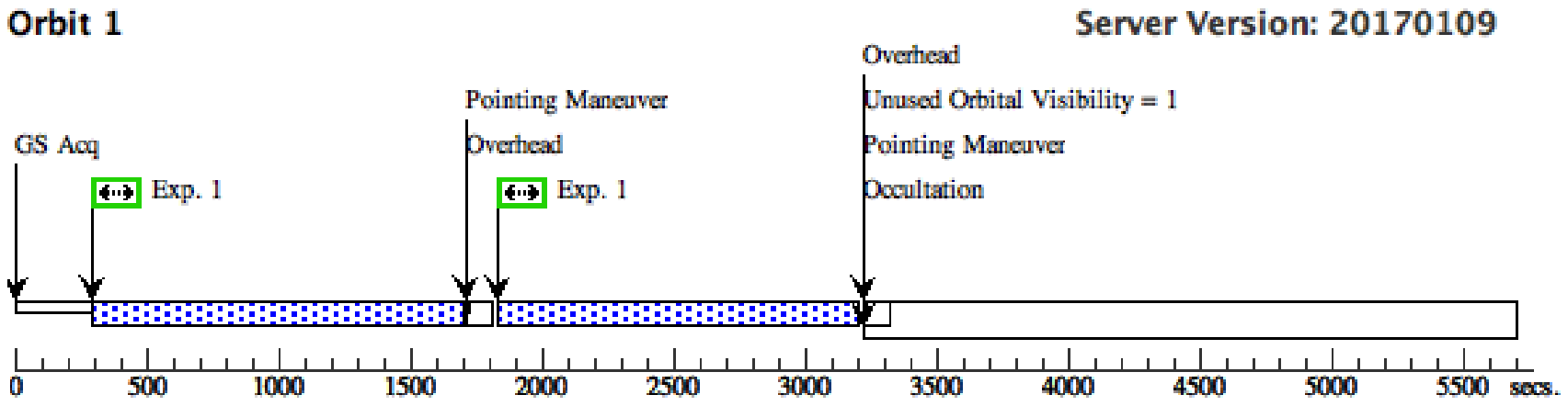
Fixed Targets

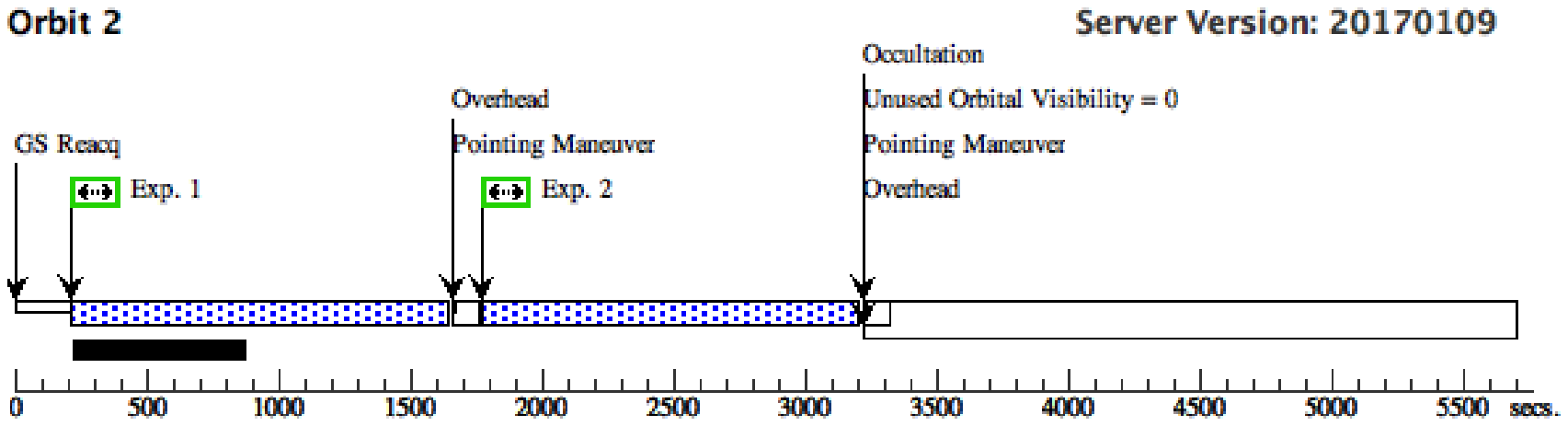
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(5)	IPTF15AF-HOST	RA: 08 48 28.1300 (132.1172083d) Dec: +22 03 33.49 (22.05930d) Equinox: J2000		V=18.5	Reference Frame: ICRS

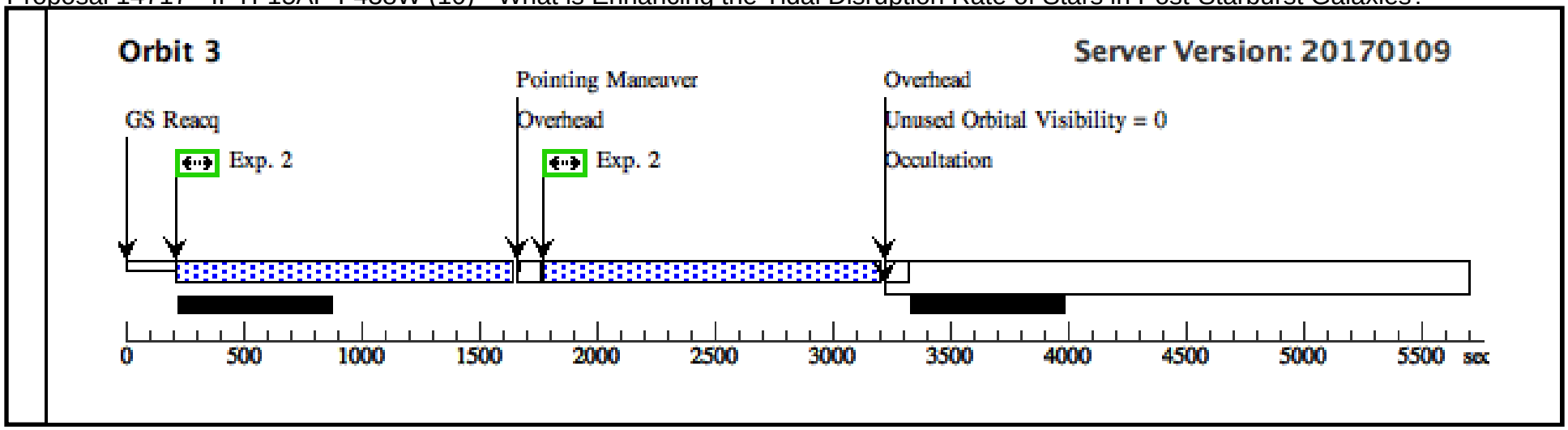
Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F438W	(5) IPTF15AF-HOST	WFC3/UVIS, ACCUM, UVIS2	F438W			Pattern 2, Exps 1-1 in IPTF15AF-F438W (10) (2)	1200 Secs (4184 Secs)	
								[==>1376.0 Secs (Pattern 1)] *[==>1376.0 Secs (Pattern 2)]*	***[1]***
								[==>1432.0 Secs (Pattern 3)]	***[2]***
2	F438W	(5) IPTF15AF-HOST	WFC3/UVIS, ACCUM, UVIS2	F438W		POS TARG null,0.0996	Pattern 2, Exps 2-2 in IPTF15AF-F438W (10) (2)	1200 Secs (4296 Secs)	
								[==>1432.0 Secs (Pattern 1)]	***[2]***
								[==>1432.0 Secs (Pattern 2)] *[==>1432.0 Secs (Pattern 3)]*	***[3]***

Orbit Structure






Orbit 3
Server Version: 20170109
GS Reacq
Exp. 2
Pointing Maneuver
Overhead
Exp. 2
Overhead
Unused Orbital Visibility = 0
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14717, IPTF15AF-F625W (11), completed Tue Mar 14 01:01:13 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: (none)

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false		(1)

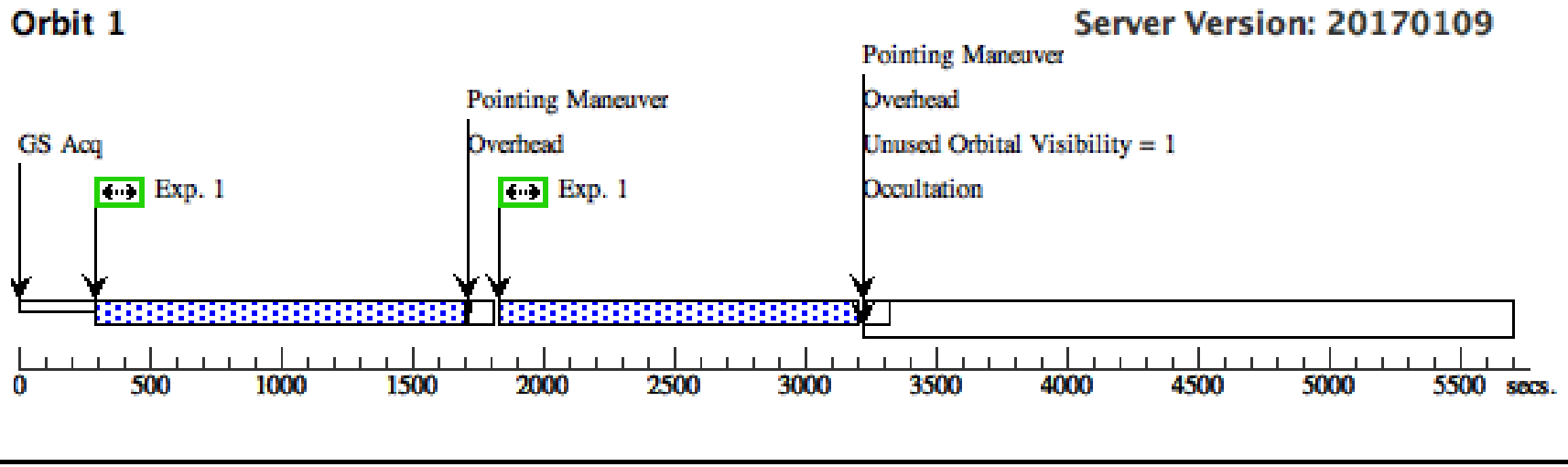
Fixed Targets

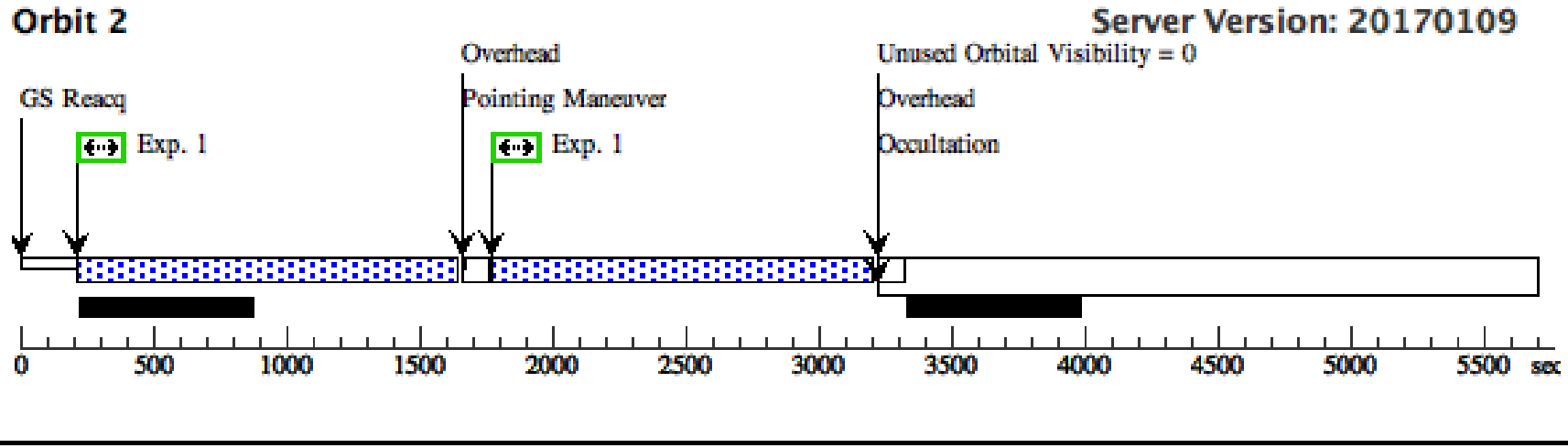
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(5)	IPTF15AF-HOST	RA: 08 48 28.1300 (132.1172083d) Dec: +22 03 33.49 (22.05930d) Equinox: J2000		V=18.5	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F625W	(5) IPTF15AF-HOST	WFC3/UVIS, ACCUM, UVIS2	F625W			Pattern 1, Exps 1-1 in IPTF15AF-F625W (11) (1)	1200 Secs (5616 Secs)	
								[==>1376.0 Secs (Pattern 1)] *[==>1376.0 Secs (Pattern 2)]*	***[1]***
								[==>1432.0 Secs (Pattern 3)] *[==>1432.0 Secs (Pattern 4)]*	***[2]***

Orbit Structure





Visit

Proposal 14717, IPTF15AF-F814W (12), completed Tue Mar 14 01:01:13 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: (none)

Patterns

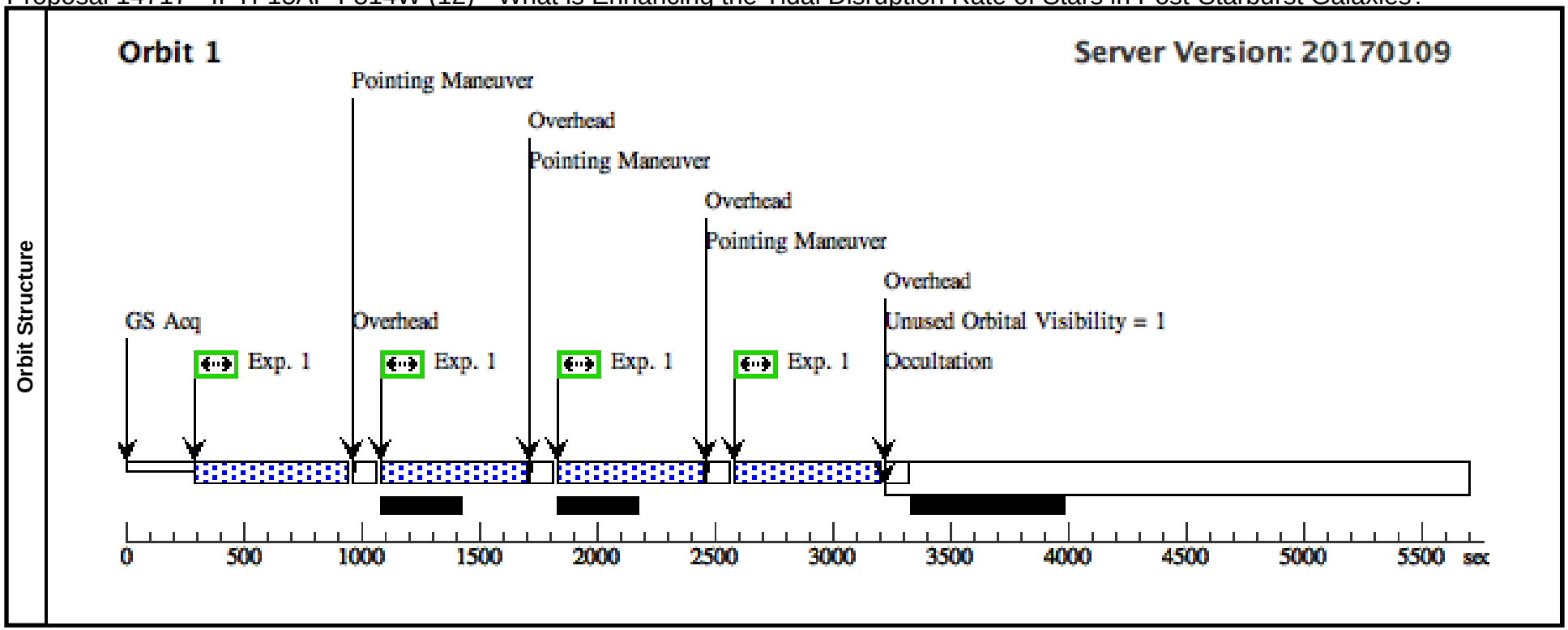
#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false		(1)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(5)	IPTF15AF-HOST	RA: 08 48 28.1300 (132.1172083d) Dec: +22 03 33.49 (22.05930d) Equinox: J2000		V=18.5	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F814W	(5) IPTF15AF-HOST	WFC3/UVIS, ACCUM, UVIS2	F814W			Pattern 1, Exps 1-1 in IPTF15AF-F814W (12) (1)	600 Secs (2496 Secs) *[==>624.0 Secs (Pattern 1)]* *[==>624.0 Secs (Pattern 2)]* *[==>624.0 Secs (Pattern 3)]* *[==>624.0 Secs (Pattern 4)]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20170109
Pointing Maneuver
Overhead
Pointing Maneuver
Overhead
Pointing Maneuver
Overhead
Unused Orbital Visibility = 1
Occultation
GS Acq
Overhead
Exp. 1
Exp. 1
Exp. 1
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14717, PTF09GE-Spectra (13), implementation Tue Mar 14 01:01:13 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/CCD

Special Requirements: ORIENT 190D TO 210 D; ORIENT 10D TO 30 D

Comments: Requesting ~200 degree angle to align with galaxy's long axis.

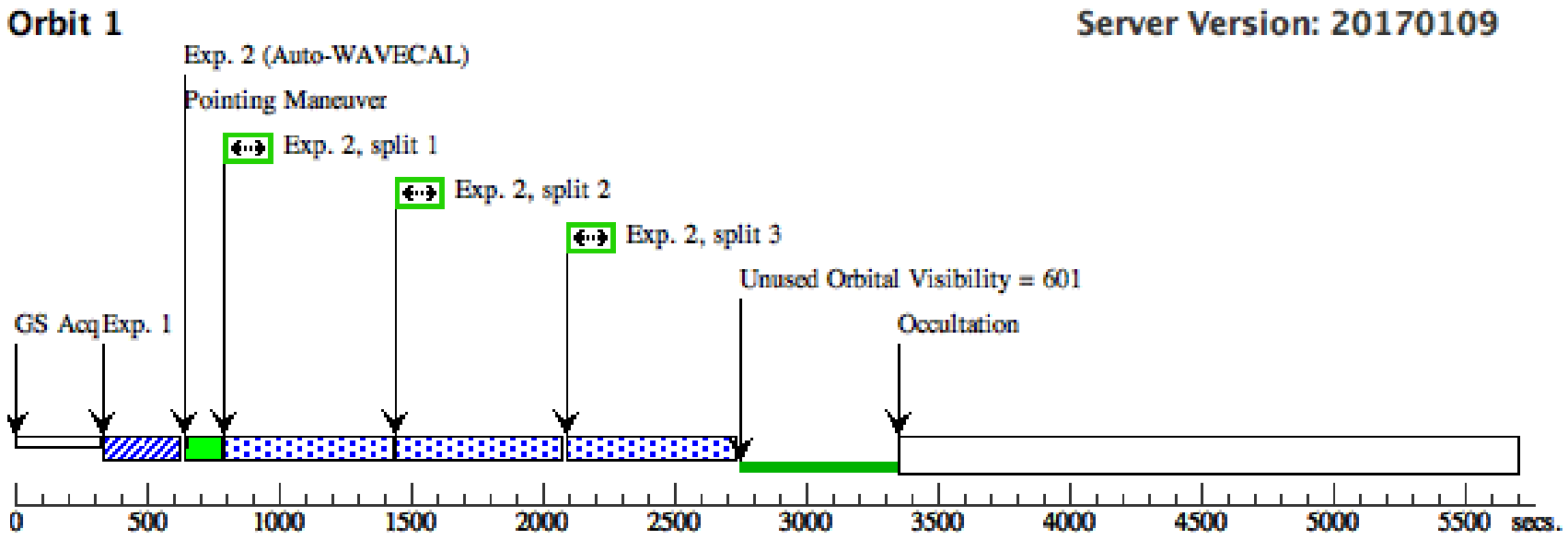
Fixed Targets

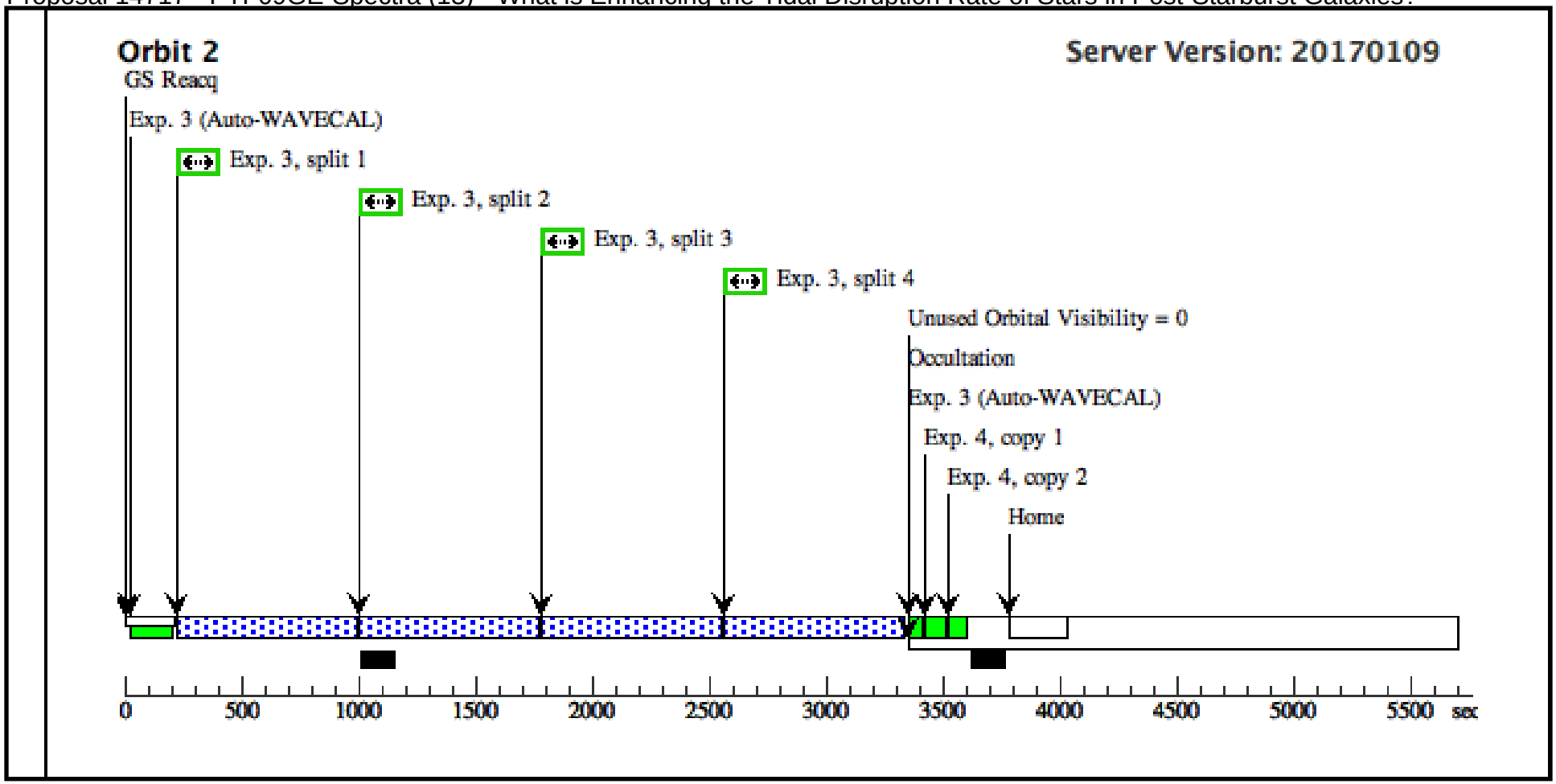
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	PTF09GE-HOST	RA: 14 57 3.1700 (224.2632083d) Dec: +49 36 40.96 (49.61138d) Equinox: J2000		V=18.0	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Acquisition	(1) PTF09GE-HOST	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=DIFFUSE; DIFFUSE-CENTER=FLUX-CENTROID; CHECKBOX=11			10 Secs (10 Secs) *[==>]*	***[1]***
2	G430L	(1) PTF09GE-HOST	STIS/CCD, ACCUM, 52X0.2	G430L 4300 A	CR-SPLIT=3			1800 Secs (1815 Secs) *[==>605.0 Secs (Split 1)]* *[==>605.0 Secs (Split 2)]* *[==>605.0 Secs (Split 3)]*	***[1]***
3	G750L	(1) PTF09GE-HOST	STIS/CCD, ACCUM, 52X0.2	G750L 7751 A	CR-SPLIT=4			2300 Secs (2948 Secs) *[==>737.0 Secs (Split 1)]* *[==>737.0 Secs (Split 2)]* *[==>737.0 Secs (Split 3)]* *[==>737.0 Secs (Split 4)]*	***[2]***
4	Flats	CCDFLAT	STIS/CCD, ACCUM, 52X0.2	G750L 7751 A				*[==>(Copy 1)]* *[==>(Copy 2)]*	***[2]***

Orbit Structure




Orbit 2
Server Version: 20170109
GS Reacq
Exp. 3 (Auto-WAVECAL)
Exp. 3, split 1
Exp. 3, split 2
Exp. 3, split 3
Exp. 3, split 4
Unused Orbital Visibility = 0
Occultation
Exp. 3 (Auto-WAVECAL)
Exp. 4, copy 1
Exp. 4, copy 2
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14717, ASASSN14AE-Spectra (14), implementation Tue Mar 14 01:01:13 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/CCD

Special Requirements: ORIENT 164D TO 168 D; ORIENT 344D TO 348 D

Comments: Requesting ~166 degree angle to align with galaxy's long axis.

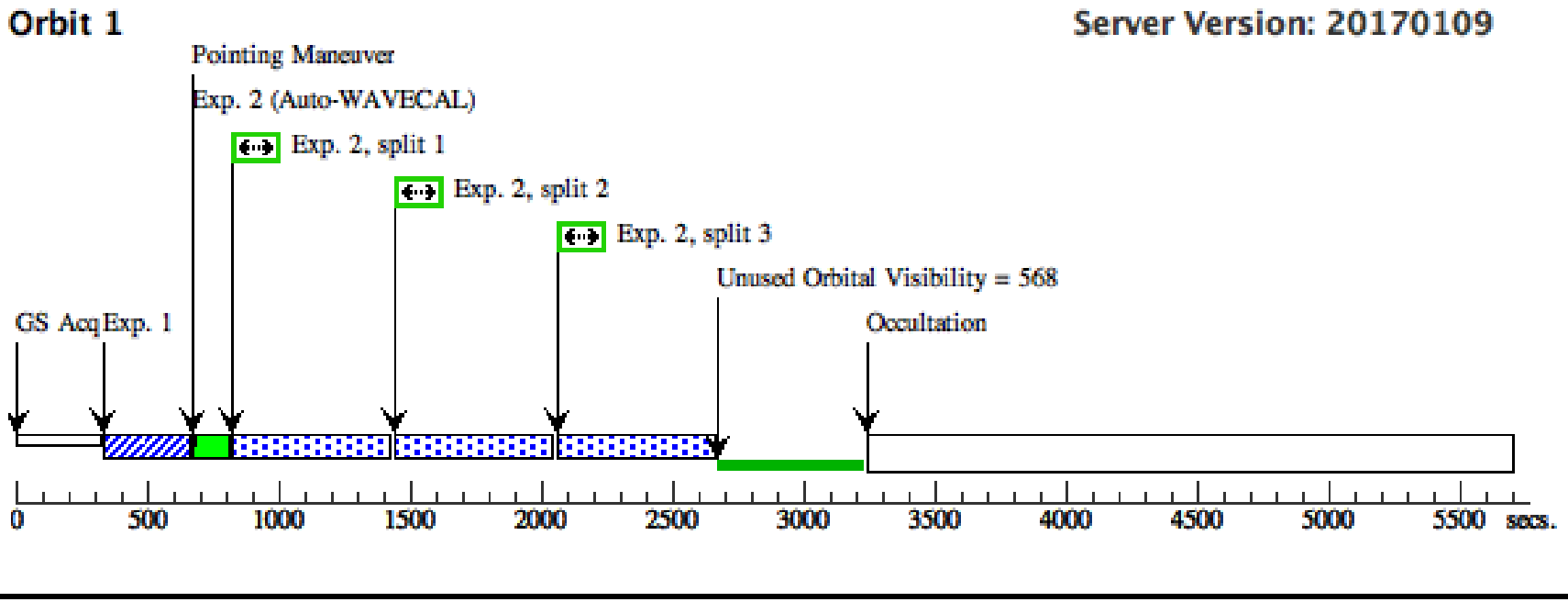
Fixed Targets

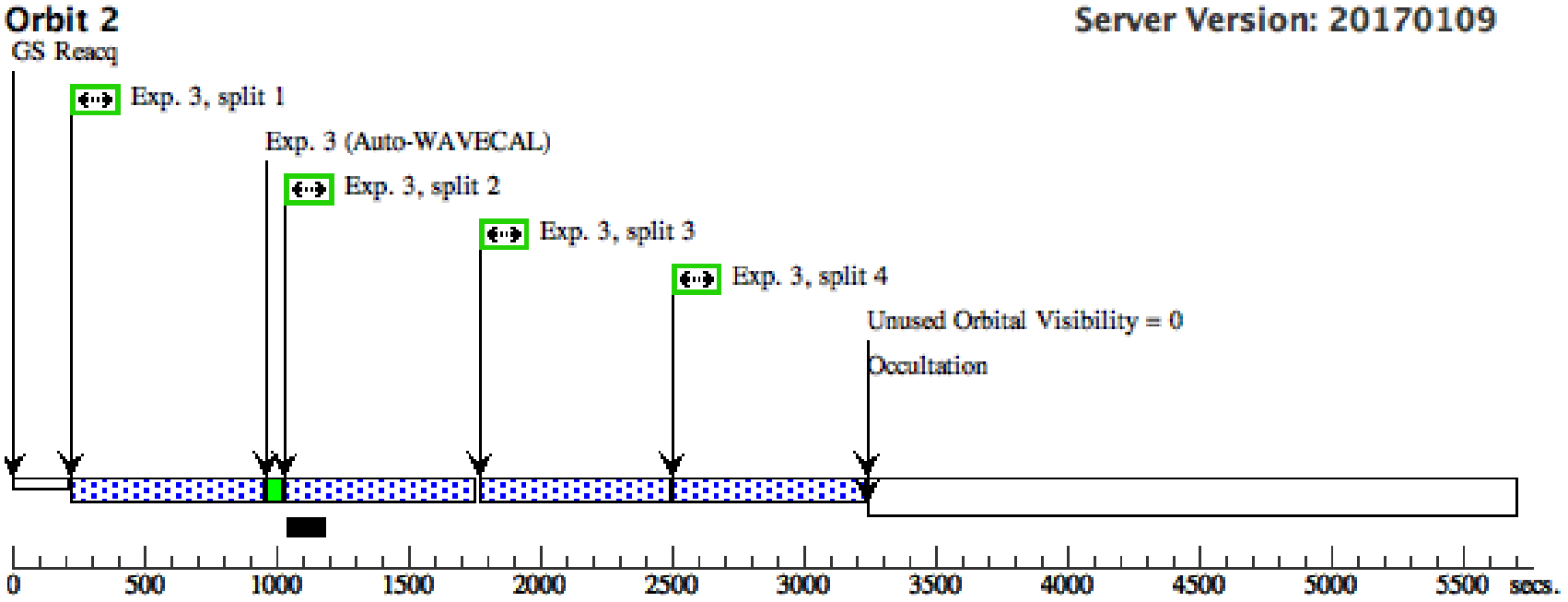
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	ASASSN-14AE-HOST	RA: 11 08 40.1100 (167.1671250d) Dec: +34 05 52.22 (34.09784d) Equinox: J2000		V=17.3	Reference Frame: ICRS

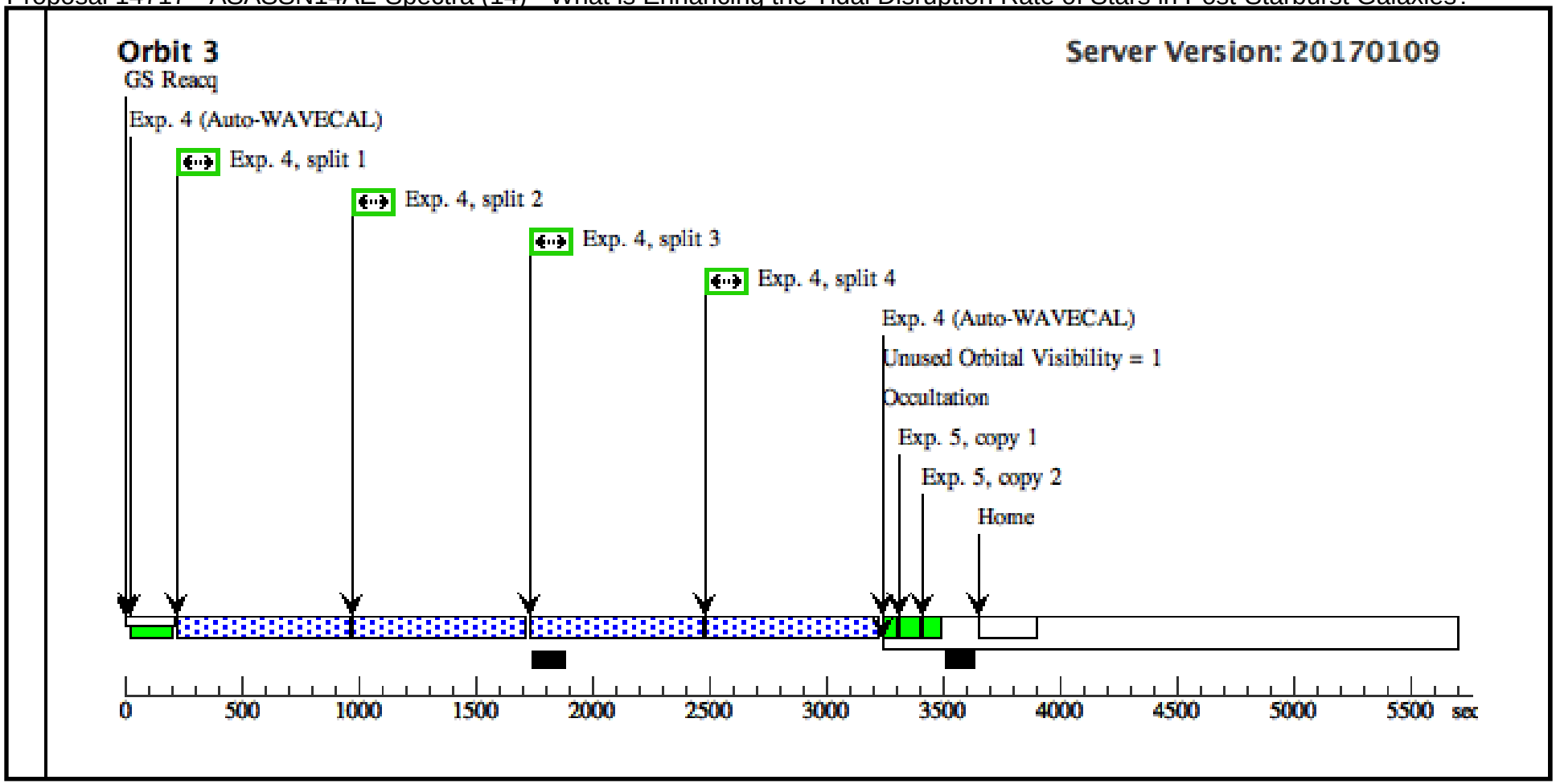
Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Acquisition	(4) ASASSN-14AE-HOST	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=DIFFUSE; DIFFUSE-CENTER=FLUX-CENTROID; CHECKBOX=17			10 Secs (10 Secs) *[==>]*	*[1]*
2	G430L	(4) ASASSN-14AE-HOST	STIS/CCD, ACCUM, 52X0.2	G430L 4300 A	CR-SPLIT=3			1300 Secs (1707.9 Secs) *[==>569.3 Secs (Split 1)]* *[==>569.3 Secs (Split 2)]* *[==>569.3 Secs (Split 3)]*	*[1]*
3	G430L	(4) ASASSN-14AE-HOST	STIS/CCD, ACCUM, 52X0.2	G430L 4300 A	CR-SPLIT=4			2700 Secs (2760 Secs) *[==>690.0 Secs (Split 1)]* *[==>690.0 Secs (Split 2)]* *[==>690.0 Secs (Split 3)]* *[==>690.0 Secs (Split 4)]*	*[2]*
4	G750L	(4) ASASSN-14AE-HOST	STIS/CCD, ACCUM, 52X0.2	G750L 7751 A	CR-SPLIT=4			2700 Secs (2840 Secs) *[==>710.0 Secs (Split 1)]* *[==>710.0 Secs (Split 2)]* *[==>710.0 Secs (Split 3)]* *[==>710.0 Secs (Split 4)]*	*[3]*
5	Flats	CCDFLAT	STIS/CCD, ACCUM, 52X0.2	G750L 7751 A				*[==>(Copy 1)]* *[==>(Copy 2)]*	*[3]*

Orbit Structure






Orbit 3
Server Version: 20170109
GS Reacq
Exp. 4 (Auto-WAVECAL)
Exp. 4, split 1
Exp. 4, split 2
Exp. 4, split 3
Exp. 4, split 4
Exp. 4 (Auto-WAVECAL)
Unused Orbital Visibility = 1
Occultation
Exp. 5, copy 1
Exp. 5, copy 2
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14717, ASASSN14LI-Spectra (15), implementation Tue Mar 14 01:01:13 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/CCD

Special Requirements: ORIENT 15D TO 345 D

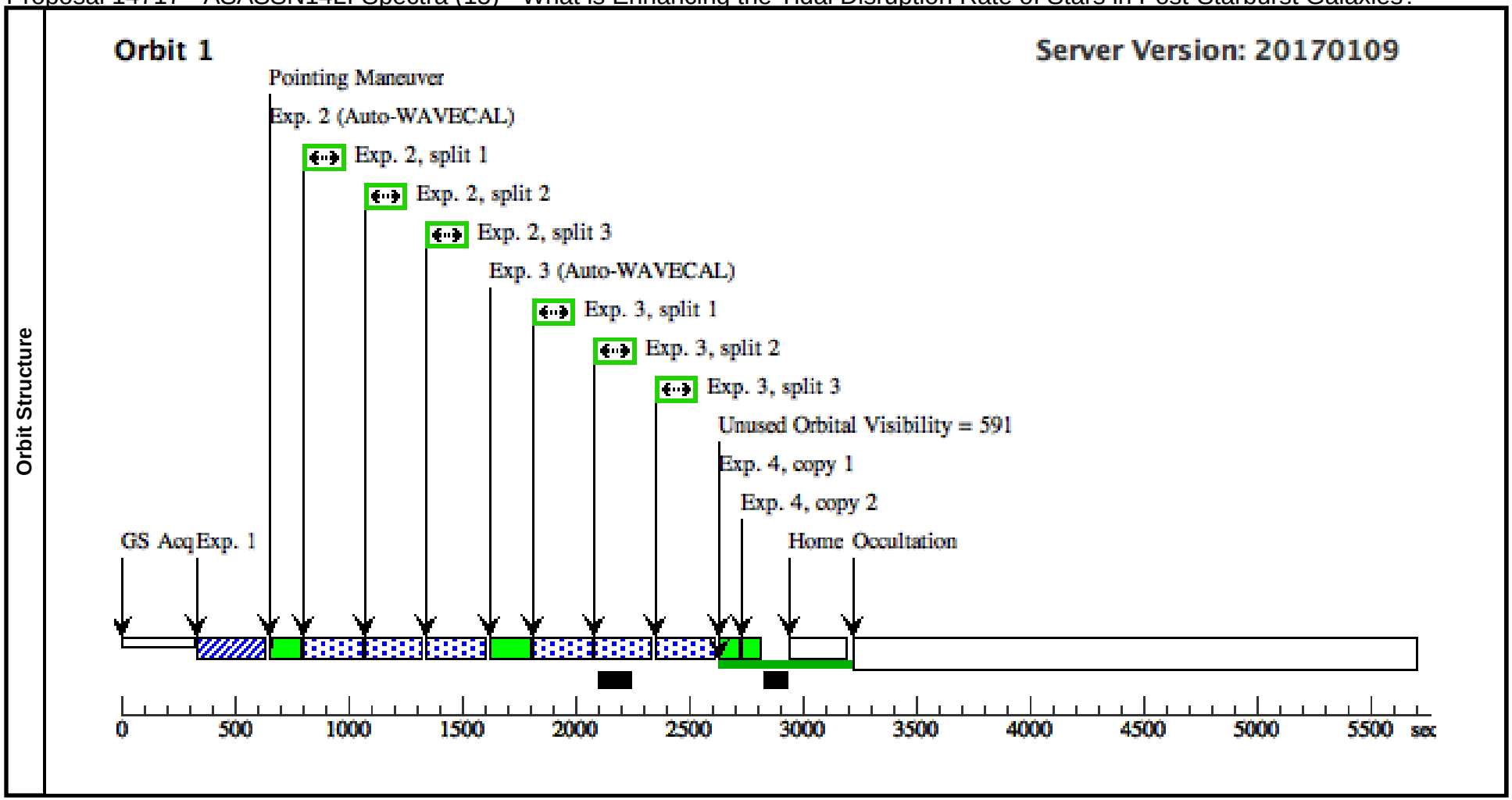
Comments: Requesting an orientation to avoid bright (16.7 mag) star directly to the south from entering the slit.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(6)	ASASSN-14LI-HOST	RA: 12 48 15.2300 (192.0634583d) Dec: +17 46 26.48 (17.77402d) Equinox: J2000		V=16	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Acquisition	(6) ASASSN-14LI-HOST	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=DIFFUSE; DIFFUSE-CENTER=FLUX-CENTROID; CHECKBOX=13			10 Secs (10 Secs) *[==>]*	***[1]***
2	G430L	(6) ASASSN-14LI-HOST	STIS/CCD, ACCUM, 52X0.2	G430L 4300 A	CR-SPLIT=3			600 Secs (675 Secs) *[==>225.0 Secs (Split 1)]* *[==>225.0 Secs (Split 2)]* *[==>225.0 Secs (Split 3)]*	***[1]***
3	G750L	(6) ASASSN-14LI-HOST	STIS/CCD, ACCUM, 52X0.2	G750L 7751 A	CR-SPLIT=3			600 Secs (675 Secs) *[==>225.0 Secs (Split 1)]* *[==>225.0 Secs (Split 2)]* *[==>225.0 Secs (Split 3)]*	***[1]***
4	Flats	CCDFLAT	STIS/CCD, ACCUM, 52X0.2	G750L 7751 A				*[==>(Copy 1)]* *[==>(Copy 2)]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20170109
Pointing Maneuver
Exp. 2 (Auto-WAVECAL)
Exp. 2, split 1
Exp. 2, split 2
Exp. 2, split 3
Exp. 3 (Auto-WAVECAL)
Exp. 3, split 1
Exp. 3, split 2
Exp. 3, split 3
Unused Orbital Visibility = 591
Exp. 4, copy 1
Exp. 4, copy 2
GS Acq
Exp. 1
Home
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14717, IPTF5AF-Spectra (16), completed Tue Mar 14 01:01:13 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/CCD

Special Requirements: (none)

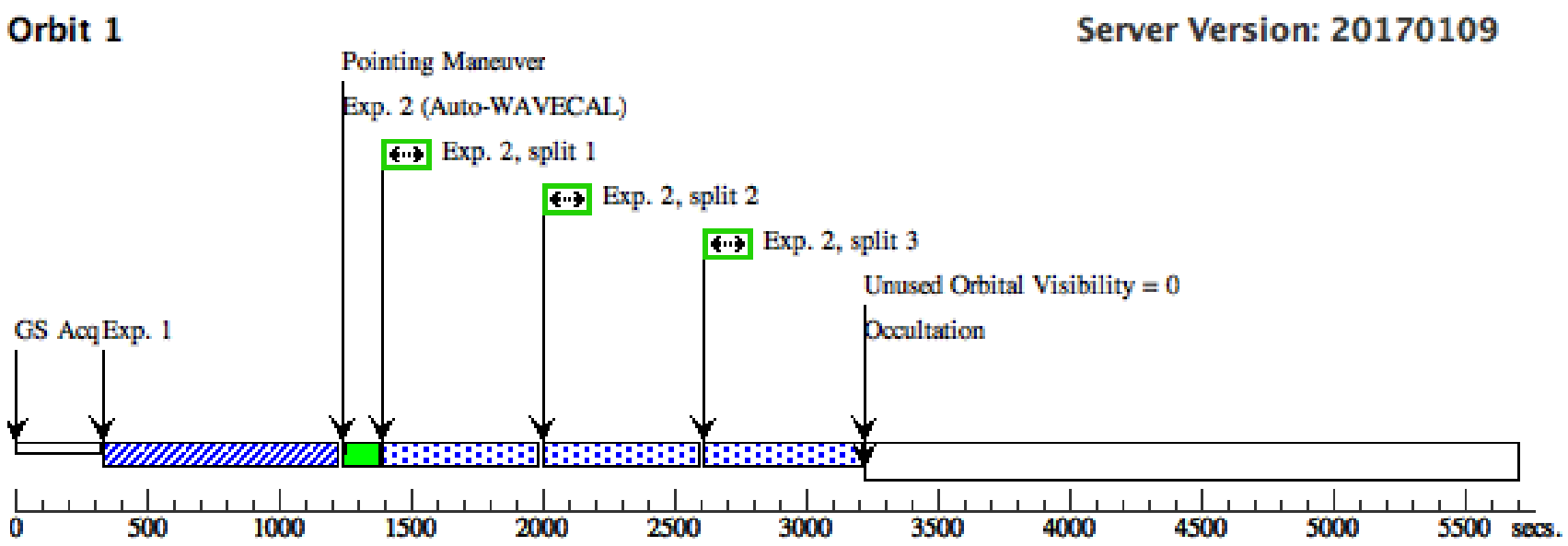
Fixed Targets

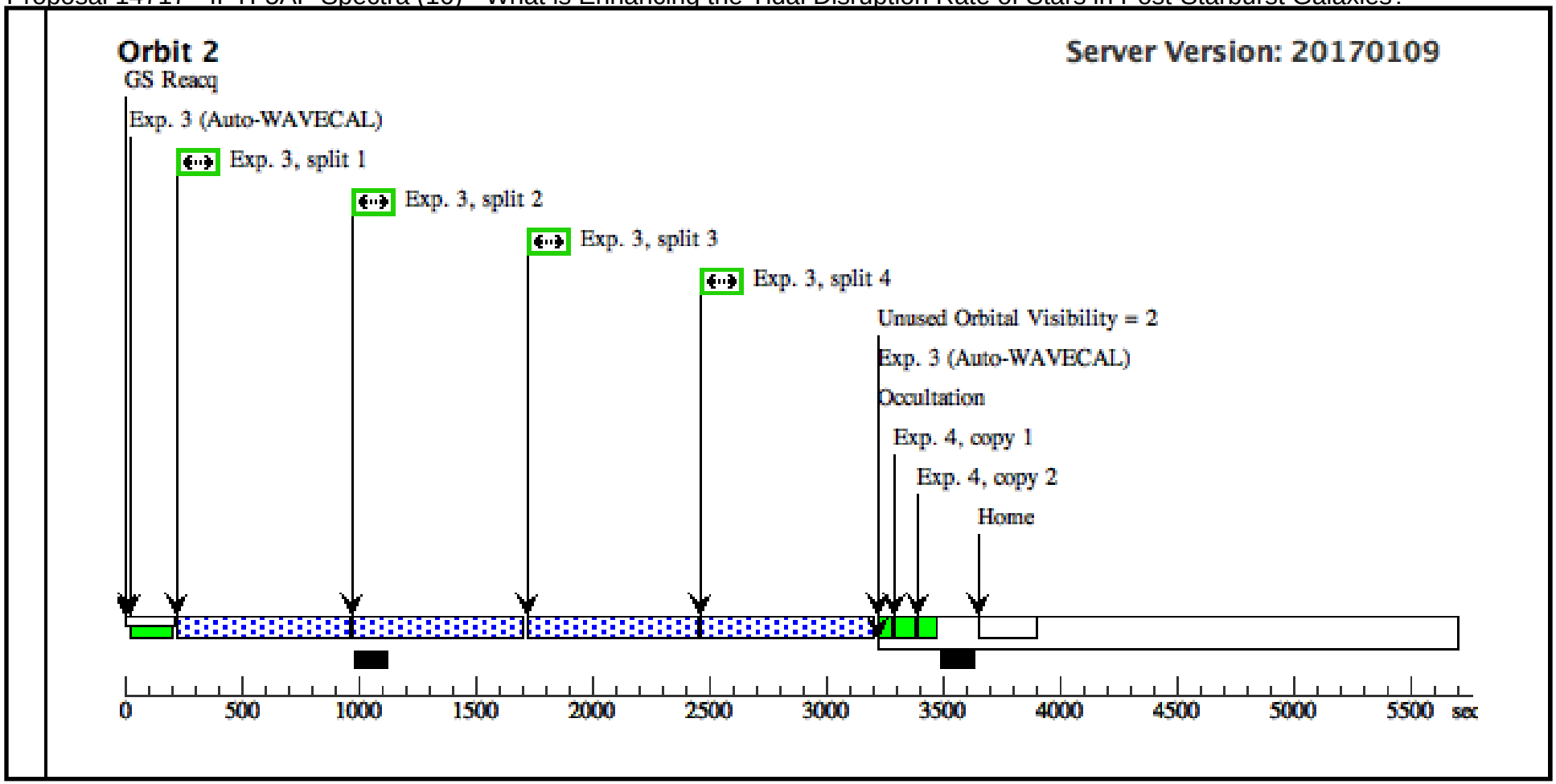
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(5)	IPTF15AF-HOST	RA: 08 48 28.1300 (132.1172083d) Dec: +22 03 33.49 (22.05930d) Equinox: J2000		V=18.5	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Acquisition	(5) IPTF15AF-HOST	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=DIFFUSE; DIFFUSE-CENTER=FLUX-CENTROID; CHECKBOX=55			10 Secs (10 Secs) *[==>]*	***[1]***
2	G430L	(5) IPTF15AF-HOST	STIS/CCD, ACCUM, 52X0.2	G430L 4300 A	CR-SPLIT=3			1400 Secs (1684.8 Secs) *[==>561.6 Secs (Split 1)]* *[==>561.6 Secs (Split 2)]* *[==>561.6 Secs (Split 3)]*	***[1]***
3	G750L	(5) IPTF15AF-HOST	STIS/CCD, ACCUM, 52X0.2	G750L 7751 A	CR-SPLIT=4			2700 Secs (2816 Secs) *[==>704.0 Secs (Split 1)]* *[==>704.0 Secs (Split 2)]* *[==>704.0 Secs (Split 3)]* *[==>704.0 Secs (Split 4)]*	***[2]***
4	Flats	CCDFLAT	STIS/CCD, ACCUM, 52X0.2	G750L 7751 A				*[==>(Copy 1)]* *[==>(Copy 2)]*	***[2]***

Orbit Structure




Orbit 2
Server Version: 20170109
GS Reacq
Exp. 3 (Auto-WAVECAL)
Exp. 3, split 1
Exp. 3, split 2
Exp. 3, split 3
Exp. 3, split 4
Unused Orbital Visibility = 2
Exp. 3 (Auto-WAVECAL)
Occultation
Exp. 4, copy 1
Exp. 4, copy 2
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec