14618 - Ultraviolet Flashers in M87: Rapidly Recurring Novae as SNIa Progenitors

Cycle: 24, Proposal Category: GO

(UV Initiative)

(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) M-87	WFC3/UVIS	1	29-Jul-2016 14:00:58.0	yes
02	(1) M-87	WFC3/UVIS	1	29-Jul-2016 14:00:59.0	yes
03	(1) M-87	WFC3/UVIS	1	29-Jul-2016 14:01:00.0	yes
04	(1) M-87	WFC3/UVIS	1	29-Jul-2016 14:01:00.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
05	(1) M-87	WFC3/UVIS	1	29-Jul-2016 14:01:01.0	yes
06	(1) M-87	WFC3/UVIS	1	29-Jul-2016 14:01:02.0	yes
07	(1) M-87	WFC3/UVIS	1	29-Jul-2016 14:01:03.0	yes
08	(1) M-87	WFC3/UVIS	1	29-Jul-2016 14:01:04.0	yes
09	(1) M-87	WFC3/UVIS	1	29-Jul-2016 14:01:04.0	yes
10	(1) M-87	WFC3/UVIS	1	29-Jul-2016 14:01:05.0	yes
11	(1) M-87	WFC3/UVIS	1	29-Jul-2016 14:01:06.0	yes
12	(1) M-87	WFC3/UVIS	1	29-Jul-2016 14:01:07.0	yes
13	(1) M-87	WFC3/UVIS	1	29-Jul-2016 14:01:07.0	yes
14	(1) M-87	WFC3/UVIS	1	29-Jul-2016 14:01:08.0	yes
15	(1) M-87	WFC3/UVIS	1	29-Jul-2016 14:01:09.0	yes
16	(1) M-87	WFC3/UVIS	1	29-Jul-2016 14:01:10.0	yes
17	(1) M-87	WFC3/UVIS	1	29-Jul-2016 14:01:10.0	yes
18	(1) M-87	WFC3/UVIS	1	29-Jul-2016 14:01:11.0	yes
19	(1) M-87	WFC3/UVIS	1	29-Jul-2016 14:01:12.0	yes
20	(1) M-87	WFC3/UVIS	1	29-Jul-2016 14:01:12.0	yes
21	(1) M-87	WFC3/UVIS	1	29-Jul-2016 14:01:13.0	yes
22	(1) M-87	WFC3/UVIS	1	29-Jul-2016 14:01:14.0	yes
23	(1) M-87	WFC3/UVIS	1	29-Jul-2016 14:01:15.0	yes
24	(1) M-87	WFC3/UVIS	1	29-Jul-2016 14:01:15.0	yes
25	(1) M-87	WFC3/UVIS	1	29-Jul-2016 14:01:16.0	yes
26	(1) M-87	WFC3/UVIS	1	29-Jul-2016 14:01:17.0	yes
27	(1) M-87	WFC3/UVIS	1	29-Jul-2016 14:01:18.0	yes
28	(1) M-87	WFC3/UVIS	1	29-Jul-2016 14:01:19.0	yes
29	(1) M-87	WFC3/UVIS	1	29-Jul-2016 14:01:19.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
30	(1) M-87	WFC3/UVIS	1	29-Jul-2016 14:01:20.0	yes
31	(1) M-87	WFC3/UVIS	1	29-Jul-2016 14:01:21.0	yes
32	(1) M-87	WFC3/UVIS	1	29-Jul-2016 14:01:22.0	yes
33	(1) M-87	WFC3/UVIS	1	29-Jul-2016 14:01:22.0	yes
34	(1) M-87	WFC3/UVIS	1	29-Jul-2016 14:01:23.0	yes
35	(1) M-87	WFC3/UVIS	1	29-Jul-2016 14:01:24.0	yes
36	(1) M-87	WFC3/UVIS	1	29-Jul-2016 14:01:24.0	yes
37	(1) M-87	WFC3/UVIS	1	29-Jul-2016 14:01:25.0	yes
38	(1) M-87	WFC3/UVIS	1	29-Jul-2016 14:01:26.0	yes
39	(1) M-87	WFC3/UVIS	1	29-Jul-2016 14:01:27.0	yes
40	(1) M-87	WFC3/UVIS	1	29-Jul-2016 14:01:27.0	yes
41	(1) M-87	WFC3/UVIS	1	29-Jul-2016 14:01:28.0	yes
42	(1) M-87	WFC3/UVIS	1	29-Jul-2016 14:01:29.0	yes
43	(1) M-87	WFC3/UVIS	1	29-Jul-2016 14:01:29.0	yes
44	(1) M-87	WFC3/UVIS	1	29-Jul-2016 14:01:30.0	yes
45	(1) M-87	WFC3/UVIS	1	29-Jul-2016 14:01:31.0	yes
46	(1) M-87	WFC3/UVIS	1	29-Jul-2016 14:01:31.0	yes
47	(1) M-87	WFC3/UVIS	1	29-Jul-2016 14:01:32.0	yes
48	(1) M-87	WFC3/UVIS	1	29-Jul-2016 14:01:33.0	yes
49	(1) M-87	WFC3/UVIS	1	29-Jul-2016 14:01:34.0	yes
50	(1) M-87	WFC3/UVIS	1	29-Jul-2016 14:01:34.0	yes
51	(1) M-87	WFC3/UVIS	1	29-Jul-2016 14:01:35.0	yes
52	(1) M-87	WFC3/UVIS	1	29-Jul-2016 14:01:36.0	yes
53	(1) M-87	WFC3/UVIS	1	29-Jul-2016 14:01:36.0	yes

53 Total Orbits Used

ABSTRACT

The recent discovery of a recurrent nova erupting every six months in M31, and simultaneous development of a consistent theoretical/numerical model for growing white dwarfs (WDs) to the Chandrasekhar limit, points the way to locating UV-bright SNIa progenitors in galaxies. We propose to monitor M87 with a cadence of 5 days over a 9 month-long span to 1) detect all the NUV-bright, near-Chandrasekhar mass WDs accreting at high enough rates to become SNIa in the next ~ 200,000 years; 2) determine their eruption frequency distribution, which is diagnostic of the underlying white dwarf accretion rates; 3) test nova modelers' prediction that recurrent novae can never erupt more frequently that once in 45 days; 4) definitively determine the rate Rnova of nova eruptions in M87; 5) confront population synthesis models predictions of Rnova with our observationally determined value; and 6) check the claim (observed in M31) that 20-41% of all nova WDs have red giant secondaries. A free bonus of these observations will be the deepest-ever NUV image of the M87 jet, and the highest cadence ever sequence of images of the jet, which includes knots mysteriously varying in brightness by up to 5 magnitudes.

OBSERVING DESCRIPTION

We propose to observe M87 with the WFC3, using the F275W and F606W filters, every 5 days for 1 orbit over the 265 day span in cycle 24 when HST can observe this galaxy. This amounts to 53 orbits in total. 3 dithered images of 500 seconds duration each in F275W will be followed by two dithered images of 350 seconds in F606W at each epoch. We are requesting this very long baseline of observations to guarantee our detectng at least two eruptions of the rapidly accreting WDs in M87 which are close enough to the Chandrasekhar mass - i.e., within about 0.02Mo - to erupt every 4.5 months. The nondetection of such objects would essentially rule out RNe as viable SNIa progenitors.

Novae display very strong emission lines during eruption, so ETC calculations are rough guides, at best. Our own archival survey of M87 (Shara et al 2016), using WFPC2 F606W images demonstrates that we detect even the faintest M87 novae (as faint as 27th magnitude) with 500 second exposures and S/N = 5-10. Novae are typically 1-2 magnitudes brighter in the NUV during eruption than in the optical (e.g., Bode et al 2016, Figure 1). The detection of M87 NUV transients that must be novae, in STIS NUV MAMA images, has been demonstrated by Sohn et al (2006) and by Madrid, Sparks et al (2007). The ETC calculates S/N = 5 for a 25th magnitude black body at 40,000 Kelvins in 1500 seconds with the F275W filter. It also calculates S/N= 5 for a 10,000 Kelvins black body at an F275W magnitude = 26.5. The detection of novae with the WFC3/ F275W combination, with 1500 seconds of total exposure, at 23-25th magnitude, will be straightforward. We will, of course, use WFC3 rather than the STIS MAMAs because of the much larger Field of View

of WFC3.

Finally, we note that we are not missing novae because of dust obscuration, as evidenced by M87s lack of far infrared emission (Baes et al. 2010), lack of cool molecular gas (Tan et al. 2008; Salome & Combes 2008) and non-detection of significant intrinsic absorption in the galaxys X-ray spectrum (Bohringer et al. 2002).

Visit

Proposal 14618, Visit 01 Fri Jul 29 18:01:38 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: PCS MODE FINE; SCHED 90%

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true		(1)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

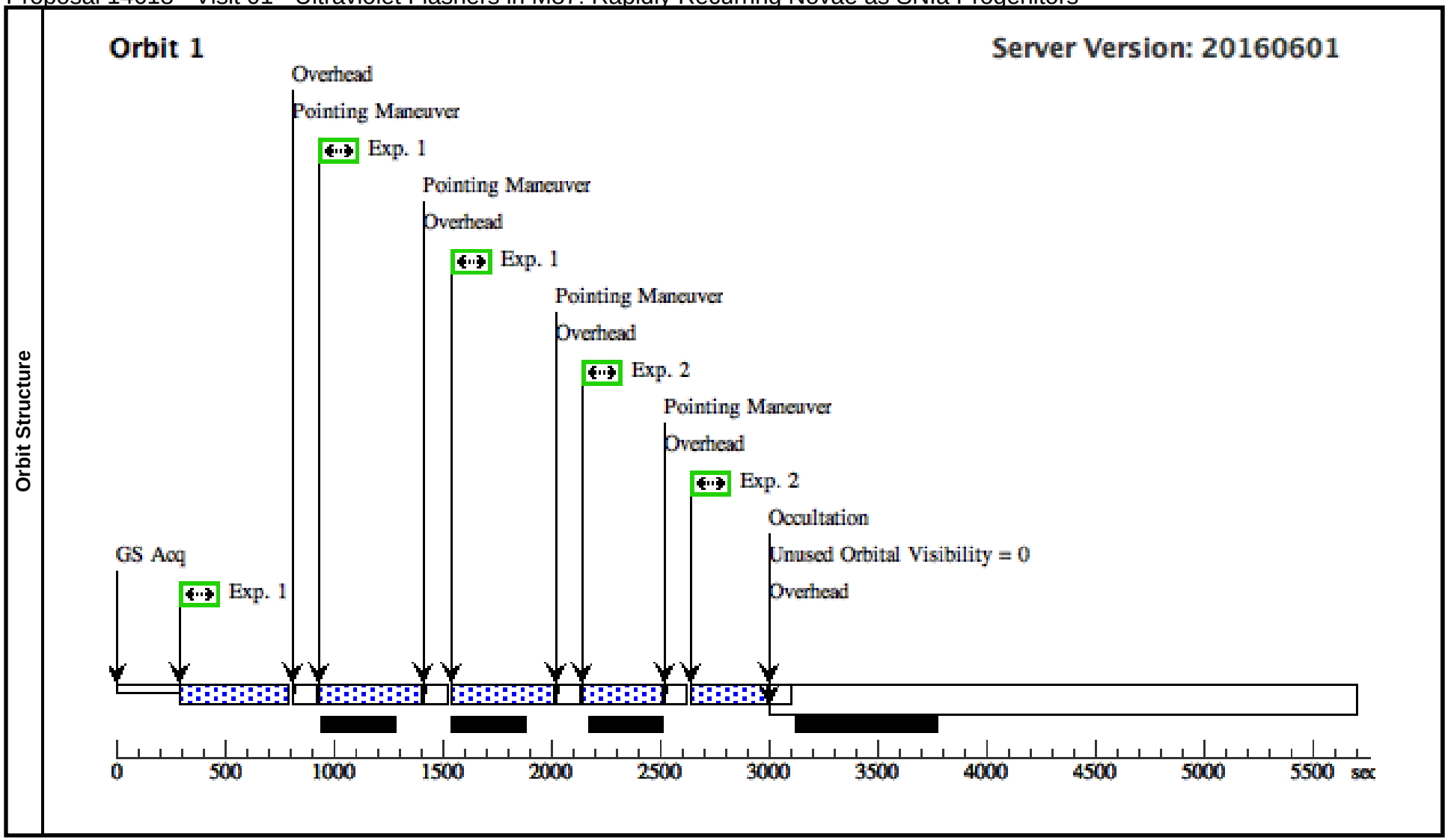
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M-87	RA: 12 30 49.4234 (187.7059308d) Dec: +12 23 28.04 (12.39112d) Equinox: J2000		V=8.63	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F275W	FLASH=10.0		Pattern 1, Exps 1-1 in Visit 01 (1)	472 Secs (1416 Secs)	
								[==>(Pattern 1)]	***[1]***
								[==>(Pattern 2)]	
								[==>(Pattern 3)]	
2		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F606W			Pattern 2, Exps 2-2 in Visit 01 (2)	349 Secs (698 Secs)	
								[==>(Pattern 1)]	***[1]***
								[==>(Pattern 2)]	


Orbit 1
Server Version: 20160601
Orbit Structure
Overhead
Pointing Maneuver
Exp. 1
Pointing Maneuver
Overhead
Exp. 1
Pointing Maneuver
Overhead
Exp. 2
Pointing Maneuver
Overhead
Exp. 2
Occultation
Unused Orbital Visibility = 0
Overhead
GS Acq
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14618, Visit 02 Fri Jul 29 18:01:38 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: PCS MODE FINE; SCHED 90%; AFTER 01 BY 5 D TO 6 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true		(1)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

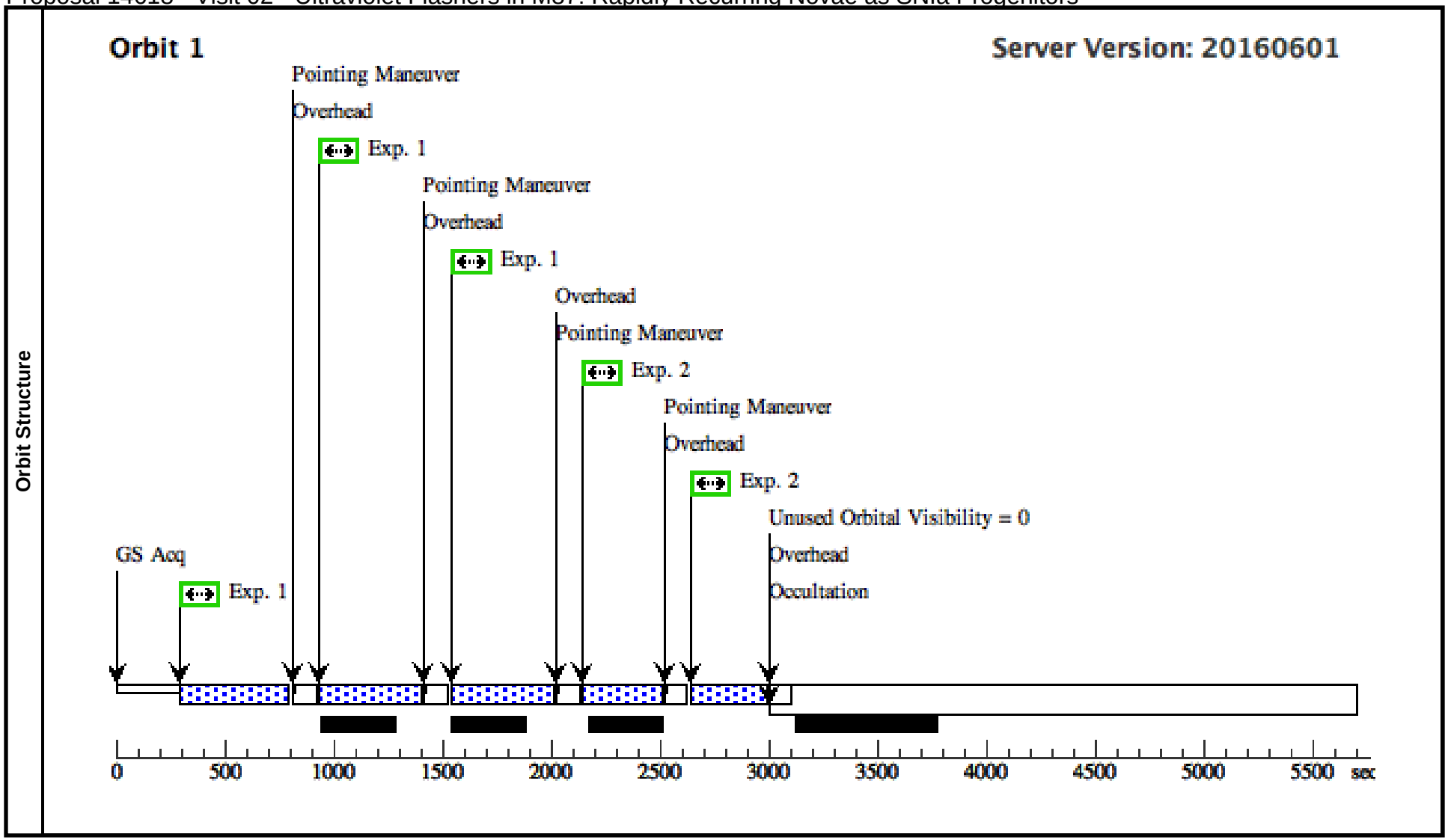
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M-87	RA: 12 30 49.4234 (187.7059308d) Dec: +12 23 28.04 (12.39112d) Equinox: J2000		V=8.63	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F275W	FLASH=10.0		Pattern 1, Exps 1-1 in Visit 02 (1)	472 Secs (1416 Secs)	
								[==>(Pattern 1)] *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
2		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F606W			Pattern 2, Exps 2-2 in Visit 02 (2)	349 Secs (698 Secs)	
								[==>(Pattern 1)] *[==>(Pattern 2)]*	***[1]***


Orbit 1
Server Version: 20160601
Orbit Structure
Pointing Maneuver
Overhead
Exp. 1
Pointing Maneuver
Overhead
Exp. 1
Overhead
Pointing Maneuver
Exp. 2
Pointing Maneuver
Overhead
Exp. 2
Unused Orbital Visibility = 0
Overhead
Occultation
GS Acq
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14618, Visit 03 Fri Jul 29 18:01:38 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: PCS MODE FINE; SCHED 90%; AFTER 01 BY 10 D TO 11 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true		(1)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

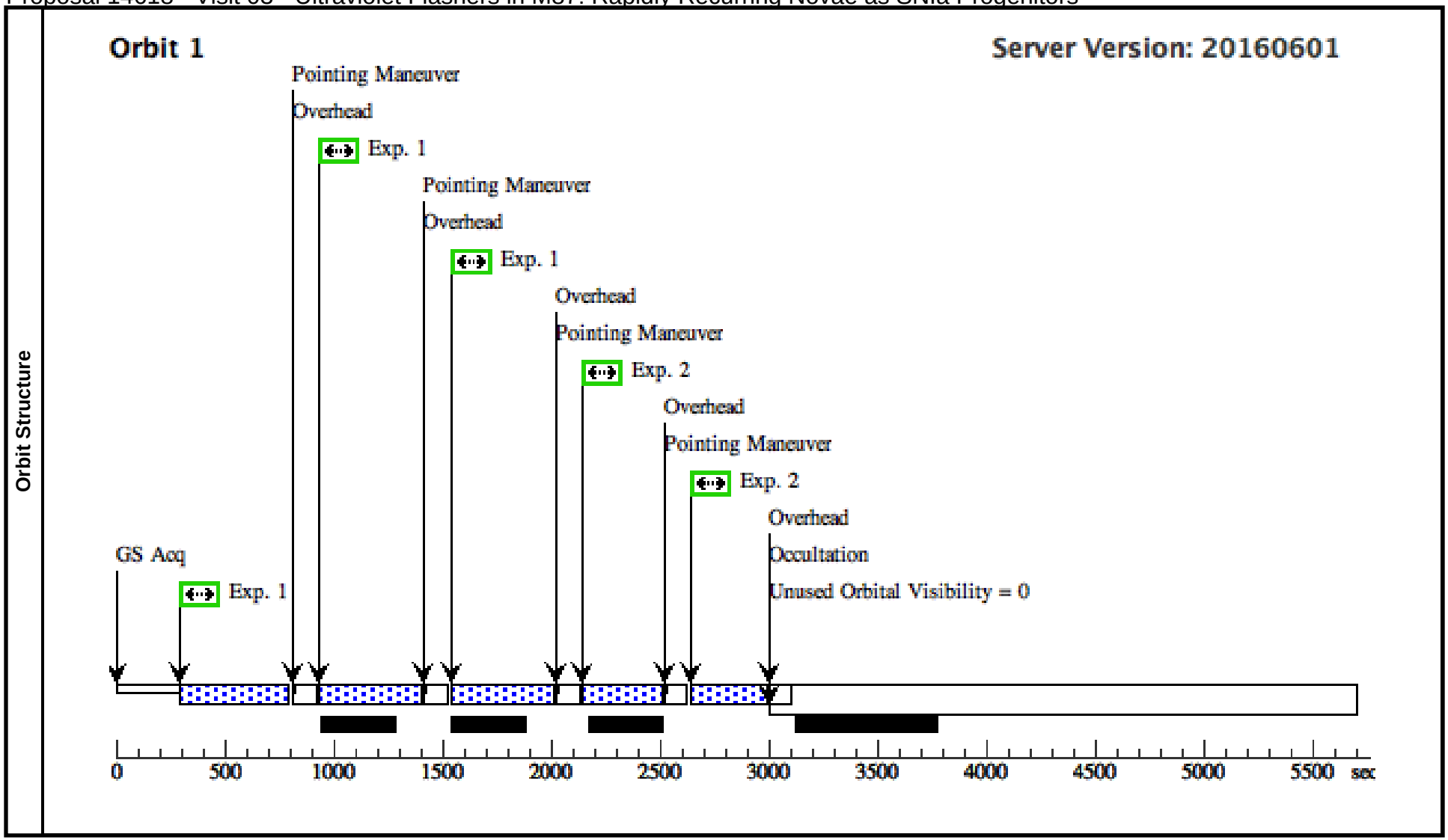
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M-87	RA: 12 30 49.4234 (187.7059308d) Dec: +12 23 28.04 (12.39112d) Equinox: J2000		V=8.63	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F275W	FLASH=10.0		Pattern 1, Exps 1-1 in Visit 03 (1)	472 Secs (1416 Secs)	
								[==>(Pattern 1)] *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
2		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F606W			Pattern 2, Exps 2-2 in Visit 03 (2)	349 Secs (698 Secs)	
								[==>(Pattern 1)] *[==>(Pattern 2)]*	***[1]***


Orbit 1
Server Version: 20160601
Orbit Structure
Pointing Maneuver
Overhead
Exp. 1
Pointing Maneuver
Overhead
Exp. 1
Overhead
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Exp. 2
Overhead
Pointing Maneuver
Exp. 2
Overhead
Occultation
Unused Orbital Visibility = 0
GS Acq
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14618, Visit 04 Fri Jul 29 18:01:38 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: PCS MODE FINE; SCHED 90%; AFTER 01 BY 15 D TO 16 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true		(1)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

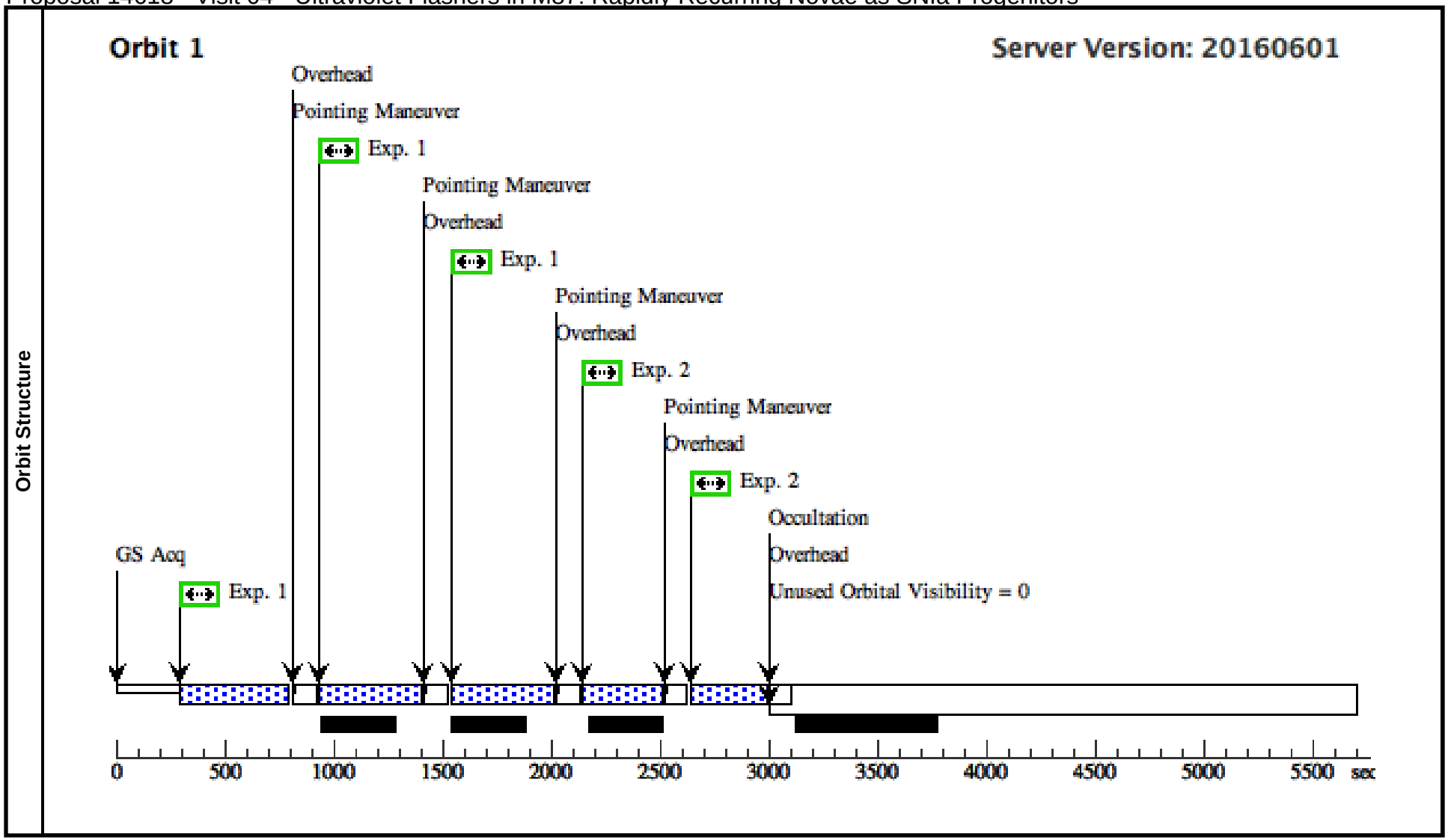
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M-87	RA: 12 30 49.4234 (187.7059308d) Dec: +12 23 28.04 (12.39112d) Equinox: J2000		V=8.63	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F275W	FLASH=10.0		Pattern 1, Exps 1-1 in Visit 04 (1)	472 Secs (1416 Secs)	
								[==>(Pattern 1)] *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
2		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F606W			Pattern 2, Exps 2-2 in Visit 04 (2)	349 Secs (698 Secs)	
								[==>(Pattern 1)] *[==>(Pattern 2)]*	***[1]***


Orbit 1
Server Version: 20160601
Orbit Structure
Overhead
Pointing Maneuver
Exp. 1
Pointing Maneuver
Overhead
Exp. 1
Pointing Maneuver
Overhead
Exp. 2
Pointing Maneuver
Overhead
Exp. 2
Occultation
Overhead
Unused Orbital Visibility = 0
GS Acq
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14618, Visit 05 Fri Jul 29 18:01:38 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: PCS MODE FINE; SCHED 90%; AFTER 01 BY 20 D TO 21 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true		(1)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

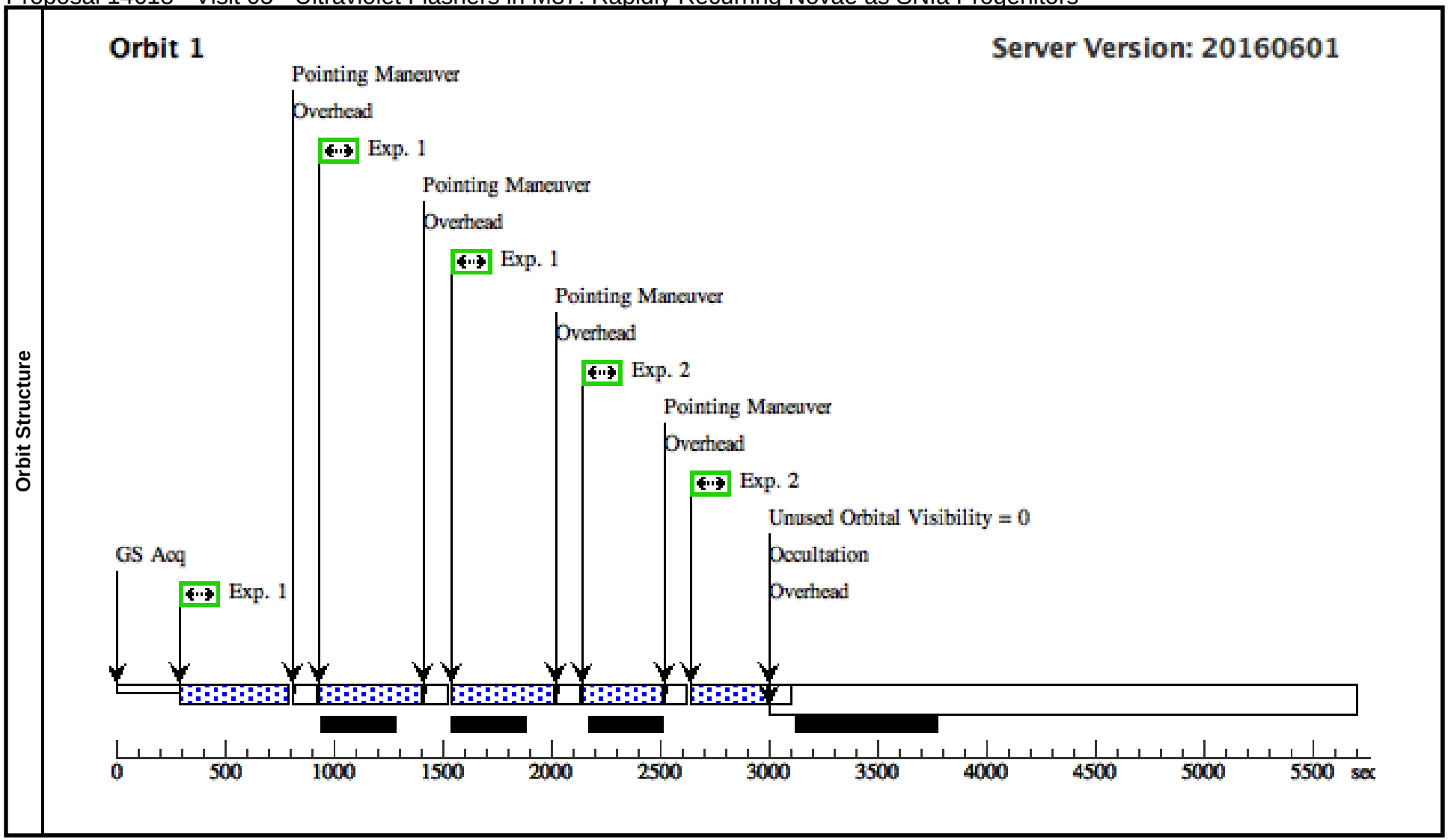
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M-87	RA: 12 30 49.4234 (187.7059308d) Dec: +12 23 28.04 (12.39112d) Equinox: J2000		V=8.63	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F275W	FLASH=10.0		Pattern 1, Exps 1-1 in Visit 05 (1)	472 Secs (1416 Secs)	
								[==>(Pattern 1)] *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
2		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F606W			Pattern 2, Exps 2-2 in Visit 05 (2)	349 Secs (698 Secs)	
								[==>(Pattern 1)] *[==>(Pattern 2)]*	***[1]***


Orbit 1
Server Version: 20160601
Orbit Structure
Pointing Maneuver
Overhead
Exp. 1
Pointing Maneuver
Overhead
Exp. 1
Pointing Maneuver
Overhead
Exp. 2
Pointing Maneuver
Overhead
Exp. 2
Unused Orbital Visibility = 0
Occultation
Overhead
GS Acq
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14618, Visit 06 Fri Jul 29 18:01:38 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: PCS MODE FINE; SCHED 90%; AFTER 01 BY 25 D TO 26 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true		(1)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

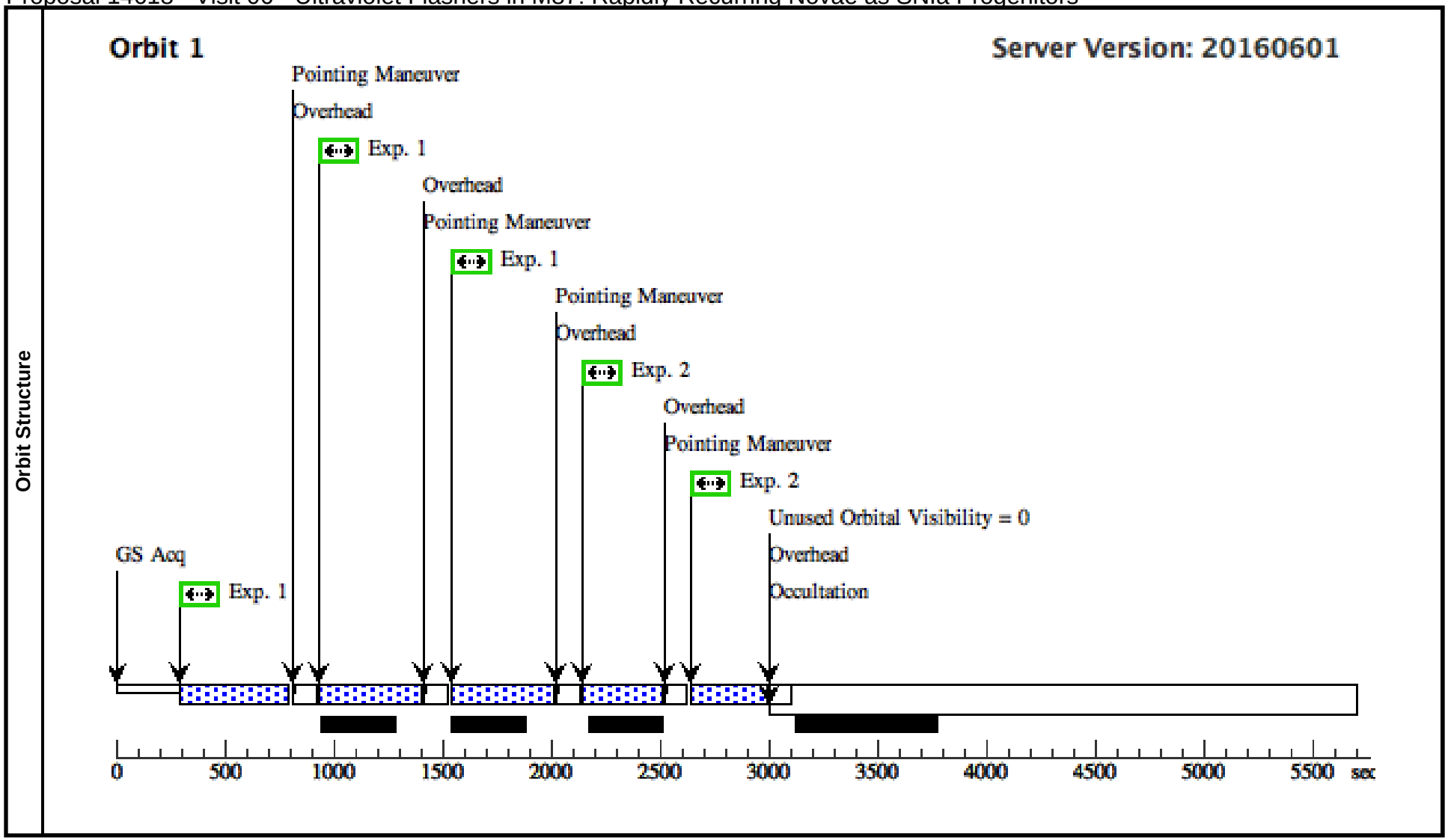
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M-87	RA: 12 30 49.4234 (187.7059308d) Dec: +12 23 28.04 (12.39112d) Equinox: J2000		V=8.63	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F275W	FLASH=10.0		Pattern 1, Exps 1-1 in Visit 06 (1)	472 Secs (1416 Secs)	
								[==>(Pattern 1)] *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
2		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F606W			Pattern 2, Exps 2-2 in Visit 06 (2)	349 Secs (698 Secs)	
								[==>(Pattern 1)] *[==>(Pattern 2)]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20160601
Pointing Maneuver
Overhead
Exp. 1
Overhead
Pointing Maneuver
Exp. 1
Pointing Maneuver
Overhead
Exp. 2
Overhead
Pointing Maneuver
Exp. 2
Unused Orbital Visibility = 0
Overhead
Occultation
GS Acq
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14618, Visit 07 Fri Jul 29 18:01:38 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: PCS MODE FINE; SCHED 90%; AFTER 01 BY 30 D TO 31 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true		(1)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

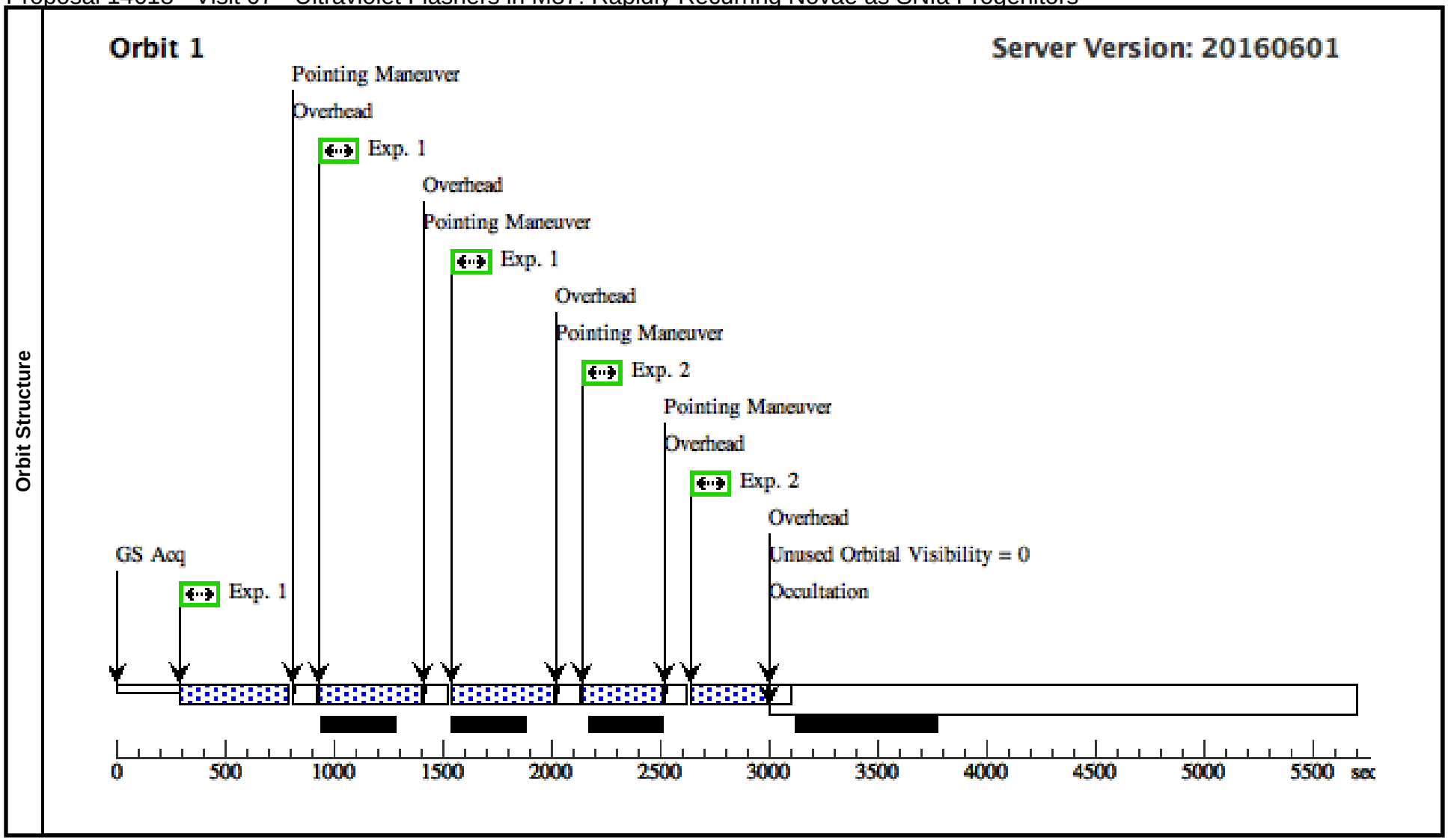
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M-87	RA: 12 30 49.4234 (187.7059308d) Dec: +12 23 28.04 (12.39112d) Equinox: J2000		V=8.63	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F275W	FLASH=10		Pattern 1, Exps 1-1 in Visit 07 (1)	472 Secs (1416 Secs)	
								[==>(Pattern 1)] *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
2		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F606W			Pattern 2, Exps 2-2 in Visit 07 (2)	349 Secs (698 Secs)	
								[==>(Pattern 1)] *[==>(Pattern 2)]*	***[1]***


Orbit 1
Server Version: 20160601
Orbit Structure
Pointing Maneuver
Overhead
Exp. 1
Overhead
Pointing Maneuver
Exp. 1
Overhead
Pointing Maneuver
Exp. 2
Pointing Maneuver
Overhead
Exp. 2
Overhead
Unused Orbital Visibility = 0
Occultation
GS Acq
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14618, Visit 08 Fri Jul 29 18:01:38 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: PCS MODE FINE; SCHED 90%; AFTER 01 BY 35 D TO 36 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true		(1)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

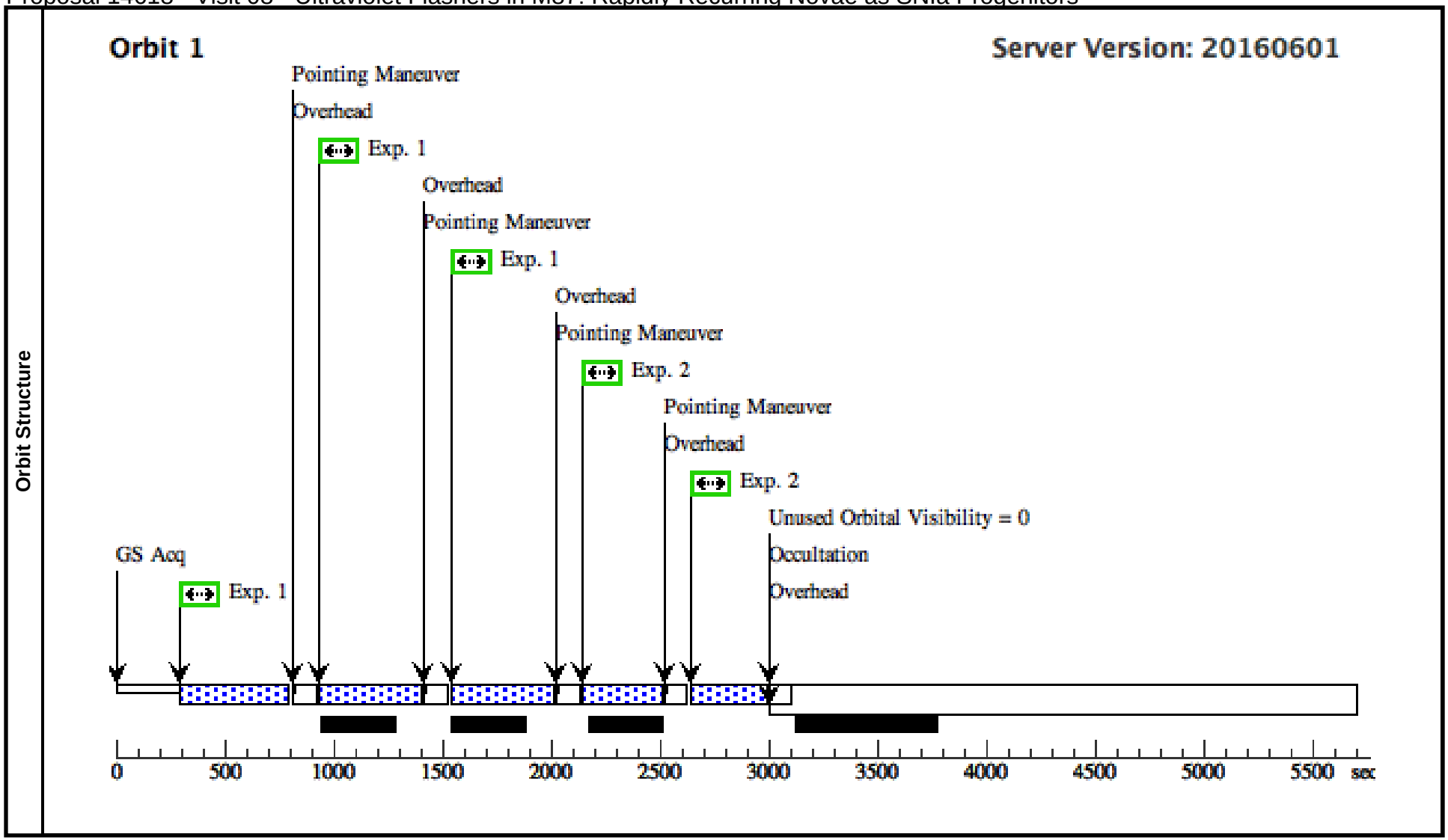
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M-87	RA: 12 30 49.4234 (187.7059308d) Dec: +12 23 28.04 (12.39112d) Equinox: J2000		V=8.63	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F275W	FLASH=10		Pattern 1, Exps 1-1 in Visit 08 (1)	472 Secs (1416 Secs)	
								[==>(Pattern 1)] *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
2		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F606W			Pattern 2, Exps 2-2 in Visit 08 (2)	349 Secs (698 Secs)	
								[==>(Pattern 1)] *[==>(Pattern 2)]*	***[1]***


Orbit 1
Server Version: 20160601
Orbit Structure
Pointing Maneuver
Overhead
Exp. 1
Overhead
Pointing Maneuver
Exp. 1
Overhead
Pointing Maneuver
Exp. 2
Pointing Maneuver
Overhead
Exp. 2
Unused Orbital Visibility = 0
Occultation
Overhead
GS Acq
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14618, Visit 09 Fri Jul 29 18:01:38 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: PCS MODE FINE; SCHED 90%; AFTER 01 BY 40 D TO 41 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true		(1)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

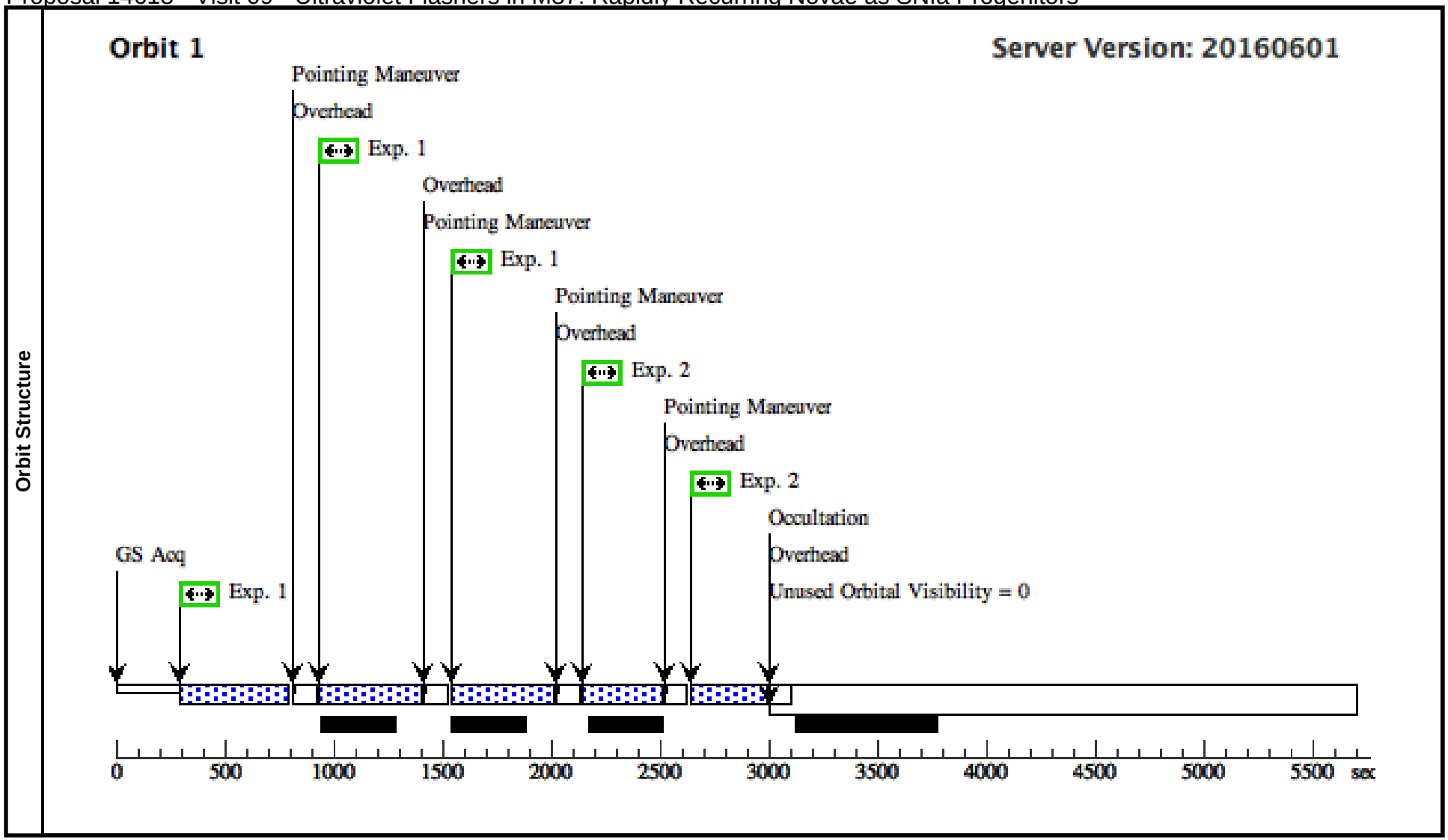
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M-87	RA: 12 30 49.4234 (187.7059308d) Dec: +12 23 28.04 (12.39112d) Equinox: J2000		V=8.63	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F275W	FLASH=10		Pattern 1, Exps 1-1 in Visit 09 (1)	472 Secs (1416 Secs)	
								[==>(Pattern 1)]	***[1]***
								[==>(Pattern 2)]	
								[==>(Pattern 3)]	
2		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F606W			Pattern 2, Exps 2-2 in Visit 09 (2)	349 Secs (698 Secs)	
								[==>(Pattern 1)]	***[1]***
								[==>(Pattern 2)]	


Orbit 1
Server Version: 20160601
Orbit Structure
Pointing Maneuver
Overhead
Exp. 1
Overhead
Pointing Maneuver
Exp. 1
Pointing Maneuver
Overhead
Exp. 2
Pointing Maneuver
Overhead
Exp. 2
Occultation
Overhead
Unused Orbital Visibility = 0
GS Acq
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14618, Visit 10 Fri Jul 29 18:01:38 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: PCS MODE FINE; SCHED 90%; AFTER 01 BY 45 D TO 46 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true		(1)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

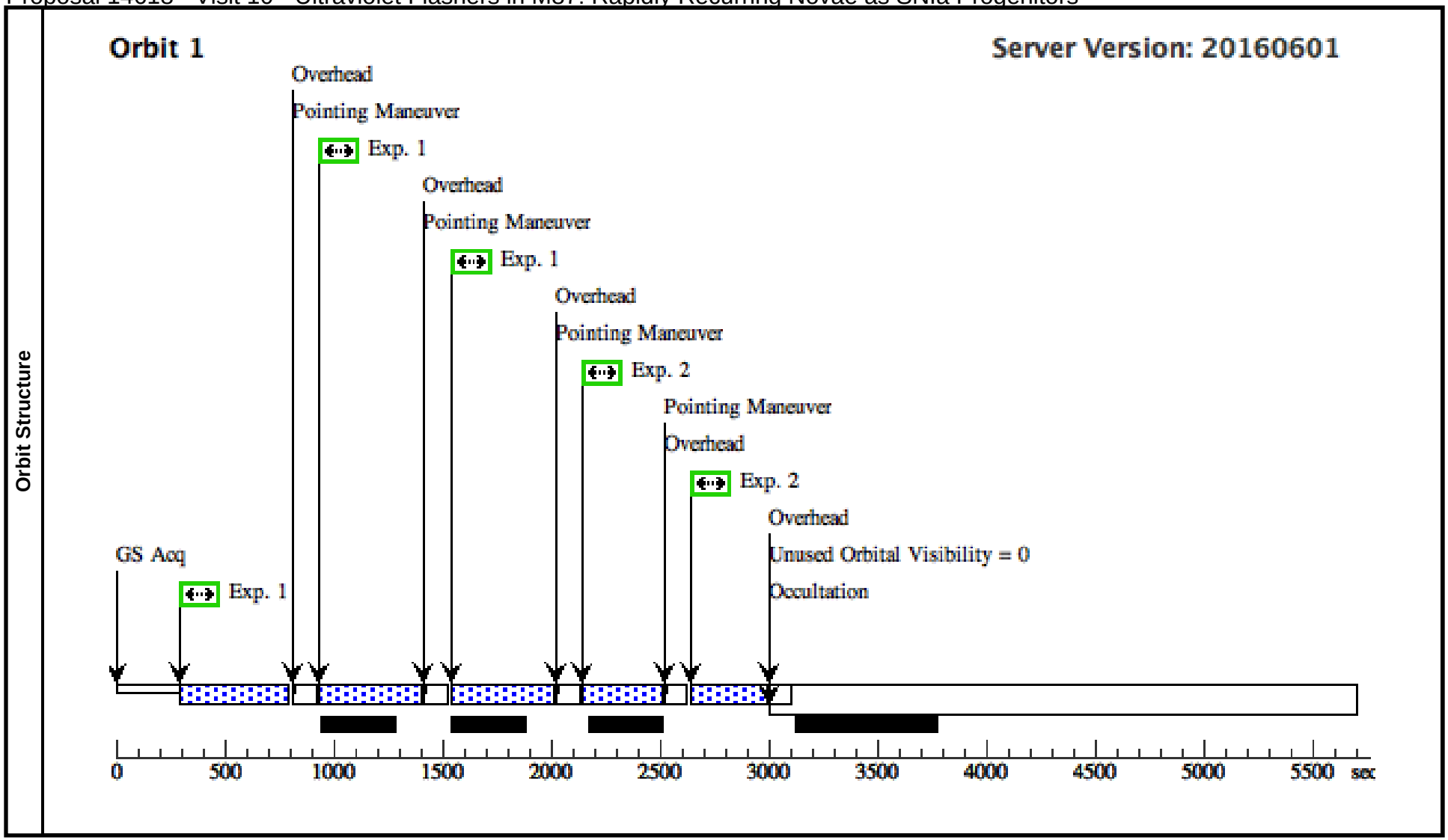
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M-87	RA: 12 30 49.4234 (187.7059308d) Dec: +12 23 28.04 (12.39112d) Equinox: J2000		V=8.63	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F275W	FLASH=10		Pattern 1, Exps 1-1 in Visit 10 (1)	472 Secs (1416 Secs)	
								[==>(Pattern 1)]	***[1]***
								[==>(Pattern 2)]	
								[==>(Pattern 3)]	
2		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F606W			Pattern 2, Exps 2-2 in Visit 10 (2)	349 Secs (698 Secs)	
								[==>(Pattern 1)]	***[1]***
								[==>(Pattern 2)]	


Orbit 1
Server Version: 20160601
Orbit Structure
Overhead
Pointing Maneuver
Exp. 1
Overhead
Pointing Maneuver
Exp. 1
Overhead
Pointing Maneuver
Exp. 2
Pointing Maneuver
Overhead
Exp. 2
Overhead
Unused Orbital Visibility = 0
Occultation
GS Acq
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14618, Visit 11 Fri Jul 29 18:01:38 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: PCS MODE FINE; SCHED 90%; AFTER 01 BY 50 D TO 51 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true		(1)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

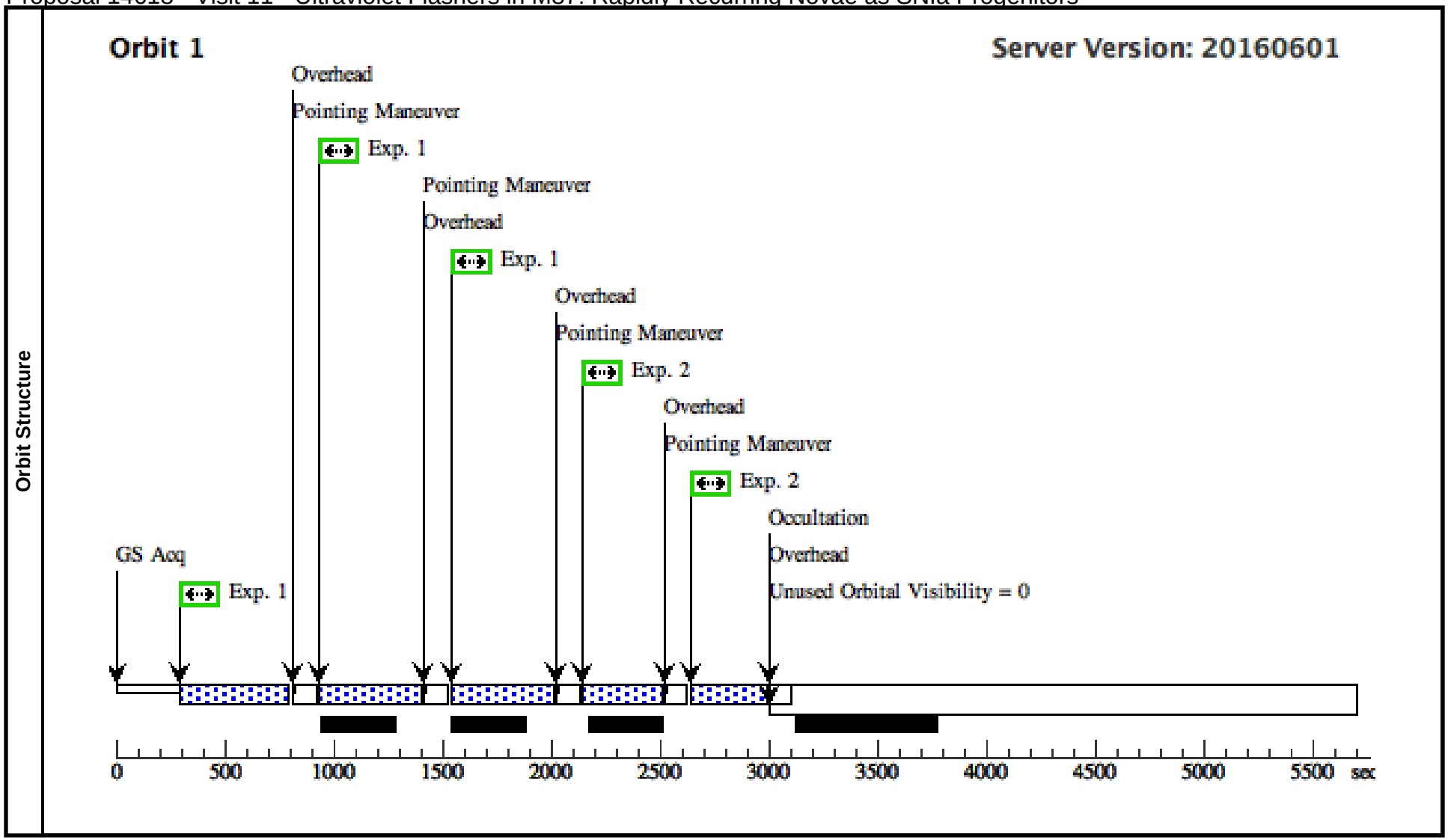
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M-87	RA: 12 30 49.4234 (187.7059308d) Dec: +12 23 28.04 (12.39112d) Equinox: J2000		V=8.63	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F275W	FLASH=10		Pattern 1, Exps 1-1 in Visit 11 (1)	472 Secs (1416 Secs)	
								[==>(Pattern 1)]	***[1]***
								[==>(Pattern 2)]	
								[==>(Pattern 3)]	
2		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F606W			Pattern 2, Exps 2-2 in Visit 11 (2)	349 Secs (698 Secs)	
								[==>(Pattern 1)]	***[1]***
								[==>(Pattern 2)]	


Orbit 1
Server Version: 20160601
Orbit Structure
Overhead
Pointing Maneuver
Exp. 1
Pointing Maneuver
Overhead
Exp. 1
Overhead
Pointing Maneuver
Exp. 2
Overhead
Pointing Maneuver
Exp. 2
Occultation
Overhead
Unused Orbital Visibility = 0
GS Acq
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14618, Visit 12 Fri Jul 29 18:01:38 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: PCS MODE FINE; SCHED 90%; AFTER 01 BY 55 D TO 56 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true		(1)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

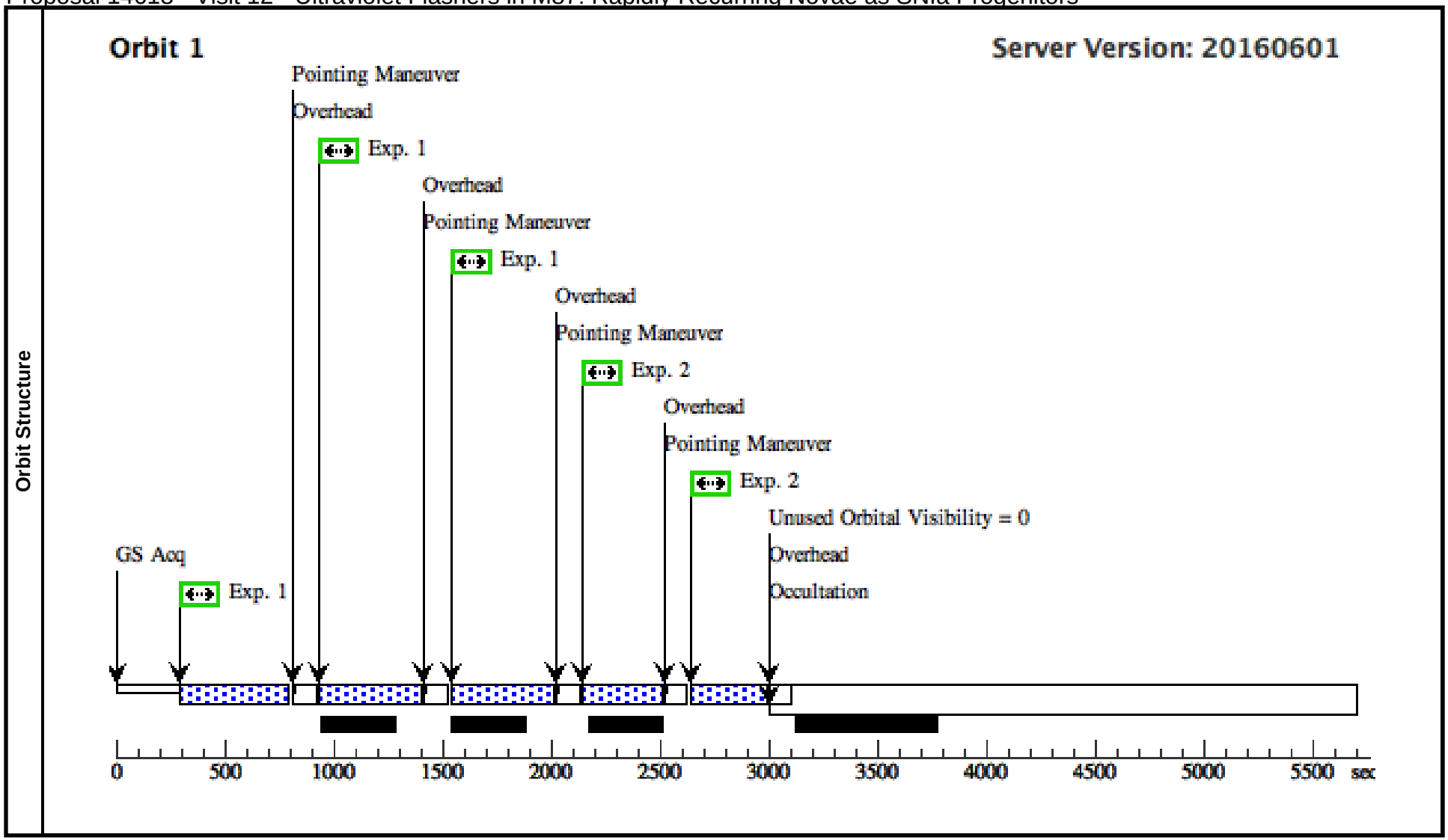
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M-87	RA: 12 30 49.4234 (187.7059308d) Dec: +12 23 28.04 (12.39112d) Equinox: J2000		V=8.63	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F275W	FLASH=10		Pattern 1, Exps 1-1 in Visit 12 (1)	472 Secs (1416 Secs)	
								[==>(Pattern 1)] *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
2		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F606W			Pattern 2, Exps 2-2 in Visit 12 (2)	349 Secs (698 Secs)	
								[==>(Pattern 1)] *[==>(Pattern 2)]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20160601
Pointing Maneuver
Overhead
Exp. 1
Overhead
Pointing Maneuver
Exp. 1
Overhead
Pointing Maneuver
Exp. 2
Overhead
Pointing Maneuver
Exp. 2
Unused Orbital Visibility = 0
Overhead
Occultation
GS Acq
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14618, Visit 13 Fri Jul 29 18:01:38 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: PCS MODE FINE; SCHED 90%; AFTER 01 BY 60 D TO 61 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true		(1)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

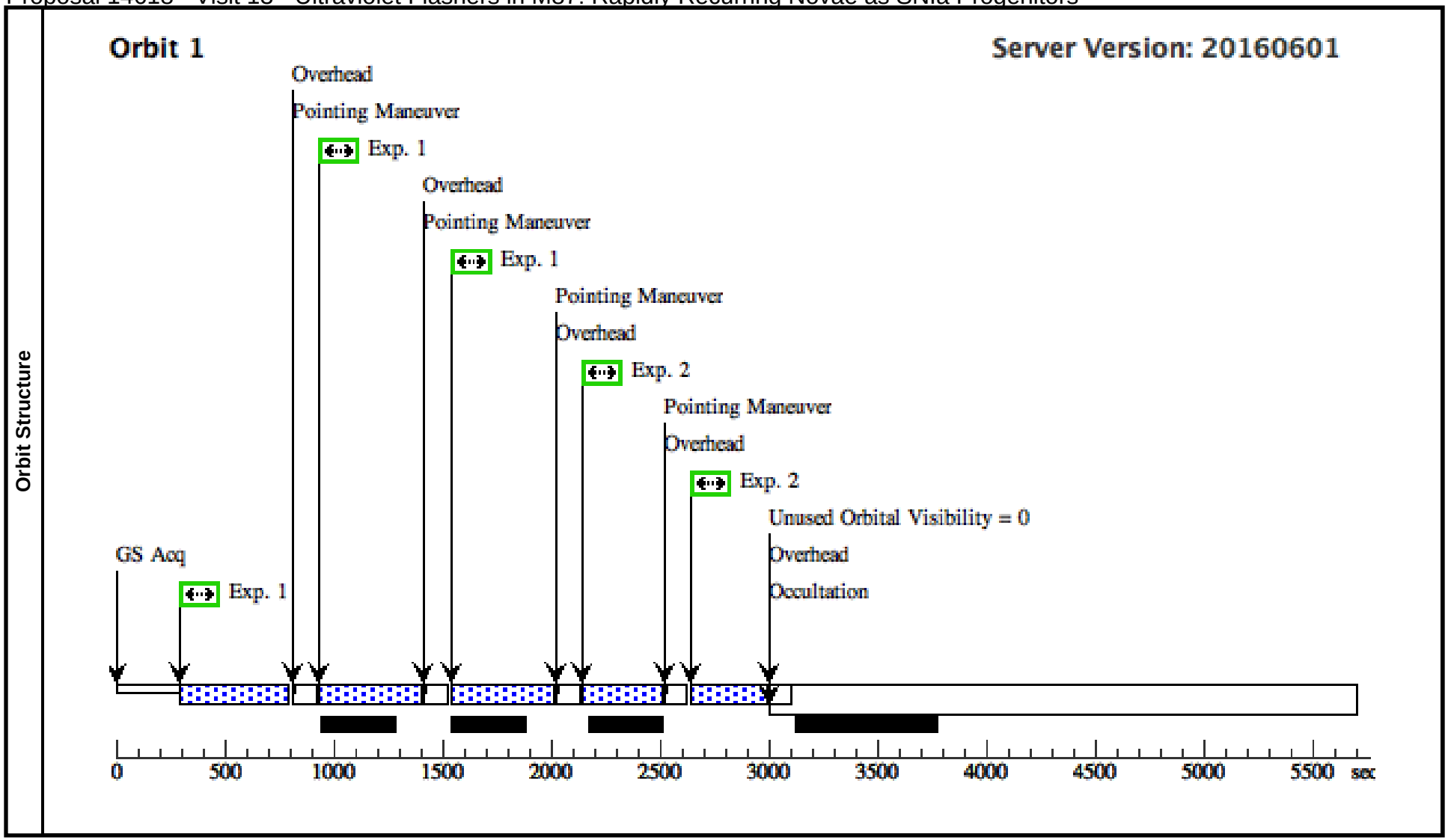
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M-87	RA: 12 30 49.4234 (187.7059308d) Dec: +12 23 28.04 (12.39112d) Equinox: J2000		V=8.63	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F275W	FLASH=10		Pattern 1, Exps 1-1 in Visit 13 (1)	472 Secs (1416 Secs)	
								[==>(Pattern 1)]	***[1]***
								[==>(Pattern 2)]	
								[==>(Pattern 3)]	
2		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F606W			Pattern 2, Exps 2-2 in Visit 13 (2)	349 Secs (698 Secs)	
								[==>(Pattern 1)]	***[1]***
								[==>(Pattern 2)]	


Orbit 1
Server Version: 20160601
Orbit Structure
Overhead
Pointing Maneuver
Exp. 1
Overhead
Pointing Maneuver
Exp. 1
Pointing Maneuver
Overhead
Exp. 2
Pointing Maneuver
Overhead
Exp. 2
Unused Orbital Visibility = 0
Overhead
Occultation
GS Acq
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14618, Visit 14 Fri Jul 29 18:01:38 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: PCS MODE FINE; SCHED 90%; AFTER 01 BY 65 D TO 66 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true		(1)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

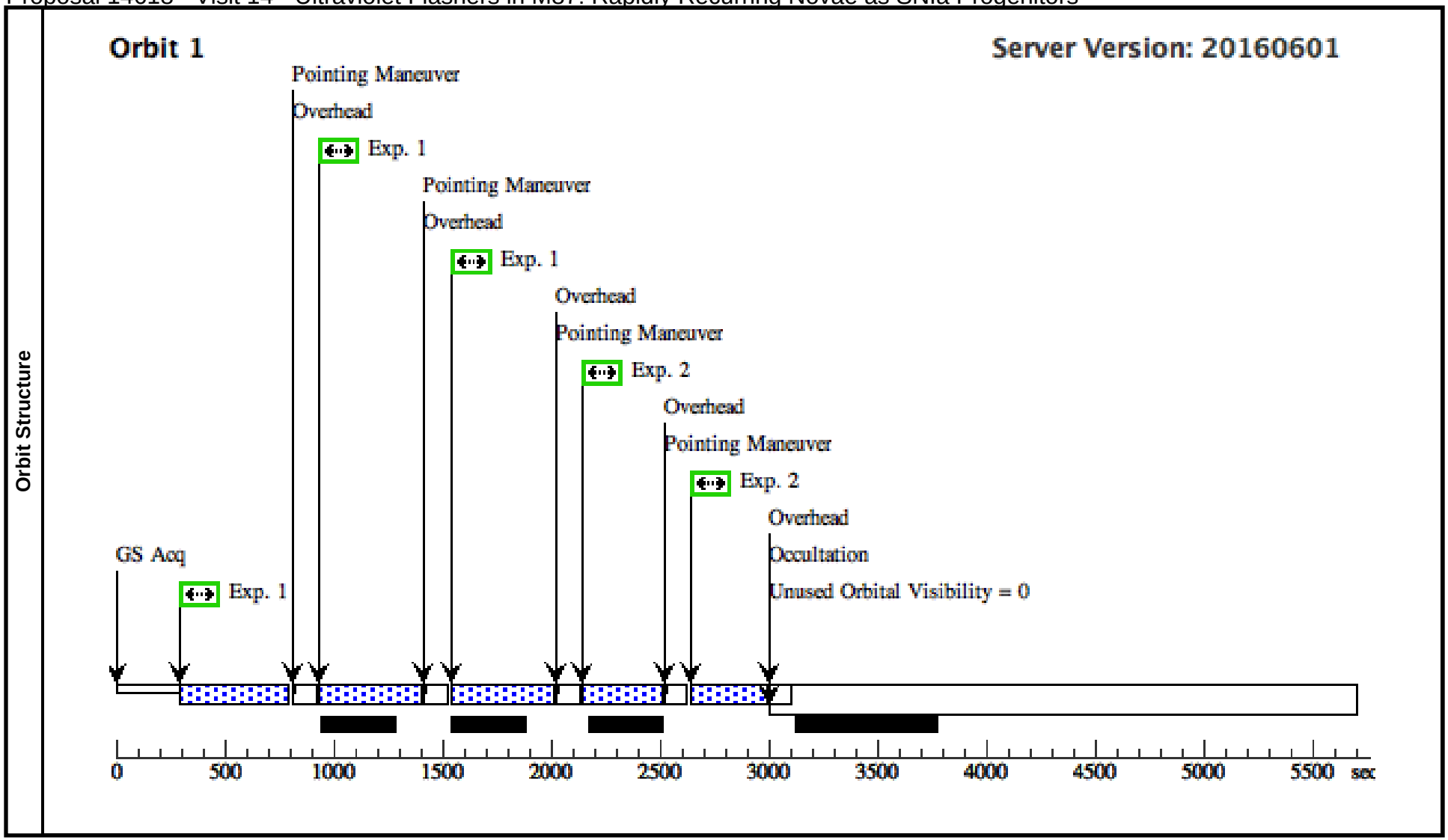
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M-87	RA: 12 30 49.4234 (187.7059308d) Dec: +12 23 28.04 (12.39112d) Equinox: J2000		V=8.63	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F275W	FLASH=10		Pattern 1, Exps 1-1 in Visit 14 (1)	472 Secs (1416 Secs)	
								[==>(Pattern 1)] *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
2		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F606W			Pattern 2, Exps 2-2 in Visit 14 (2)	349 Secs (698 Secs)	
								[==>(Pattern 1)] *[==>(Pattern 2)]*	***[1]***


Orbit 1
Server Version: 20160601
Orbit Structure
GS Acq
Exp. 1
Pointing Maneuver
Overhead
Exp. 1
Pointing Maneuver
Overhead
Exp. 1
Overhead
Pointing Maneuver
Exp. 2
Overhead
Pointing Maneuver
Exp. 2
Overhead
Occultation
Unused Orbital Visibility = 0
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14618, Visit 15 Fri Jul 29 18:01:39 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: PCS MODE FINE; SCHED 90%; AFTER 01 BY 70 D TO 71 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true		(1)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

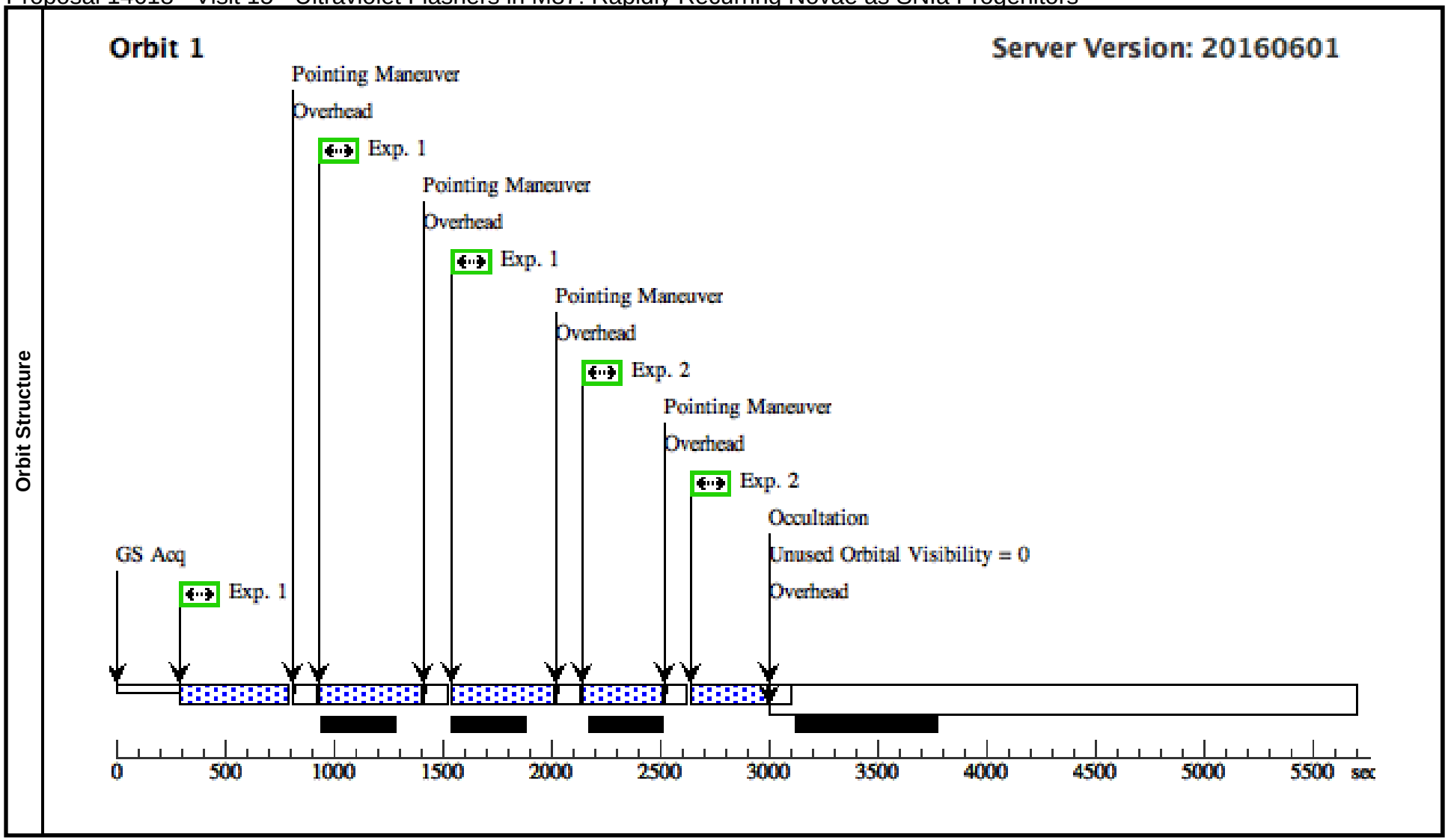
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M-87	RA: 12 30 49.4234 (187.7059308d) Dec: +12 23 28.04 (12.39112d) Equinox: J2000		V=8.63	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F275W	FLASH=10		Pattern 1, Exps 1-1 in Visit 15 (1)	472 Secs (1416 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
2		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F606W			Pattern 2, Exps 2-2 in Visit 15 (2)	349 Secs (698 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***


Orbit 1
Server Version: 20160601
Orbit Structure
Pointing Maneuver
Overhead
Exp. 1
Pointing Maneuver
Overhead
Exp. 1
Pointing Maneuver
Overhead
Exp. 2
Pointing Maneuver
Overhead
Exp. 2
Occultation
Unused Orbital Visibility = 0
Overhead
GS Acq
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14618, Visit 16 Fri Jul 29 18:01:39 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: PCS MODE FINE; SCHED 90%; AFTER 01 BY 75 D TO 76 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true		(1)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

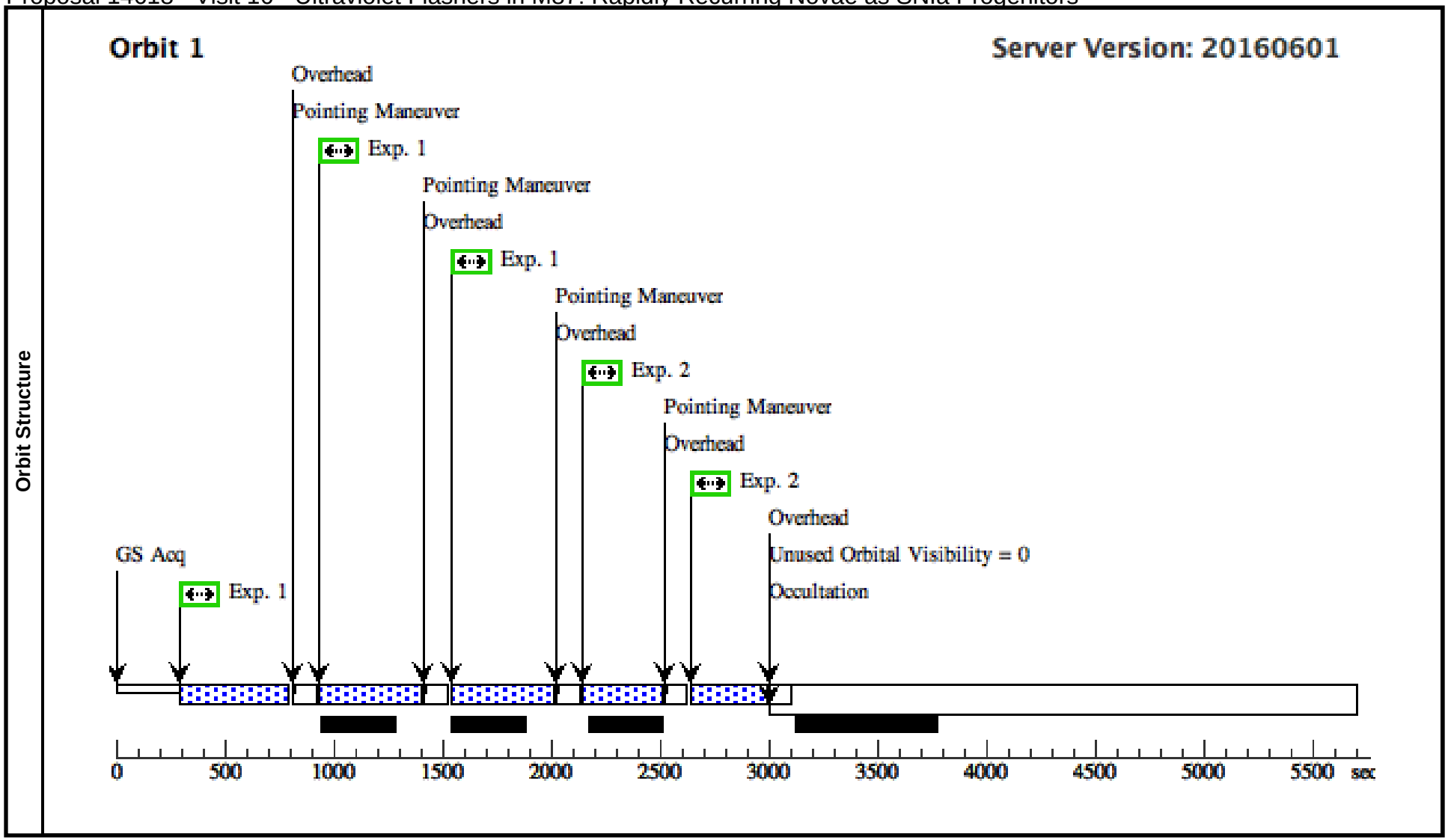
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M-87	RA: 12 30 49.4234 (187.7059308d) Dec: +12 23 28.04 (12.39112d) Equinox: J2000		V=8.63	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F275W	FLASH=10		Pattern 1, Exps 1-1 in Visit 16 (1)	472 Secs (1416 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
2		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F606W			Pattern 2, Exps 2-2 in Visit 16 (2)	349 Secs (698 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***


Orbit 1
Server Version: 20160601
Orbit Structure
Overhead
Pointing Maneuver
Exp. 1
Pointing Maneuver
Overhead
Exp. 1
Pointing Maneuver
Overhead
Exp. 2
Pointing Maneuver
Overhead
Exp. 2
Overhead
Unused Orbital Visibility = 0
Occultation
GS Acq
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14618, Visit 17 Fri Jul 29 18:01:39 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: PCS MODE FINE; SCHED 90%; AFTER 01 BY 80 D TO 81 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true		(1)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

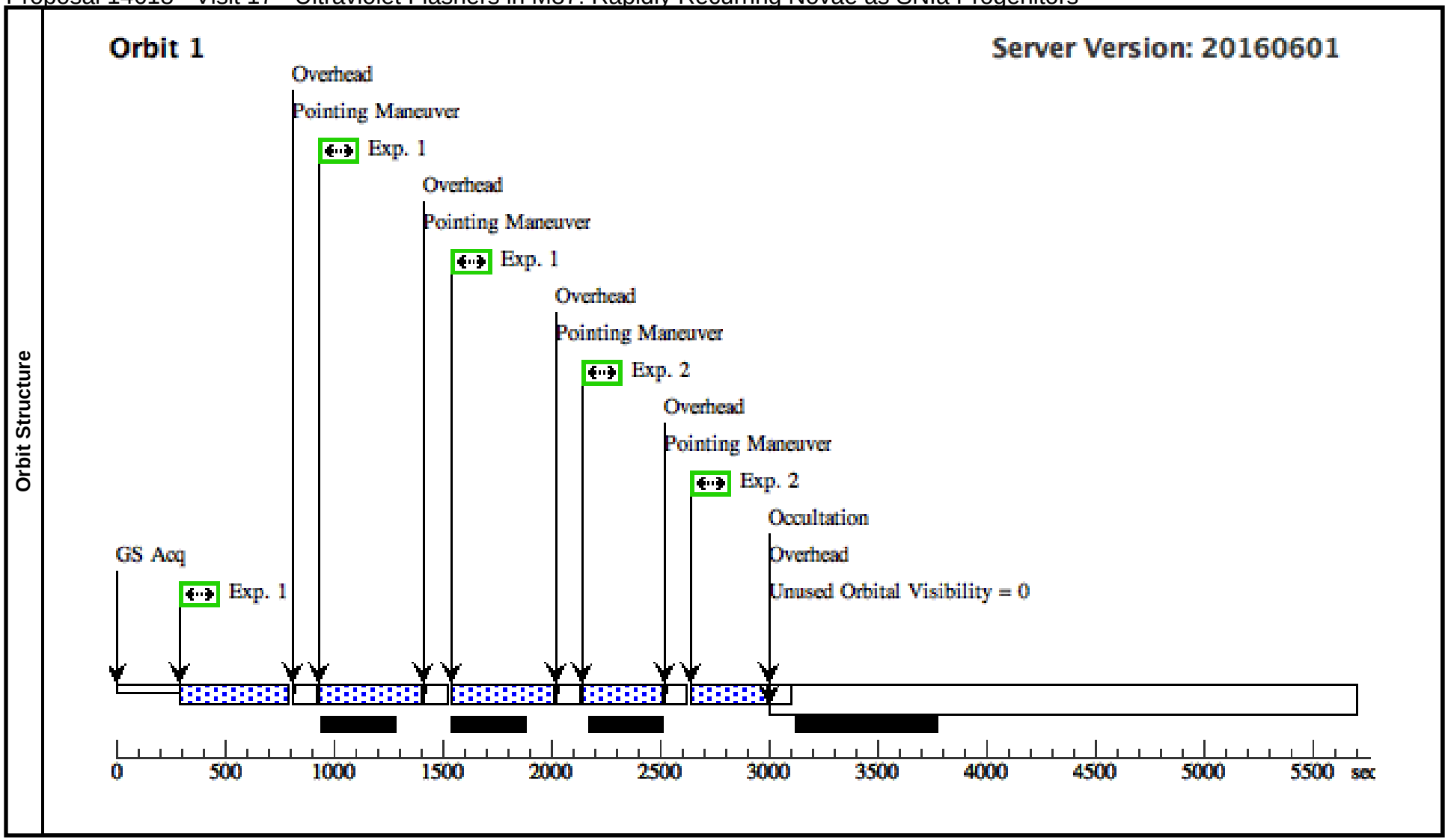
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M-87	RA: 12 30 49.4234 (187.7059308d) Dec: +12 23 28.04 (12.39112d) Equinox: J2000		V=8.63	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F275W	FLASH=10		Pattern 1, Exps 1-1 in Visit 17 (1)	472 Secs (1416 Secs)	
								[==>(Pattern 1)] *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
2		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F606W			Pattern 2, Exps 2-2 in Visit 17 (2)	349 Secs (698 Secs)	
								[==>(Pattern 1)] *[==>(Pattern 2)]*	***[1]***


Orbit 1
Server Version: 20160601
Orbit Structure
GS Acq
Exp. 1
Overhead
Pointing Maneuver
Exp. 1
Overhead
Pointing Maneuver
Exp. 1
Overhead
Pointing Maneuver
Exp. 2
Overhead
Pointing Maneuver
Exp. 2
Occultation
Overhead
Unused Orbital Visibility = 0
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14618, Visit 18 Fri Jul 29 18:01:39 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: PCS MODE FINE; SCHED 90%; AFTER 01 BY 85 D TO 86 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true		(1)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

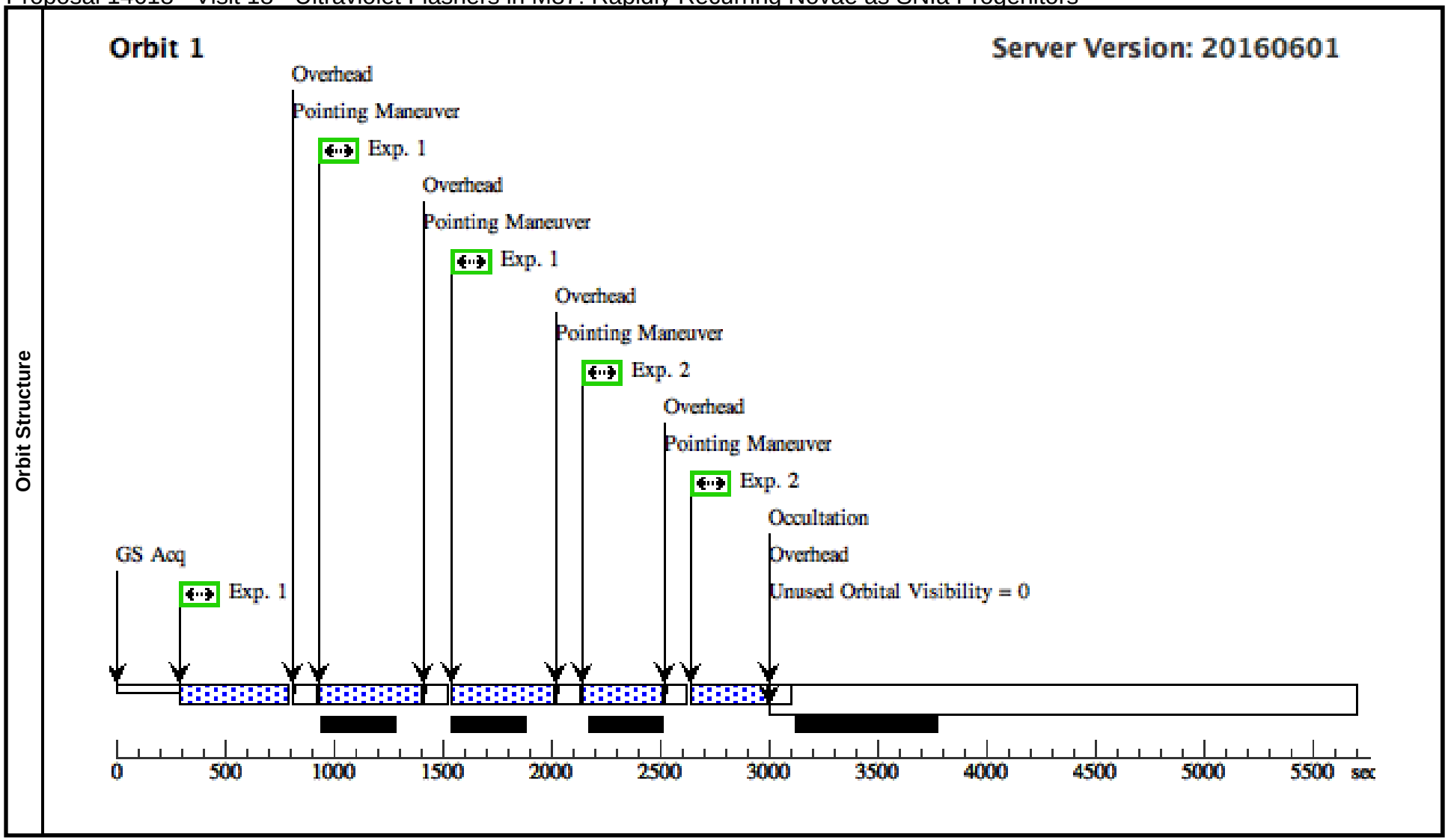
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M-87	RA: 12 30 49.4234 (187.7059308d) Dec: +12 23 28.04 (12.39112d) Equinox: J2000		V=8.63	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F275W	FLASH=10		Pattern 1, Exps 1-1 in Visit 18 (1)	472 Secs (1416 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
2		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F606W			Pattern 2, Exps 2-2 in Visit 18 (2)	349 Secs (698 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***


Orbit 1
Server Version: 20160601
Orbit Structure
Overhead
Pointing Maneuver
Exp. 1
Overhead
Pointing Maneuver
Exp. 1
Overhead
Pointing Maneuver
Exp. 2
Overhead
Pointing Maneuver
Exp. 2
Occultation
Overhead
Unused Orbital Visibility = 0
GS Acq
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14618, Visit 19 Fri Jul 29 18:01:39 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: PCS MODE FINE; SCHED 90%; AFTER 01 BY 90 D TO 91 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true		(1)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

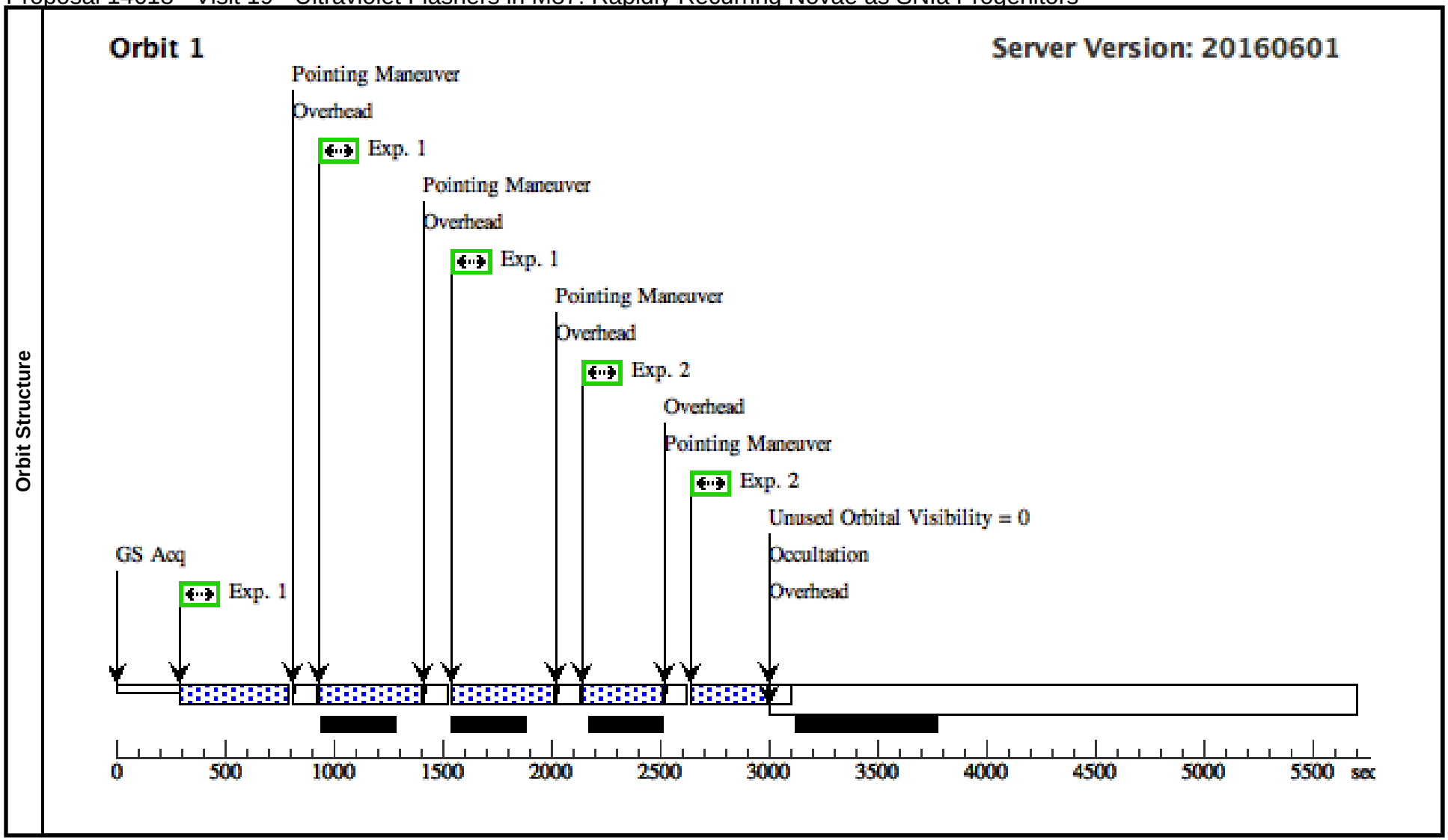
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M-87	RA: 12 30 49.4234 (187.7059308d) Dec: +12 23 28.04 (12.39112d) Equinox: J2000		V=8.63	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F275W	FLASH=10		Pattern 1, Exps 1-1 in Visit 19 (1)	472 Secs (1416 Secs)	
								[==>(Pattern 1)] *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
2		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F606W			Pattern 2, Exps 2-2 in Visit 19 (2)	349 Secs (698 Secs)	
								[==>(Pattern 1)] *[==>(Pattern 2)]*	***[1]***


Orbit 1
Server Version: 20160601
Orbit Structure
Pointing Maneuver
Overhead
Exp. 1
Pointing Maneuver
Overhead
Exp. 1
Pointing Maneuver
Overhead
Exp. 2
Overhead
Pointing Maneuver
Exp. 2
Unused Orbital Visibility = 0
Occultation
Overhead
GS Acq
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14618, Visit 20 Fri Jul 29 18:01:39 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: PCS MODE FINE; SCHED 90%; AFTER 01 BY 95 D TO 96 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true		(1)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

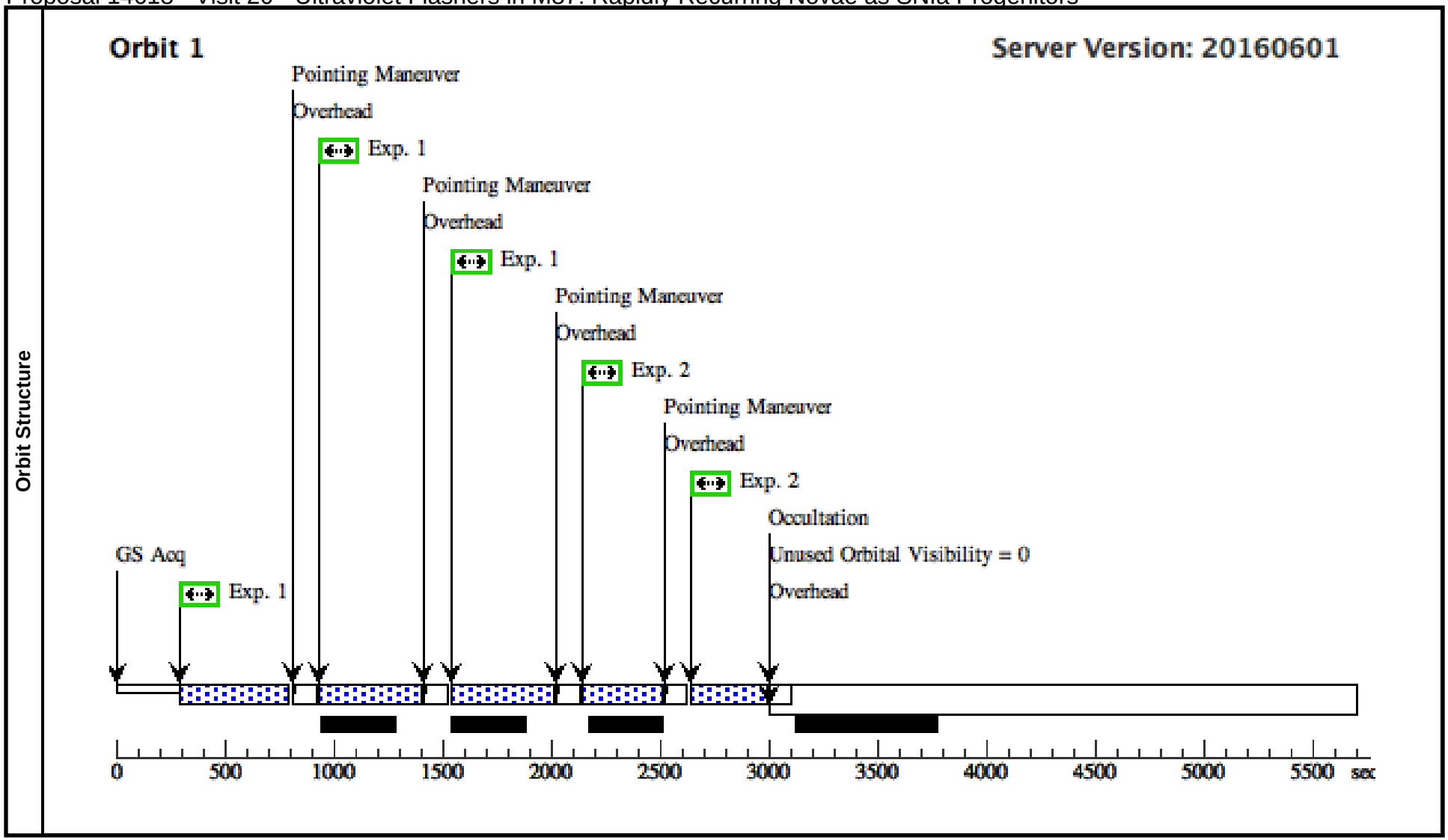
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M-87	RA: 12 30 49.4234 (187.7059308d) Dec: +12 23 28.04 (12.39112d) Equinox: J2000		V=8.63	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F275W	FLASH=10		Pattern 1, Exps 1-1 in Visit 20 (1)	472 Secs (1416 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
2		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F606W			Pattern 2, Exps 2-2 in Visit 20 (2)	349 Secs (698 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***


Orbit 1
Server Version: 20160601
Orbit Structure
Pointing Maneuver
Overhead
Exp. 1
Pointing Maneuver
Overhead
Exp. 1
Pointing Maneuver
Overhead
Exp. 2
Pointing Maneuver
Overhead
Exp. 2
Occultation
Unused Orbital Visibility = 0
Overhead
GS Acq
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14618, Visit 21 Fri Jul 29 18:01:39 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: PCS MODE FINE; SCHED 90%; AFTER 01 BY 100 D TO 101 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true		(1)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

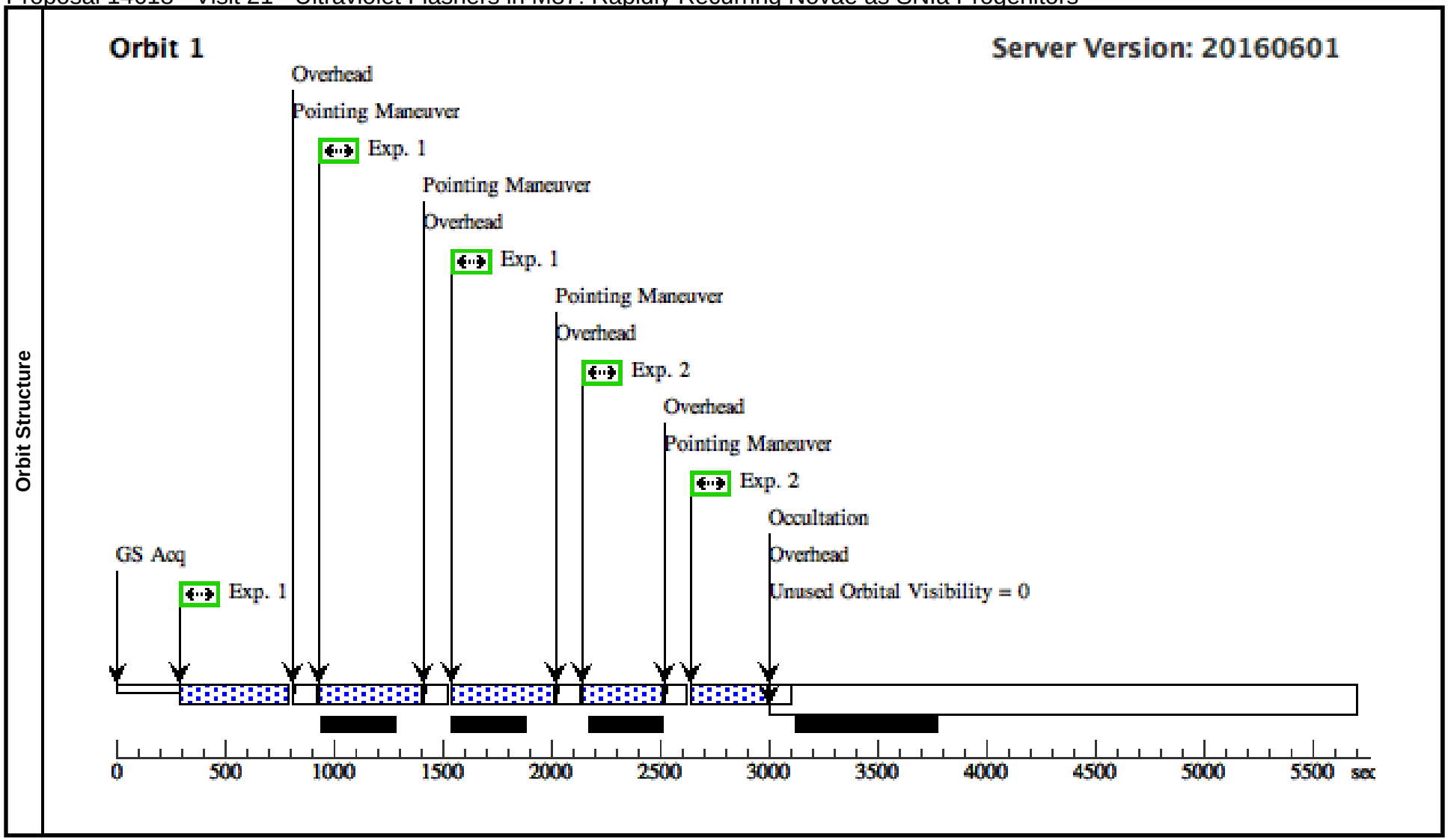
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M-87	RA: 12 30 49.4234 (187.7059308d) Dec: +12 23 28.04 (12.39112d) Equinox: J2000		V=8.63	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F275W	FLASH=10		Pattern 1, Exps 1-1 in Visit 21 (1)	472 Secs (1416 Secs)	
								[==>(Pattern 1)] *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
2		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F606W			Pattern 2, Exps 2-2 in Visit 21 (2)	349 Secs (698 Secs)	
								[==>(Pattern 1)] *[==>(Pattern 2)]*	***[1]***


Orbit 1
Server Version: 20160601
Orbit Structure
Overhead
Pointing Maneuver
Exp. 1
Pointing Maneuver
Overhead
Exp. 1
Pointing Maneuver
Overhead
Exp. 2
Overhead
Pointing Maneuver
Exp. 2
Occultation
Overhead
Unused Orbital Visibility = 0
GS Acq
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14618, Visit 22 Fri Jul 29 18:01:39 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: PCS MODE FINE; SCHED 90%; AFTER 01 BY 105 D TO 106 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true		(1)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

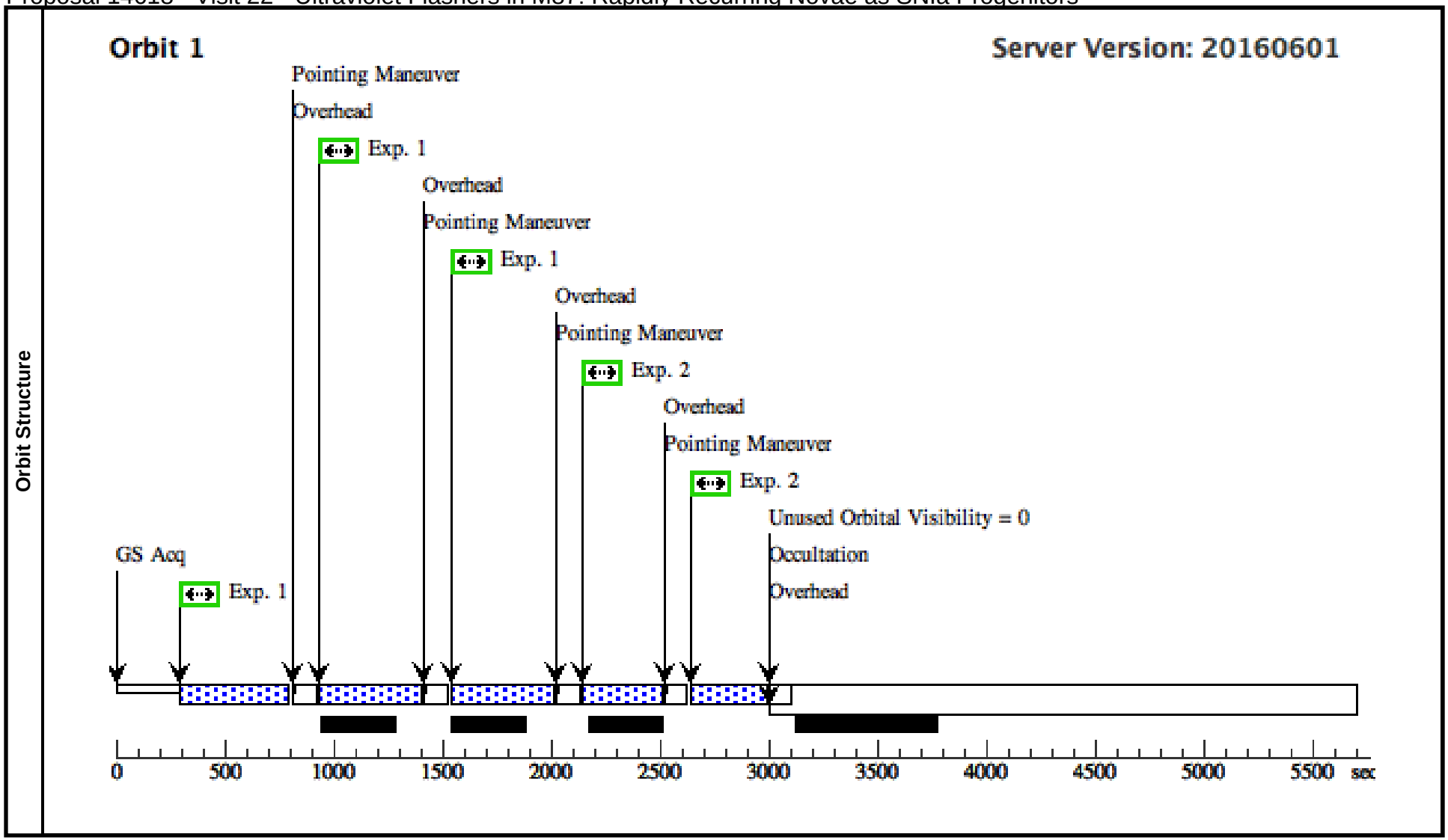
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M-87	RA: 12 30 49.4234 (187.7059308d) Dec: +12 23 28.04 (12.39112d) Equinox: J2000		V=8.63	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F275W	FLASH=10		Pattern 1, Exps 1-1 in Visit 22 (1)	472 Secs (1416 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
2		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F606W			Pattern 2, Exps 2-2 in Visit 22 (2)	349 Secs (698 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***


Orbit 1
Server Version: 20160601
Orbit Structure
Pointing Maneuver
Overhead
Exp. 1
Overhead
Pointing Maneuver
Exp. 1
Overhead
Pointing Maneuver
Exp. 2
Overhead
Pointing Maneuver
Exp. 2
Unused Orbital Visibility = 0
Occultation
Overhead
GS Acq
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14618, Visit 23 Fri Jul 29 18:01:39 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: PCS MODE FINE; SCHED 90%; AFTER 01 BY 110 D TO 111 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true		(1)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

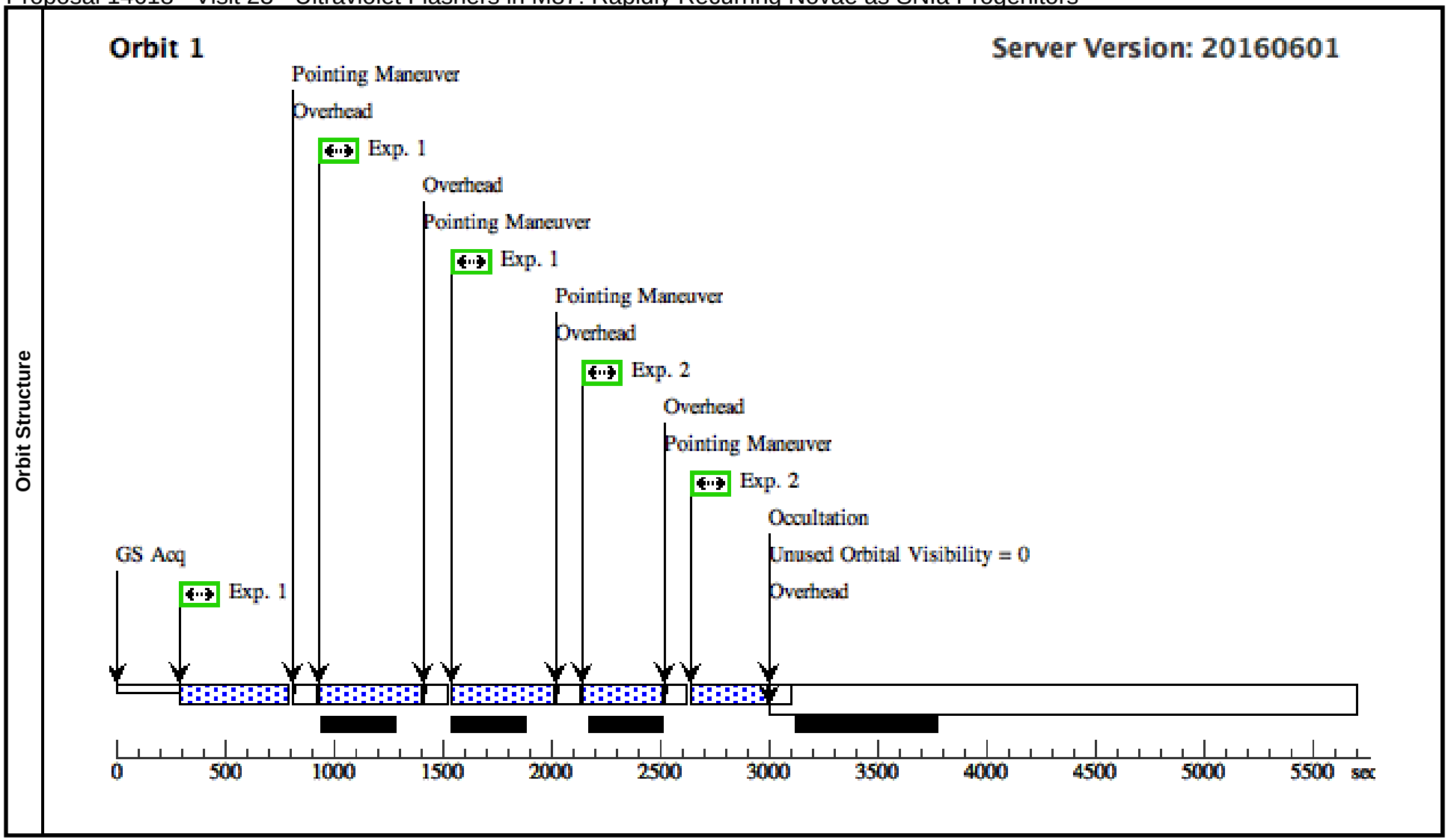
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M-87	RA: 12 30 49.4234 (187.7059308d) Dec: +12 23 28.04 (12.39112d) Equinox: J2000		V=8.63	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F275W	FLASH=10		Pattern 1, Exps 1-1 in Visit 23 (1)	472 Secs (1416 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
2		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F606W			Pattern 2, Exps 2-2 in Visit 23 (2)	349 Secs (698 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20160601
Pointing Maneuver
Overhead
Exp. 1
Overhead
Pointing Maneuver
Exp. 1
Pointing Maneuver
Overhead
Exp. 2
Overhead
Pointing Maneuver
Exp. 2
Occultation
Unused Orbital Visibility = 0
Overhead
GS Acq
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14618, Visit 24 Fri Jul 29 18:01:39 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: PCS MODE FINE; SCHED 90%; AFTER 01 BY 115 D TO 116 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true		(1)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

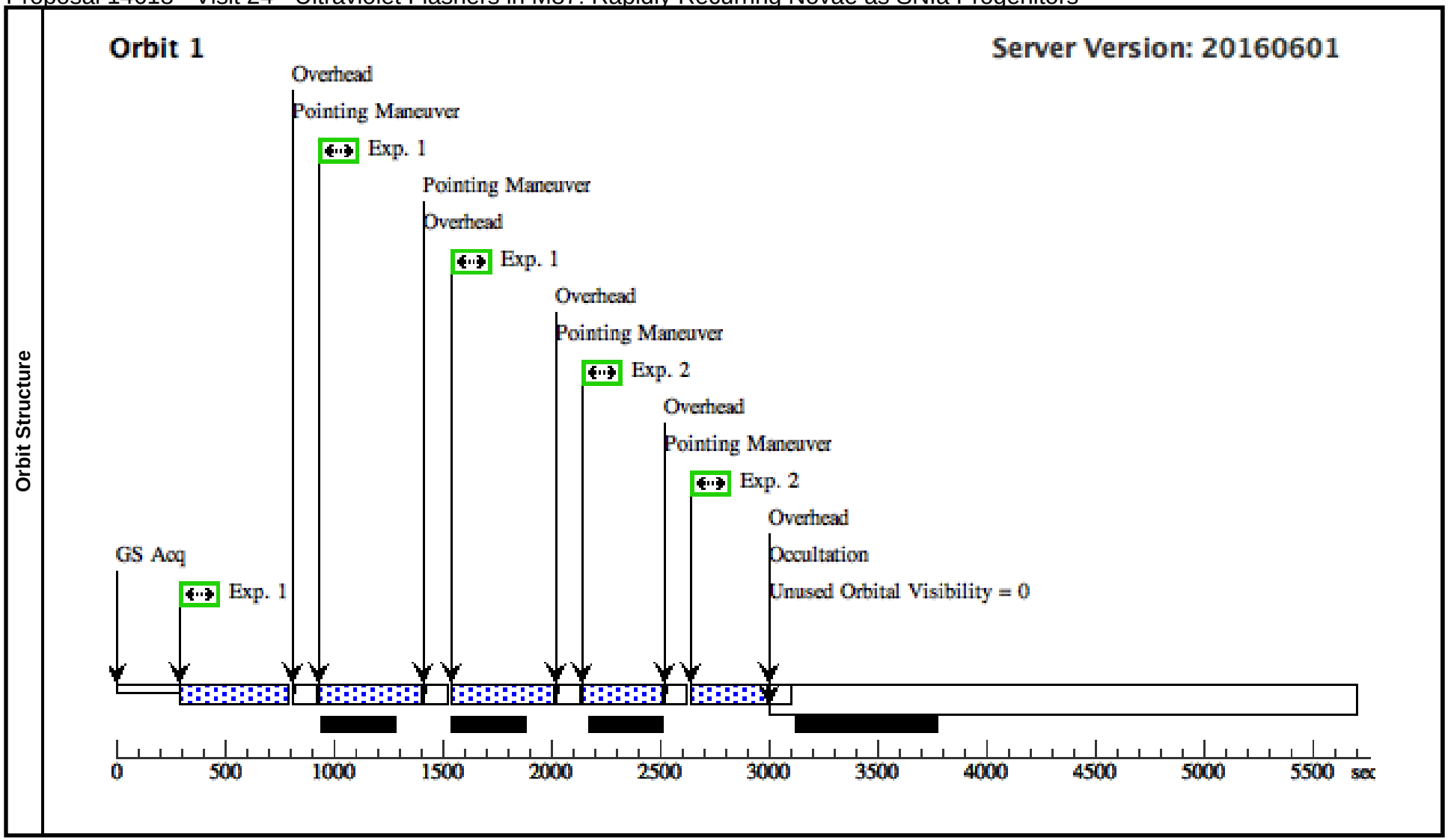
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M-87	RA: 12 30 49.4234 (187.7059308d) Dec: +12 23 28.04 (12.39112d) Equinox: J2000		V=8.63	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F275W	FLASH=10		Pattern 1, Exps 1-1 in Visit 24 (1)	472 Secs (1416 Secs)	
								[==>(Pattern 1)]	***[1]***
								[==>(Pattern 2)]	
								[==>(Pattern 3)]	
2		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F606W			Pattern 2, Exps 2-2 in Visit 24 (2)	349 Secs (698 Secs)	
								[==>(Pattern 1)]	***[1]***
								[==>(Pattern 2)]	


Orbit 1
Server Version: 20160601
Orbit Structure
Overhead
Pointing Maneuver
Exp. 1
Pointing Maneuver
Overhead
Exp. 1
Overhead
Pointing Maneuver
Exp. 2
Overhead
Pointing Maneuver
Exp. 2
Overhead
Occultation
Unused Orbital Visibility = 0
GS Acq
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14618, Visit 25 Fri Jul 29 18:01:39 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: PCS MODE FINE; SCHED 90%; AFTER 01 BY 120 D TO 121 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true		(1)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

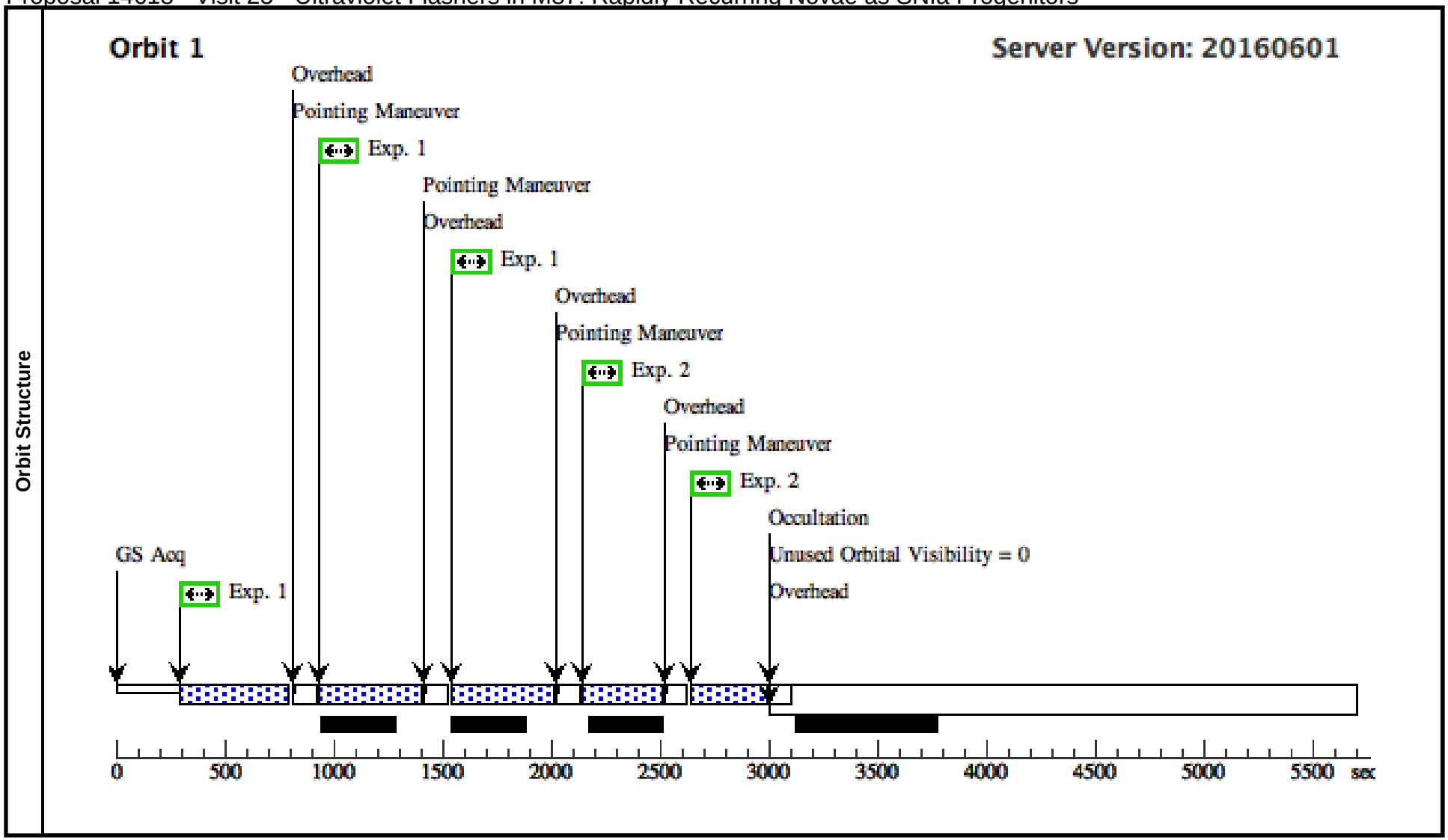
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M-87	RA: 12 30 49.4234 (187.7059308d) Dec: +12 23 28.04 (12.39112d) Equinox: J2000		V=8.63	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F275W	FLASH=10		Pattern 1, Exps 1-1 in Visit 25 (1)	472 Secs (1416 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
2		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F606W			Pattern 2, Exps 2-2 in Visit 25 (2)	349 Secs (698 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***


Orbit 1
Server Version: 20160601
Orbit Structure
Overhead
Pointing Maneuver
Exp. 1
Pointing Maneuver
Overhead
Exp. 1
Overhead
Pointing Maneuver
Exp. 2
Overhead
Pointing Maneuver
Exp. 2
Occultation
Unused Orbital Visibility = 0
Overhead
GS Acq
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14618, Visit 26 Fri Jul 29 18:01:39 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: PCS MODE FINE; SCHED 90%; AFTER 01 BY 125 D TO 126 D

Patterns

#	Primary Pattern	Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.414 Line Spacing= Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true		(1)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing= Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

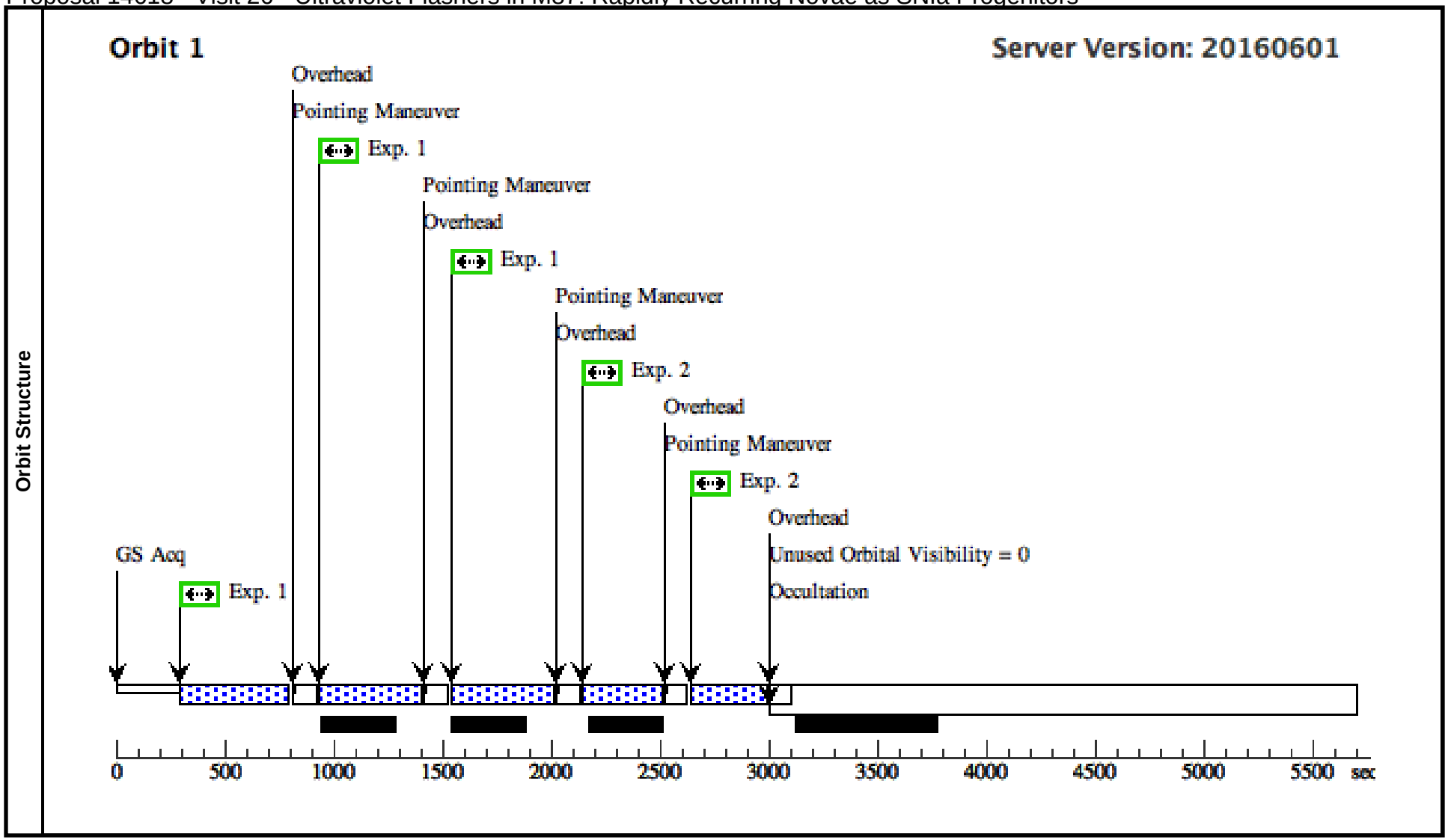
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M-87	RA: 12 30 49.4234 (187.7059308d) Dec: +12 23 28.04 (12.39112d) Equinox: J2000		V=8.63	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F275W	FLASH=10		Pattern 1, Exps 1-1 in Visit 26 (1)	472 Secs (1416 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
2		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F606W			Pattern 2, Exps 2-2 in Visit 26 (2)	349 Secs (698 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***


Orbit 1
Server Version: 20160601
Orbit Structure
Overhead
Pointing Maneuver
Exp. 1
Pointing Maneuver
Overhead
Exp. 1
Pointing Maneuver
Overhead
Exp. 2
Overhead
Pointing Maneuver
Exp. 2
Overhead
Unused Orbital Visibility = 0
Occultation
GS Acq
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14618, Visit 27 Fri Jul 29 18:01:39 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: PCS MODE FINE; SCHED 90%; AFTER 01 BY 130 D TO 131 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true		(1)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

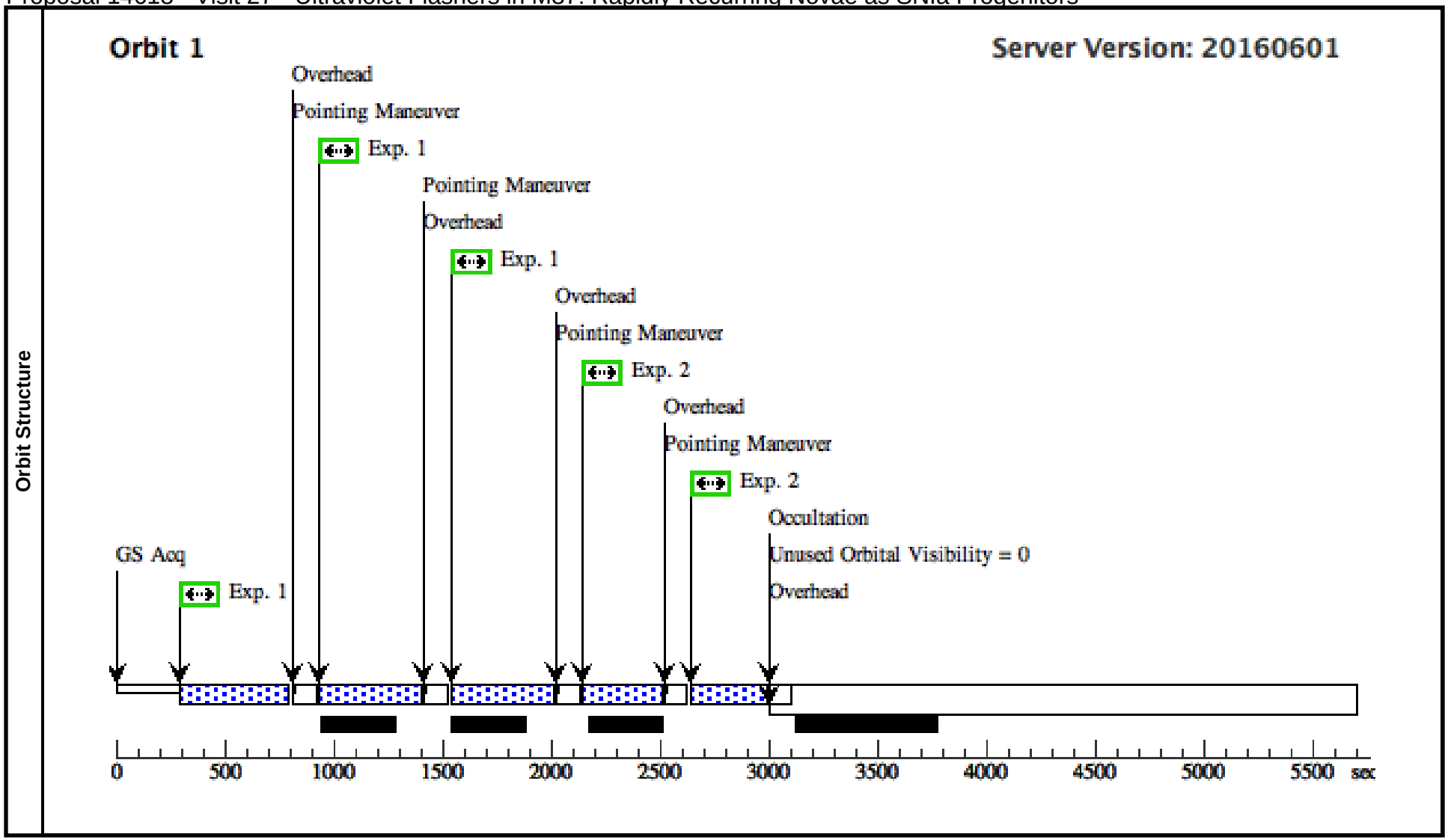
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M-87	RA: 12 30 49.4234 (187.7059308d) Dec: +12 23 28.04 (12.39112d) Equinox: J2000		V=8.63	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F275W	FLASH=10		Pattern 1, Exps 1-1 in Visit 27 (1)	472 Secs (1416 Secs)	
								[==>(Pattern 1)] *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
2		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F606W			Pattern 2, Exps 2-2 in Visit 27 (2)	349 Secs (698 Secs)	
								[==>(Pattern 1)] *[==>(Pattern 2)]*	***[1]***


Orbit 1
Server Version: 20160601
Orbit Structure
Overhead
Pointing Maneuver
Exp. 1
Pointing Maneuver
Overhead
Exp. 1
Overhead
Pointing Maneuver
Exp. 2
Overhead
Pointing Maneuver
Exp. 2
Occultation
Unused Orbital Visibility = 0
Overhead
GS Acq
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14618, Visit 28 Fri Jul 29 18:01:39 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: PCS MODE FINE; SCHED 90%; AFTER 01 BY 135 D TO 136 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true		(1)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

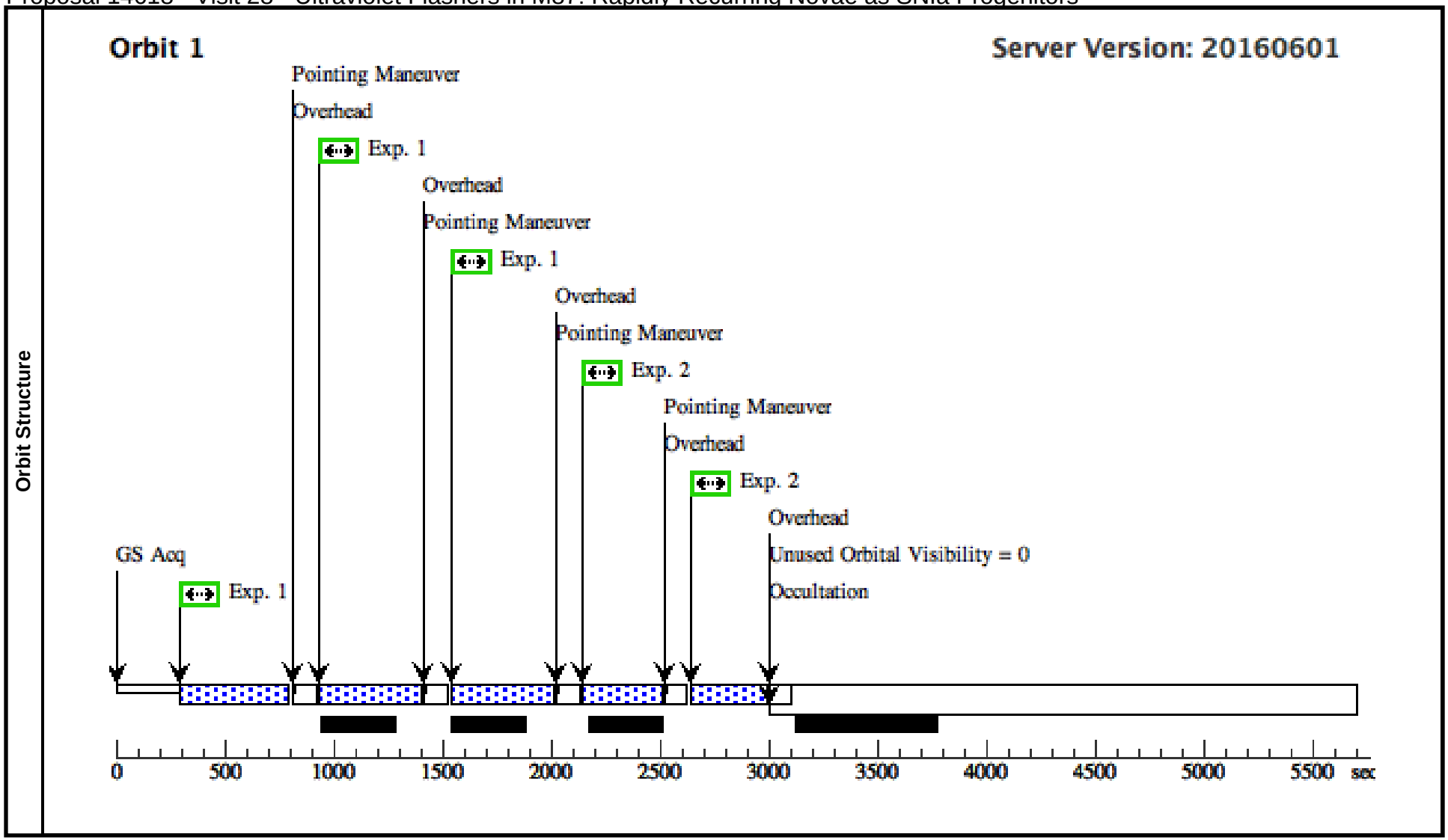
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M-87	RA: 12 30 49.4234 (187.7059308d) Dec: +12 23 28.04 (12.39112d) Equinox: J2000		V=8.63	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F275W	FLASH=10		Pattern 1, Exps 1-1 in Visit 28 (1)	472 Secs (1416 Secs)	
								[==>(Pattern 1)] *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
2		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F606W			Pattern 2, Exps 2-2 in Visit 28 (2)	349 Secs (698 Secs)	
								[==>(Pattern 1)] *[==>(Pattern 2)]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20160601
Pointing Maneuver
Overhead
Exp. 1
Overhead
Pointing Maneuver
Exp. 1
Overhead
Pointing Maneuver
Exp. 2
Pointing Maneuver
Overhead
Exp. 2
Overhead
Unused Orbital Visibility = 0
Occultation
GS Acq
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14618, Visit 29 Fri Jul 29 18:01:39 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: PCS MODE FINE; SCHED 90%; AFTER 01 BY 140 D TO 141 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true		(1)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

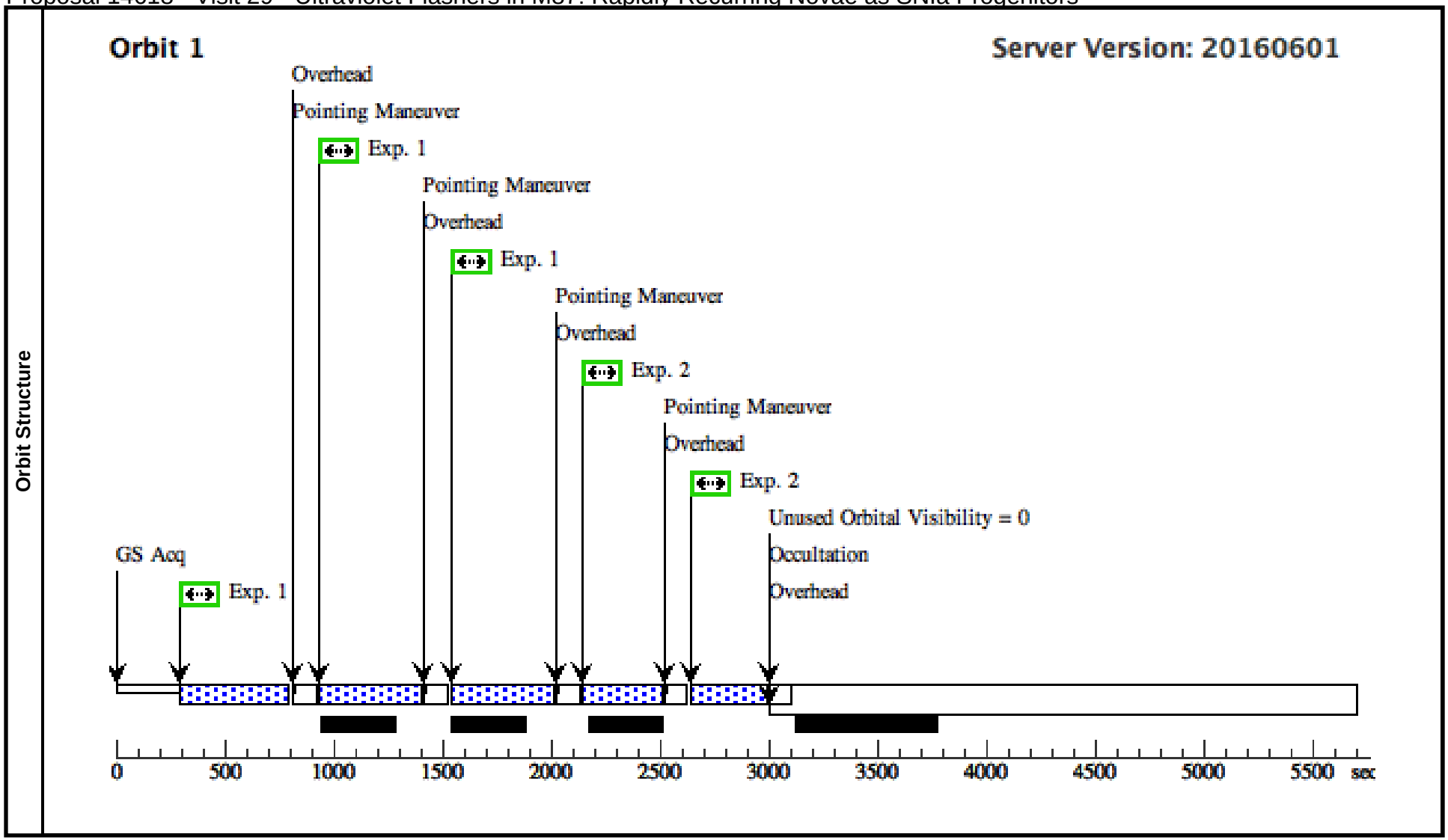
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M-87	RA: 12 30 49.4234 (187.7059308d) Dec: +12 23 28.04 (12.39112d) Equinox: J2000		V=8.63	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F275W	FLASH=10		Pattern 1, Exps 1-1 in Visit 29 (1)	472 Secs (1416 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
2		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F606W			Pattern 2, Exps 2-2 in Visit 29 (2)	349 Secs (698 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***


Orbit 1
Server Version: 20160601
Orbit Structure
Overhead
Pointing Maneuver
Exp. 1
Pointing Maneuver
Overhead
Exp. 1
Pointing Maneuver
Overhead
Exp. 2
Pointing Maneuver
Overhead
Exp. 2
Unused Orbital Visibility = 0
Occultation
Overhead
GS Acq
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14618, Visit 30 Fri Jul 29 18:01:39 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: PCS MODE FINE; SCHED 90%; AFTER 01 BY 145 D TO 146 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true		(1)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

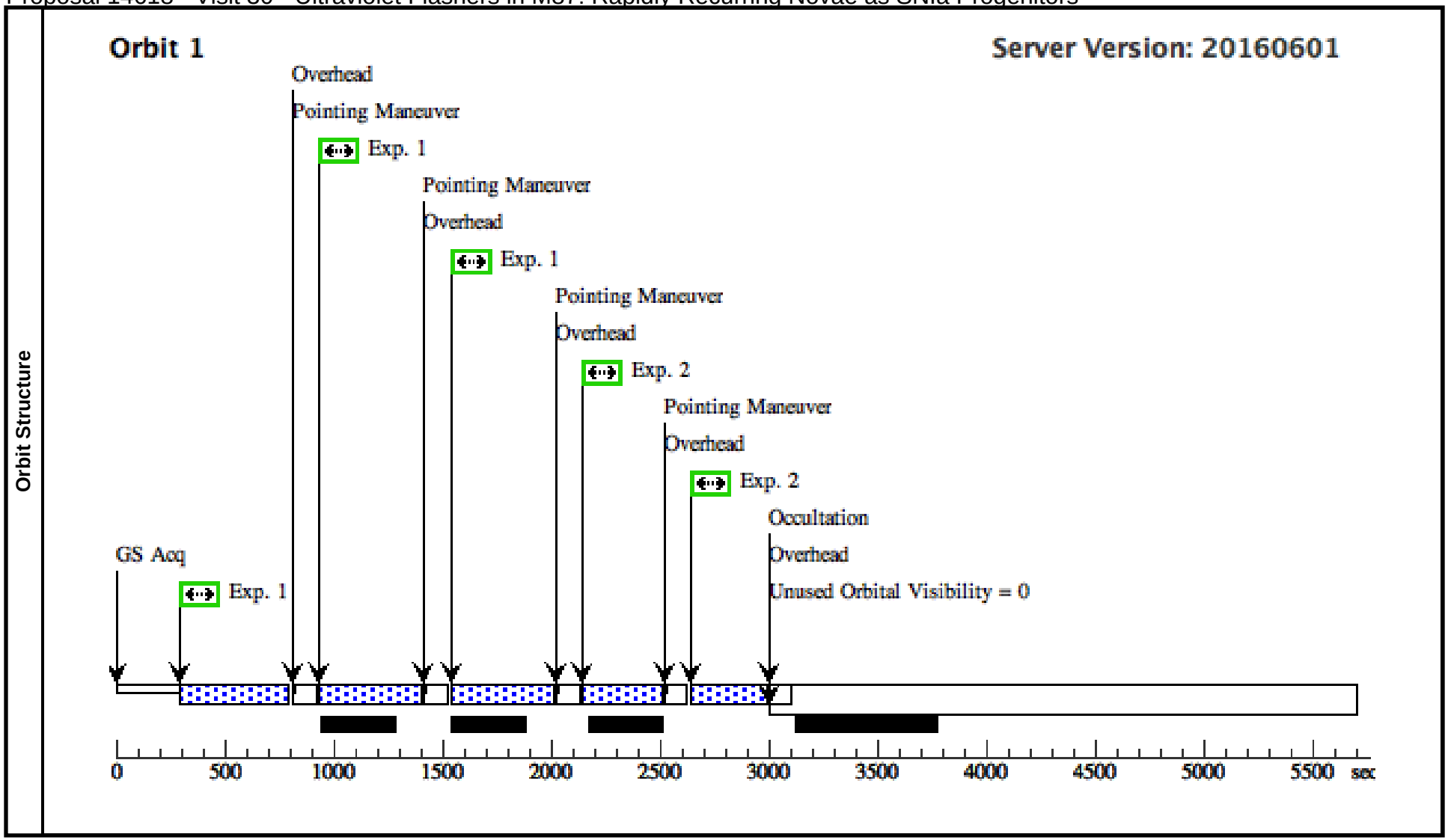
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M-87	RA: 12 30 49.4234 (187.7059308d) Dec: +12 23 28.04 (12.39112d) Equinox: J2000		V=8.63	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F275W	FLASH=10		Pattern 1, Exps 1-1 in Visit 30 (1)	472 Secs (1416 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
2		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F606W			Pattern 2, Exps 2-2 in Visit 30 (2)	349 Secs (698 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***


Orbit 1
Server Version: 20160601
Orbit Structure
Overhead
Pointing Maneuver
Exp. 1
Pointing Maneuver
Overhead
Exp. 1
Pointing Maneuver
Overhead
Exp. 2
Pointing Maneuver
Overhead
Exp. 2
Occultation
Overhead
Unused Orbital Visibility = 0
GS Acq
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14618, Visit 31 Fri Jul 29 18:01:39 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: PCS MODE FINE; SCHED 90%; AFTER 01 BY 150 D TO 151 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true		(1)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

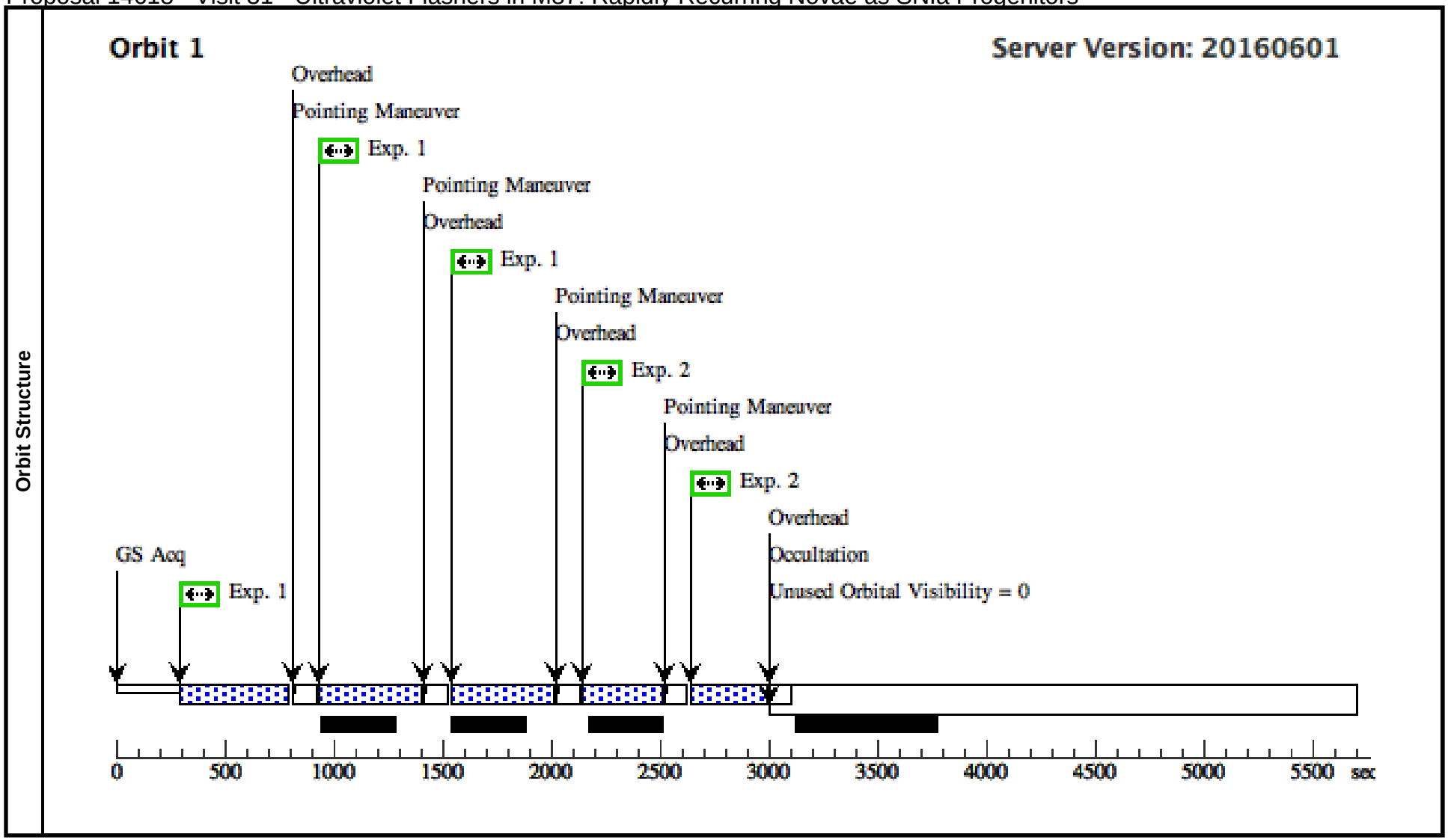
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M-87	RA: 12 30 49.4234 (187.7059308d) Dec: +12 23 28.04 (12.39112d) Equinox: J2000		V=8.63	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F275W	FLASH=10		Pattern 1, Exps 1-1 in Visit 31 (1)	472 Secs (1416 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
2		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F606W			Pattern 2, Exps 2-2 in Visit 31 (2)	349 Secs (698 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***


Orbit 1
Server Version: 20160601
Orbit Structure
Overhead
Pointing Maneuver
Exp. 1
Pointing Maneuver
Overhead
Exp. 1
Pointing Maneuver
Overhead
Exp. 2
Pointing Maneuver
Overhead
Exp. 2
Overhead
Occultation
Unused Orbital Visibility = 0
GS Acq
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14618, Visit 32 Fri Jul 29 18:01:39 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: PCS MODE FINE; SCHED 90%; AFTER 01 BY 155 D TO 156 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true		(1)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

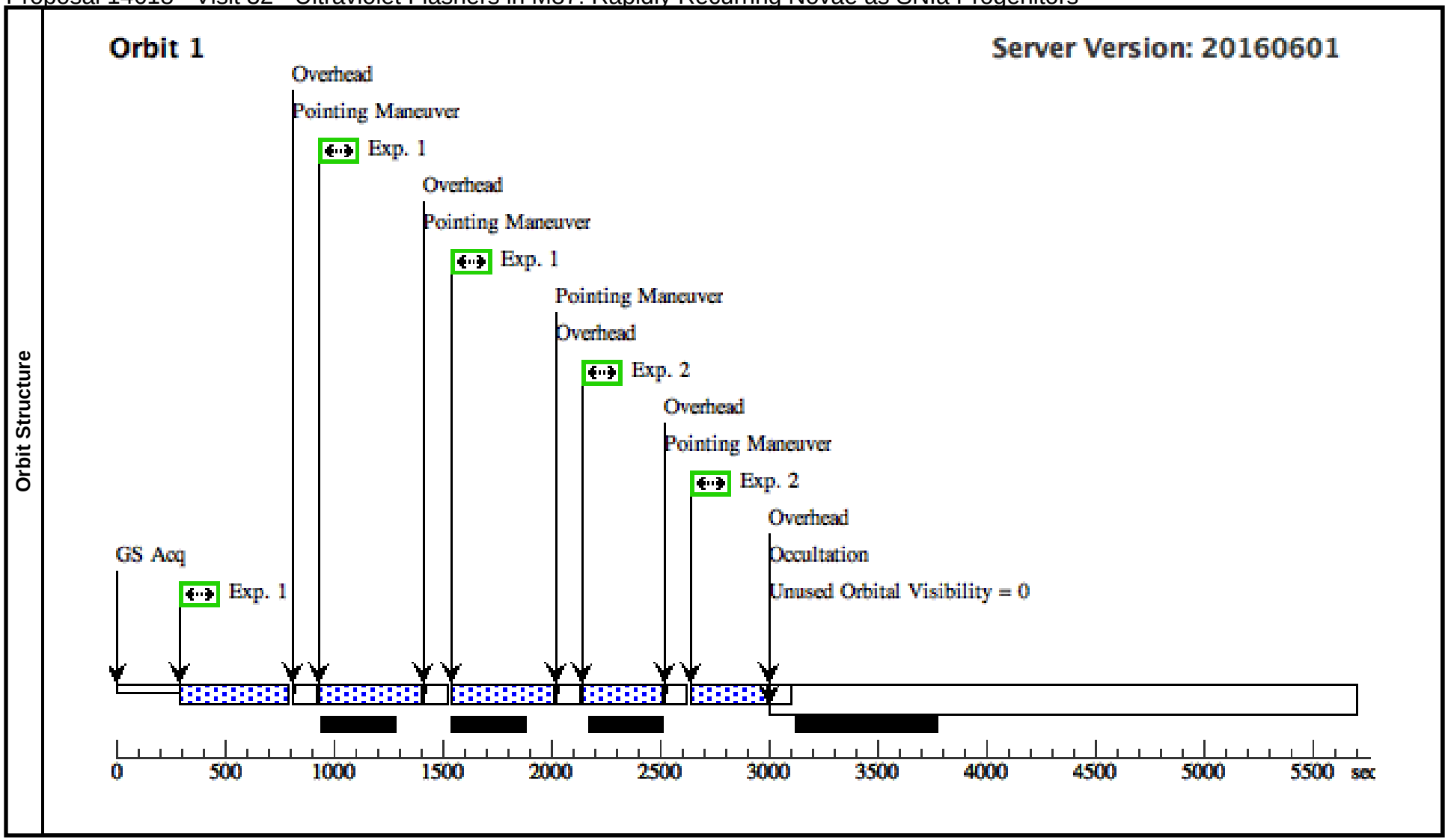
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M-87	RA: 12 30 49.4234 (187.7059308d) Dec: +12 23 28.04 (12.39112d) Equinox: J2000		V=8.63	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F275W	FLASH=10		Pattern 1, Exps 1-1 in Visit 32 (1)	472 Secs (1416 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
2		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F606W			Pattern 2, Exps 2-2 in Visit 32 (2)	349 Secs (698 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***


Orbit 1
Server Version: 20160601
Orbit Structure
Overhead
Pointing Maneuver
Exp. 1
Overhead
Pointing Maneuver
Exp. 1
Pointing Maneuver
Overhead
Exp. 2
Overhead
Pointing Maneuver
Exp. 2
Overhead
Occultation
Unused Orbital Visibility = 0
GS Acq
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14618, Visit 33 Fri Jul 29 18:01:39 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: PCS MODE FINE; SCHED 90%; AFTER 01 BY 160 D TO 161 D

Patterns

#	Primary Pattern	Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.414 Line Spacing= Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true		(1)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing= Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

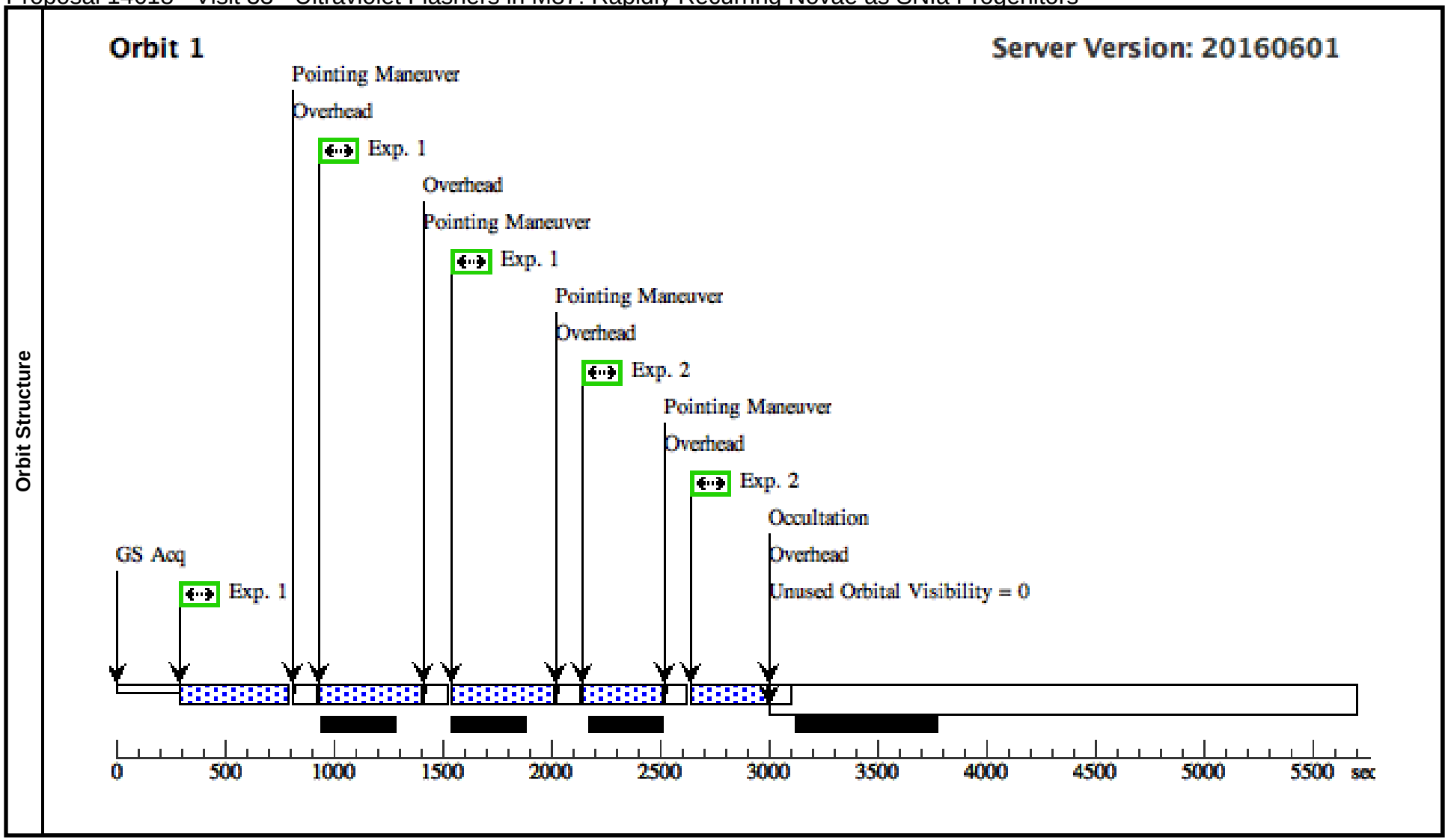
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M-87	RA: 12 30 49.4234 (187.7059308d) Dec: +12 23 28.04 (12.39112d) Equinox: J2000		V=8.63	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F275W	FLASH=10		Pattern 1, Exps 1-1 in Visit 33 (1)	472 Secs (1416 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
2		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F606W			Pattern 2, Exps 2-2 in Visit 33 (2)	349 Secs (698 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***


Orbit 1
Server Version: 20160601
Orbit Structure
Pointing Maneuver
Overhead
Exp. 1
Overhead
Pointing Maneuver
Exp. 1
Pointing Maneuver
Overhead
Exp. 2
Pointing Maneuver
Overhead
Exp. 2
Occultation
Overhead
Unused Orbital Visibility = 0
GS Acq
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14618, Visit 34 Fri Jul 29 18:01:39 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: PCS MODE FINE; SCHED 90%; AFTER 01 BY 165 D TO 166 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true		(1)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

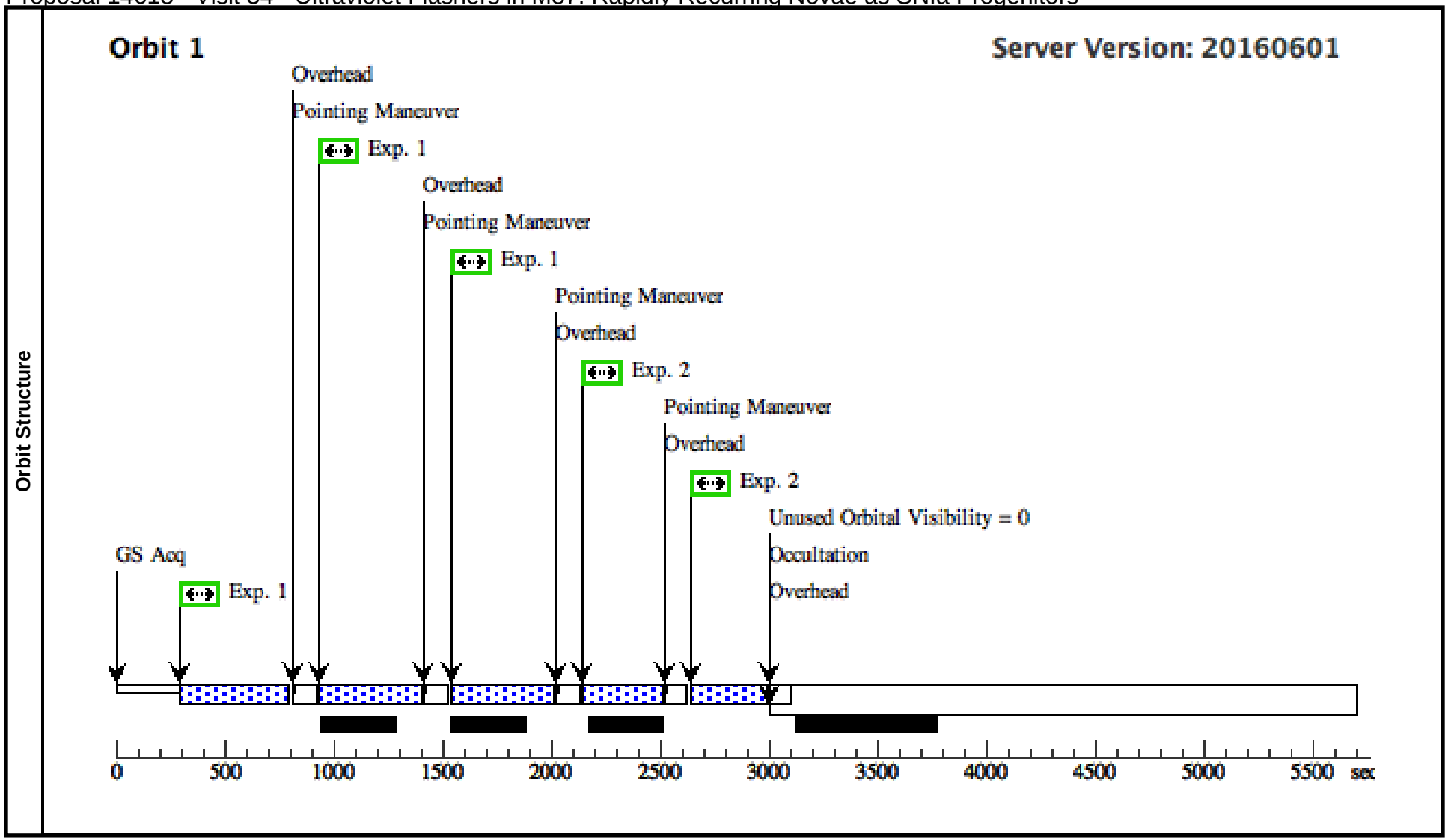
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M-87	RA: 12 30 49.4234 (187.7059308d) Dec: +12 23 28.04 (12.39112d) Equinox: J2000		V=8.63	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F275W	FLASH=10		Pattern 1, Exps 1-1 in Visit 34 (1)	472 Secs (1416 Secs)	
								[==>(Pattern 1)] *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
2		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F606W			Pattern 2, Exps 2-2 in Visit 34 (2)	349 Secs (698 Secs)	
								[==>(Pattern 1)] *[==>(Pattern 2)]*	***[1]***


Orbit 1
Server Version: 20160601
Orbit Structure
Overhead
Pointing Maneuver
Exp. 1
Overhead
Pointing Maneuver
Exp. 1
Pointing Maneuver
Overhead
Exp. 2
Pointing Maneuver
Overhead
Exp. 2
Unused Orbital Visibility = 0
Occultation
Overhead
GS Acq
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14618, Visit 35 Fri Jul 29 18:01:39 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: PCS MODE FINE; SCHED 90%; AFTER 01 BY 170 D TO 171 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true		(1)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

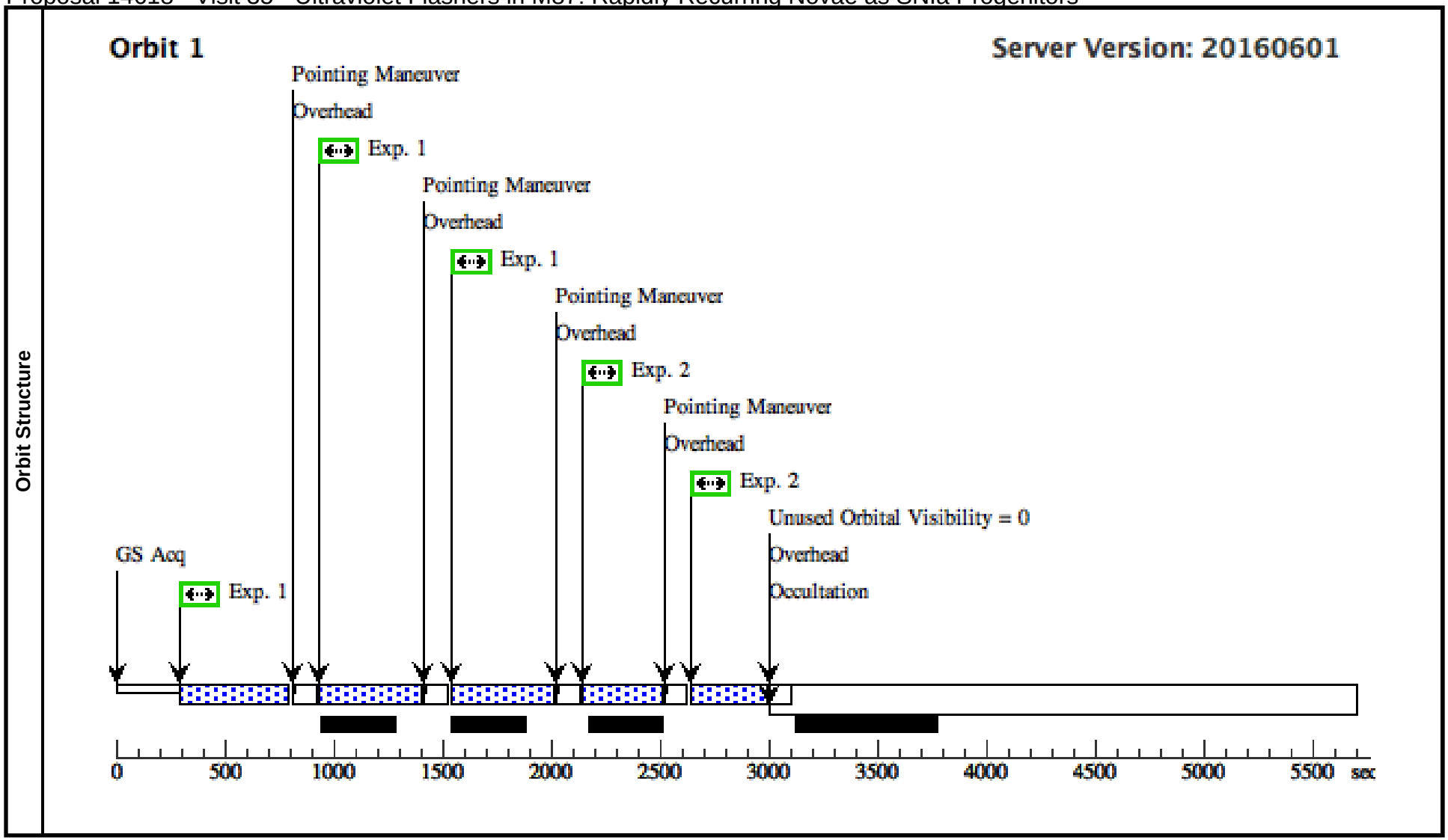
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M-87	RA: 12 30 49.4234 (187.7059308d) Dec: +12 23 28.04 (12.39112d) Equinox: J2000		V=8.63	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F275W	FLASH=10		Pattern 1, Exps 1-1 in Visit 35 (1)	472 Secs (1416 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
2		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F606W			Pattern 2, Exps 2-2 in Visit 35 (2)	349 Secs (698 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***


Orbit 1
Server Version: 20160601
Orbit Structure
Pointing Maneuver
Overhead
Exp. 1
Pointing Maneuver
Overhead
Exp. 1
Pointing Maneuver
Overhead
Exp. 2
Pointing Maneuver
Overhead
Exp. 2
Unused Orbital Visibility = 0
Overhead
Occultation
GS Acq
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14618, Visit 36 Fri Jul 29 18:01:39 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: PCS MODE FINE; SCHED 90%; AFTER 01 BY 175 D TO 176 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true		(1)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

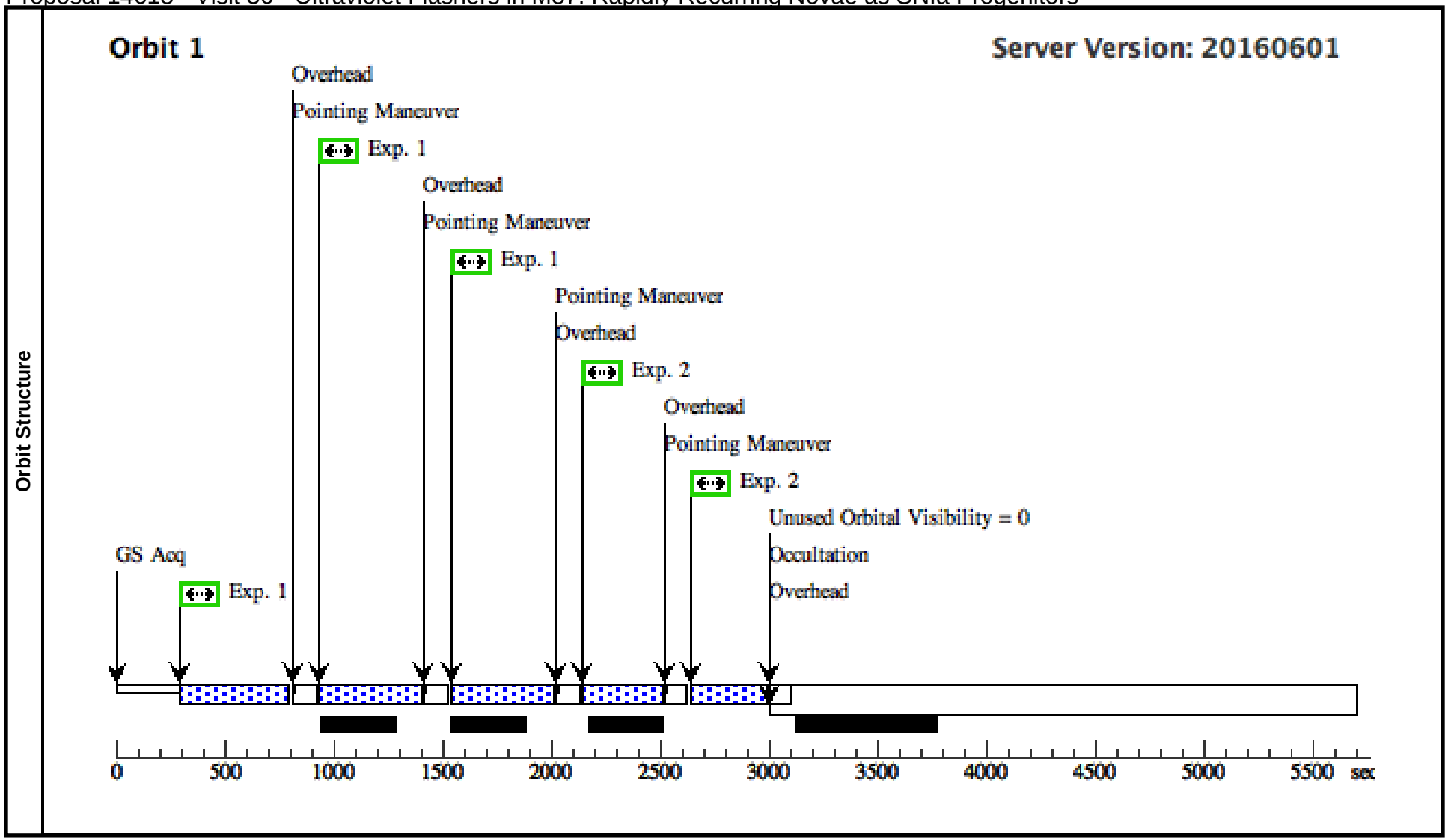
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M-87	RA: 12 30 49.4234 (187.7059308d) Dec: +12 23 28.04 (12.39112d) Equinox: J2000		V=8.63	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F275W	FLASH=10		Pattern 1, Exps 1-1 in Visit 36 (1)	472 Secs (1416 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
2		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F606W			Pattern 2, Exps 2-2 in Visit 36 (2)	349 Secs (698 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***


Orbit 1
Server Version: 20160601
Orbit Structure
GS Acq
Exp. 1
Overhead
Pointing Maneuver
Exp. 1
Overhead
Pointing Maneuver
Exp. 1
Pointing Maneuver
Overhead
Exp. 2
Overhead
Pointing Maneuver
Exp. 2
Unused Orbital Visibility = 0
Occultation
Overhead
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14618, Visit 37 Fri Jul 29 18:01:39 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: PCS MODE FINE; SCHED 90%; AFTER 01 BY 180 D TO 181 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true		(1)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

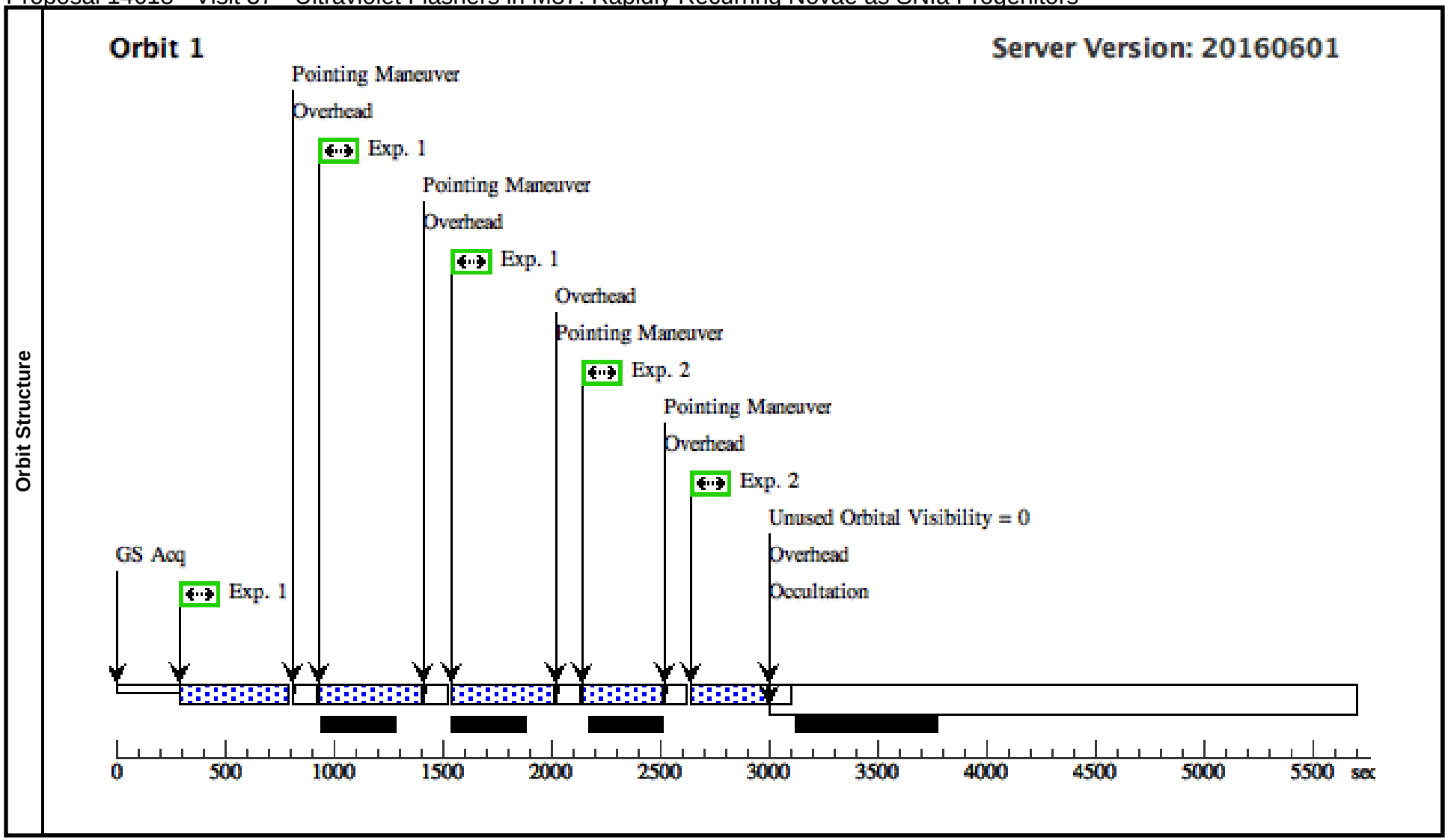
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M-87	RA: 12 30 49.4234 (187.7059308d) Dec: +12 23 28.04 (12.39112d) Equinox: J2000		V=8.63	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F275W	FLASH=10		Pattern 1, Exps 1-1 in Visit 37 (1)	472 Secs (1416 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
2		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F606W			Pattern 2, Exps 2-2 in Visit 37 (2)	349 Secs (698 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***


Orbit 1
Server Version: 20160601
Orbit Structure
Pointing Maneuver
Overhead
Exp. 1
Pointing Maneuver
Overhead
Exp. 1
Overhead
Pointing Maneuver
Exp. 2
Pointing Maneuver
Overhead
Exp. 2
Unused Orbital Visibility = 0
Overhead
Occultation
GS Acq
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14618, Visit 38 Fri Jul 29 18:01:39 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: PCS MODE FINE; SCHED 90%; AFTER 01 BY 185 D TO 186 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true		(1)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

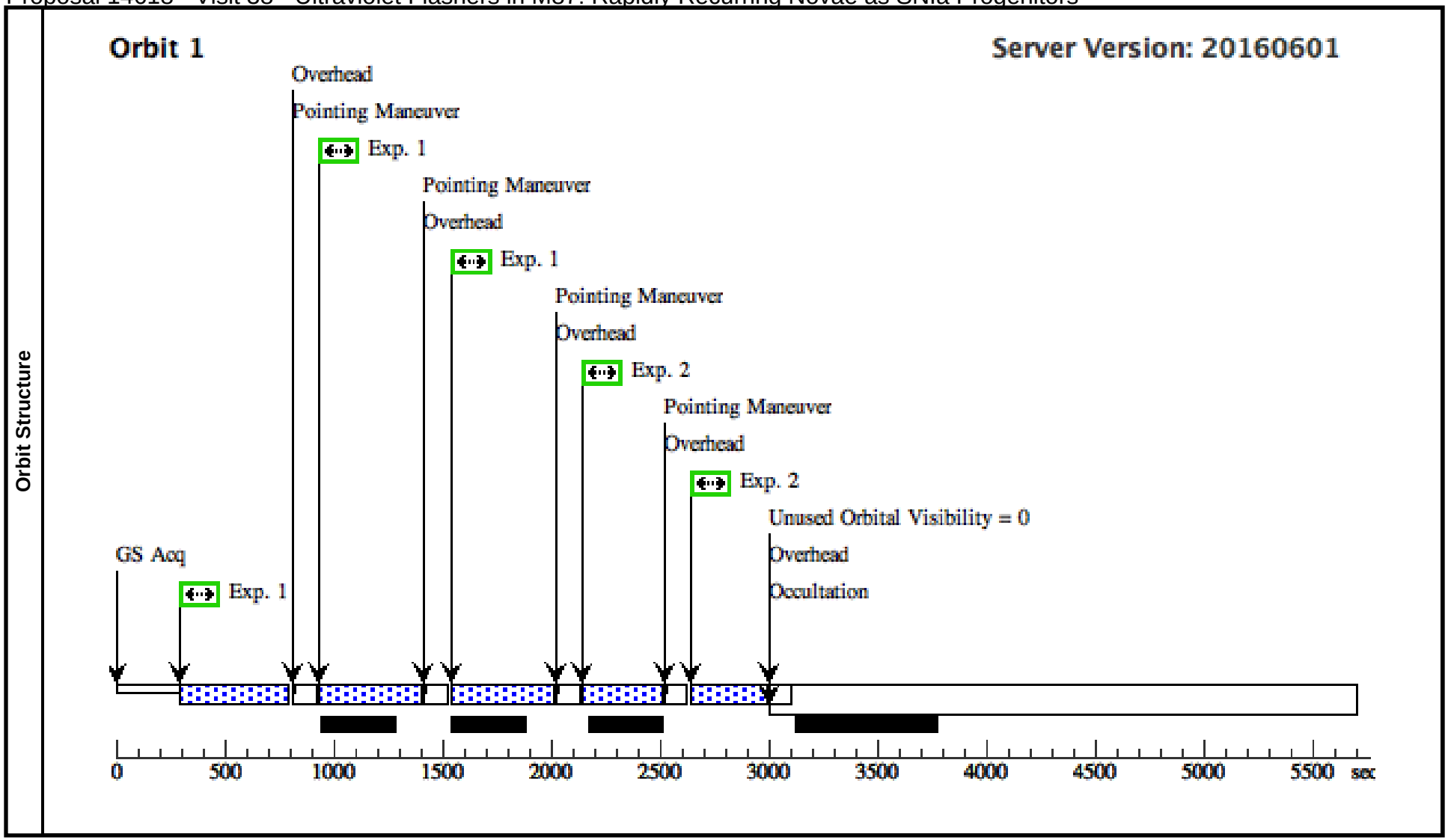
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M-87	RA: 12 30 49.4234 (187.7059308d) Dec: +12 23 28.04 (12.39112d) Equinox: J2000		V=8.63	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F275W	FLASH=10		Pattern 1, Exps 1-1 in Visit 38 (1)	472 Secs (1416 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
2		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F606W			Pattern 2, Exps 2-2 in Visit 38 (2)	349 Secs (698 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***


Orbit 1
Server Version: 20160601
Orbit Structure
Overhead
Pointing Maneuver
Exp. 1
Pointing Maneuver
Overhead
Exp. 1
Pointing Maneuver
Overhead
Exp. 2
Pointing Maneuver
Overhead
Exp. 2
Unused Orbital Visibility = 0
Overhead
Occultation
GS Acq
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14618, Visit 39 Fri Jul 29 18:01:39 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: PCS MODE FINE; SCHED 90%; AFTER 01 BY 190 D TO 191 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true		(1)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

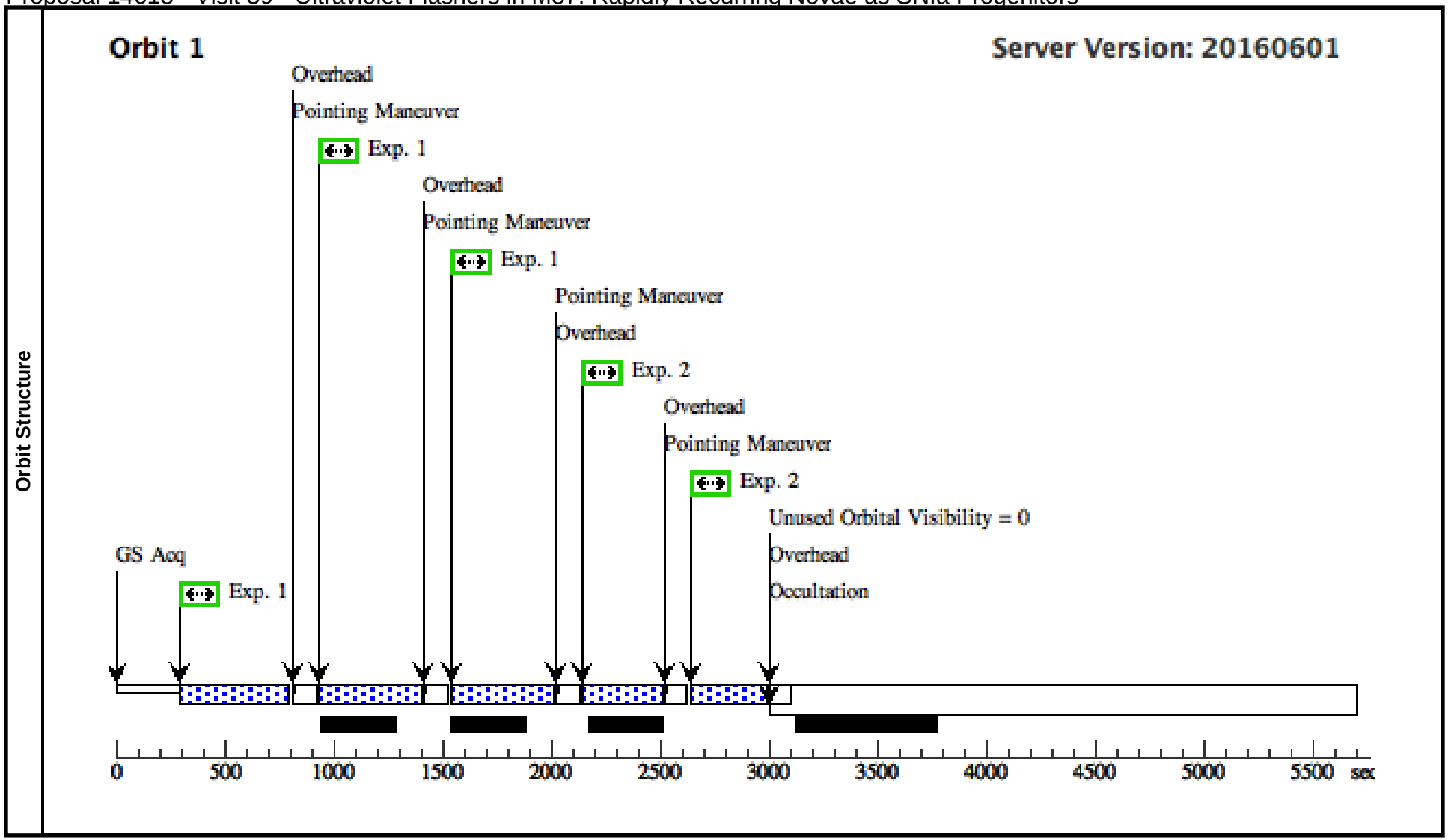
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M-87	RA: 12 30 49.4234 (187.7059308d) Dec: +12 23 28.04 (12.39112d) Equinox: J2000		V=8.63	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F275W	FLASH=10		Pattern 1, Exps 1-1 in Visit 39 (1)	472 Secs (1416 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
2		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F606W			Pattern 2, Exps 2-2 in Visit 39 (2)	349 Secs (698 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***


Orbit 1
Server Version: 20160601
Orbit Structure
GS Acq
Exp. 1
Overhead
Pointing Maneuver
Exp. 1
Overhead
Pointing Maneuver
Exp. 1
Pointing Maneuver
Overhead
Exp. 2
Overhead
Pointing Maneuver
Exp. 2
Unused Orbital Visibility = 0
Overhead
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14618, Visit 40 Fri Jul 29 18:01:39 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: PCS MODE FINE; SCHED 90%; AFTER 01 BY 195 D TO 196 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true		(1)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

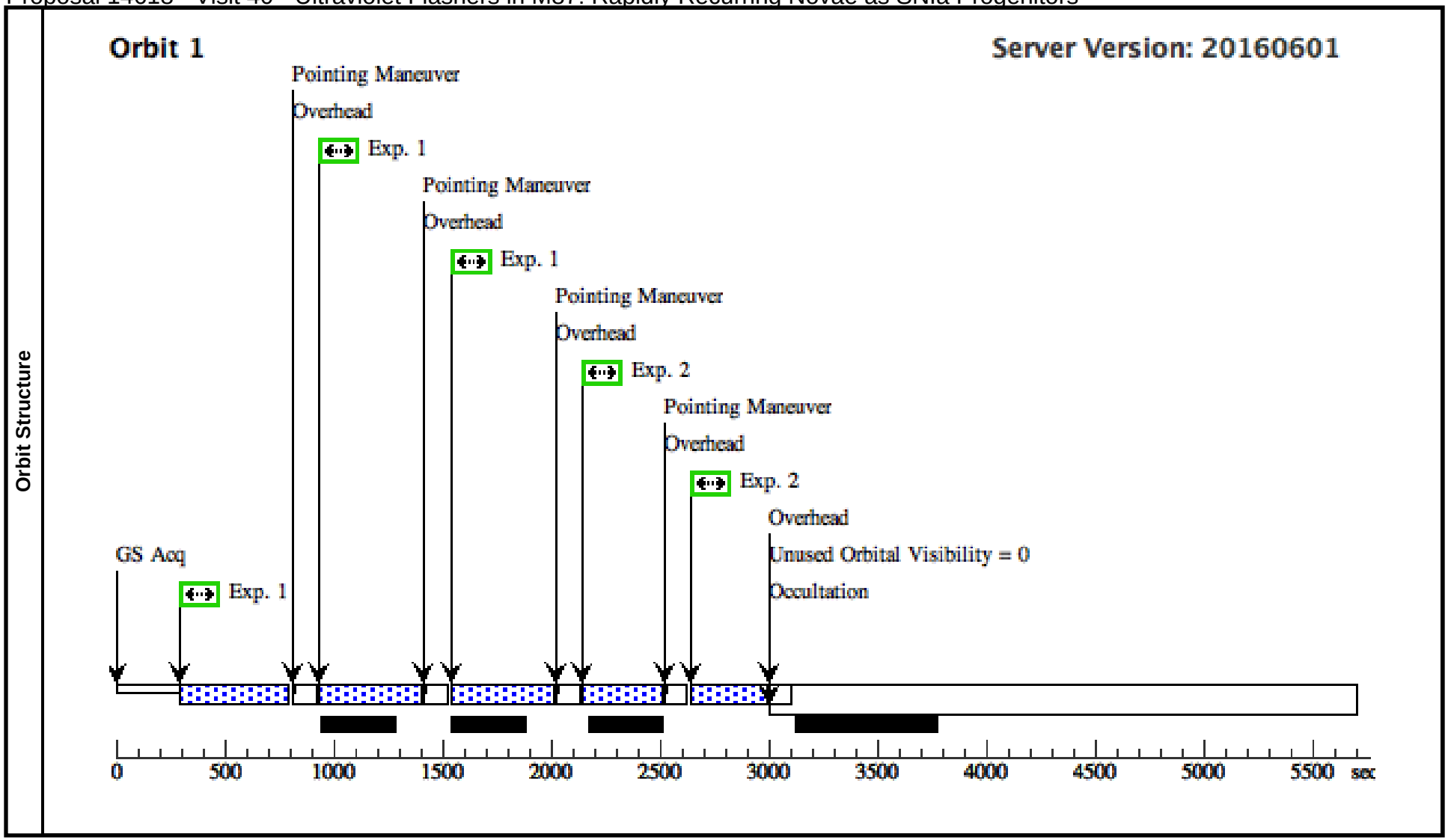
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M-87	RA: 12 30 49.4234 (187.7059308d) Dec: +12 23 28.04 (12.39112d) Equinox: J2000		V=8.63	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F275W	FLASH=10		Pattern 1, Exps 1-1 in Visit 40 (1)	472 Secs (1416 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
2		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F606W			Pattern 2, Exps 2-2 in Visit 40 (2)	349 Secs (698 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20160601
Pointing Maneuver
Overhead
Exp. 1
Pointing Maneuver
Overhead
Exp. 1
Pointing Maneuver
Overhead
Exp. 2
Pointing Maneuver
Overhead
Exp. 2
Overhead
Unused Orbital Visibility = 0
Occultation
GS Acq
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14618, Visit 41 Fri Jul 29 18:01:39 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: PCS MODE FINE; SCHED 90%; AFTER 01 BY 200 D TO 201 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true		(1)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

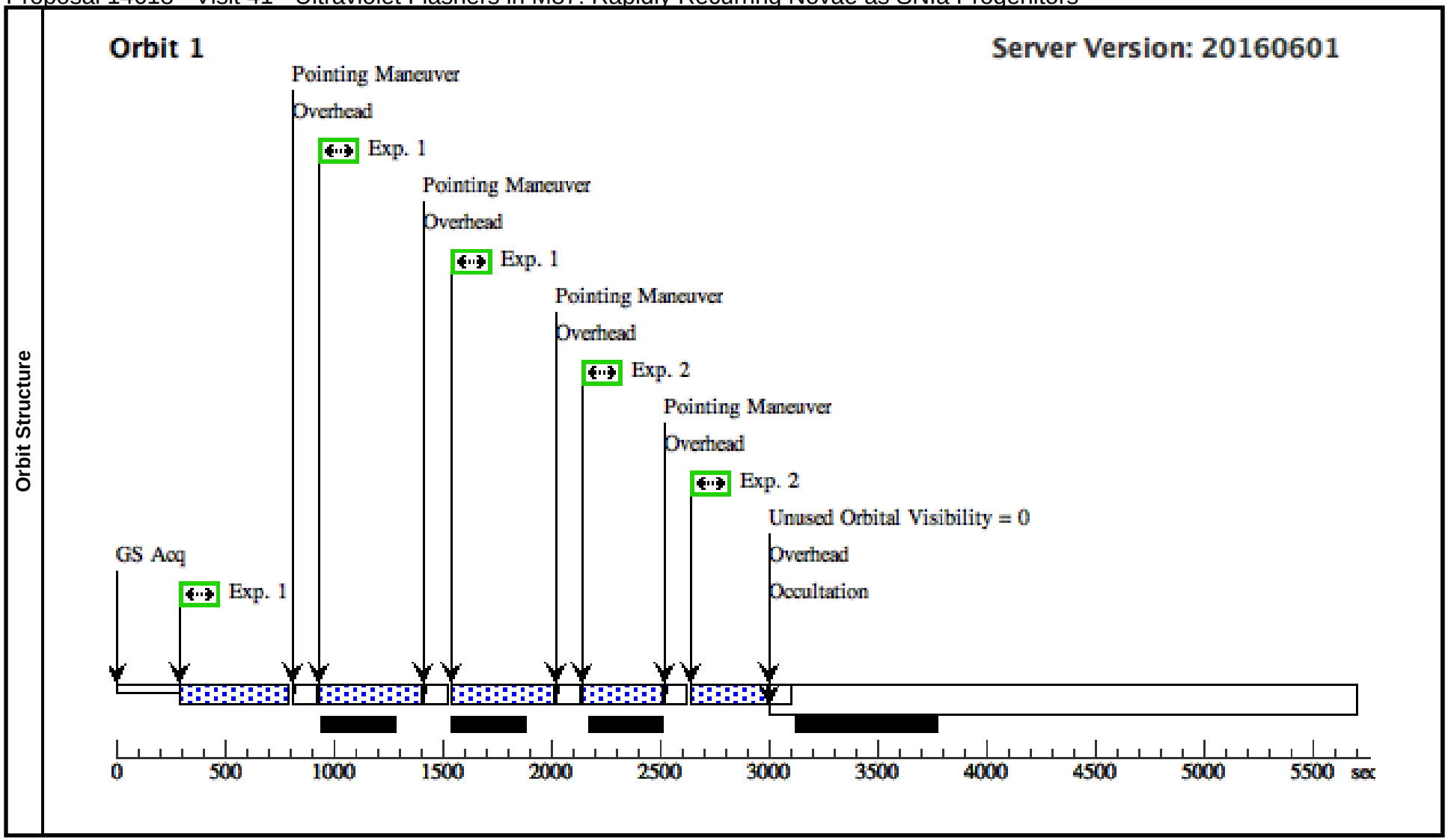
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M-87	RA: 12 30 49.4234 (187.7059308d) Dec: +12 23 28.04 (12.39112d) Equinox: J2000		V=8.63	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F275W	FLASH=10		Pattern 1, Exps 1-1 in Visit 41 (1)	472 Secs (1416 Secs)	
								[==>(Pattern 1)]	***[1]***
								[==>(Pattern 2)]	
								[==>(Pattern 3)]	
2		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F606W			Pattern 2, Exps 2-2 in Visit 41 (2)	349 Secs (698 Secs)	
								[==>(Pattern 1)]	***[1]***
								[==>(Pattern 2)]	


Orbit 1
Server Version: 20160601
Orbit Structure
Pointing Maneuver
Overhead
Exp. 1
Pointing Maneuver
Overhead
Exp. 1
Pointing Maneuver
Overhead
Exp. 2
Pointing Maneuver
Overhead
Exp. 2
Unused Orbital Visibility = 0
Overhead
Occultation
GS Acq
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14618, Visit 42 Fri Jul 29 18:01:39 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: PCS MODE FINE; SCHED 90%; AFTER 01 BY 205 D TO 206 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true		(1)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

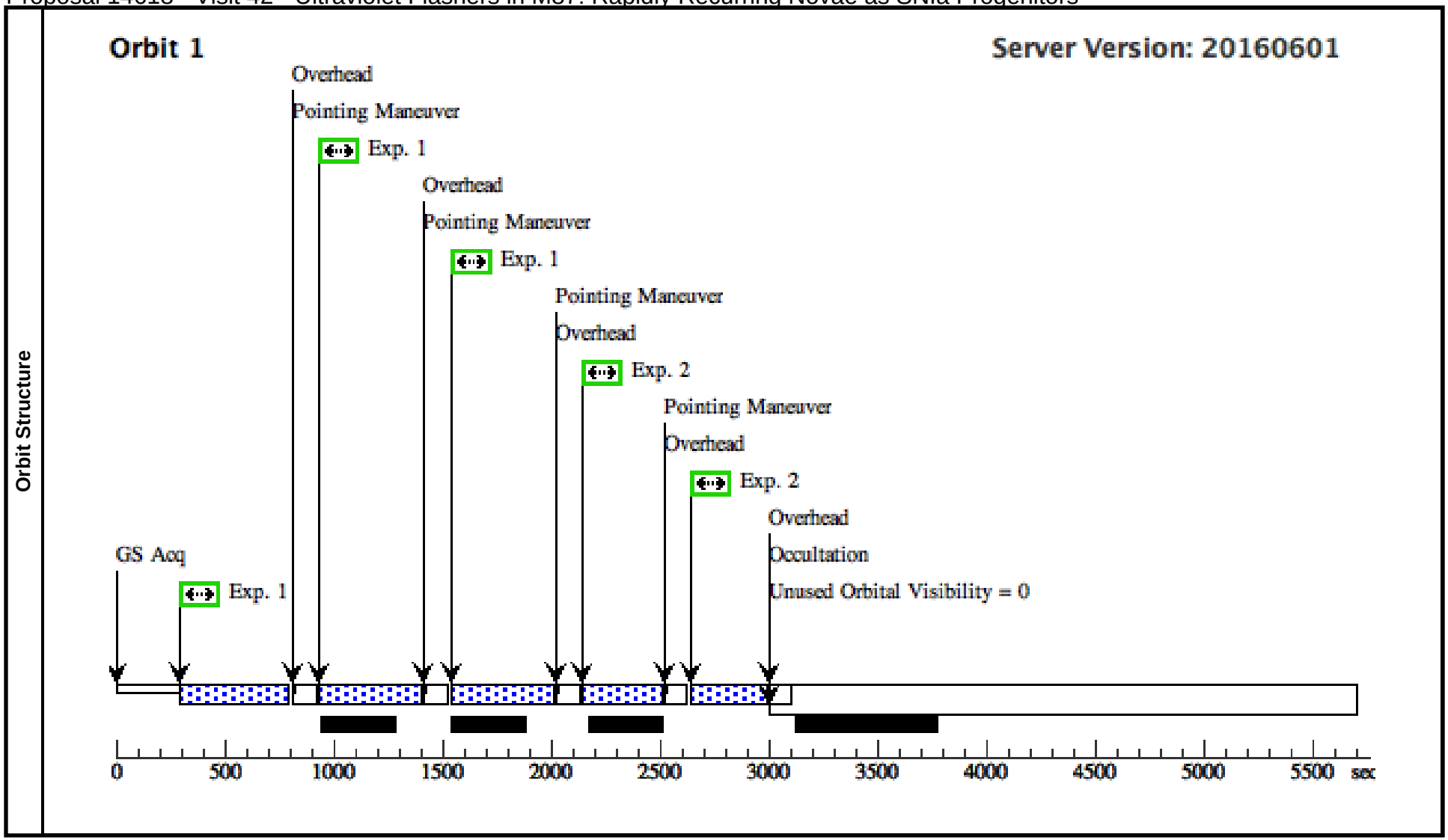
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M-87	RA: 12 30 49.4234 (187.7059308d) Dec: +12 23 28.04 (12.39112d) Equinox: J2000		V=8.63	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F275W	FLASH=10		Pattern 1, Exps 1-1 in Visit 42 (1)	472 Secs (1416 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
2		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F606W			Pattern 2, Exps 2-2 in Visit 42 (2)	349 Secs (698 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***


Orbit 1
Server Version: 20160601
Orbit Structure
Overhead
Pointing Maneuver
Exp. 1
Overhead
Pointing Maneuver
Exp. 1
Pointing Maneuver
Overhead
Exp. 2
Pointing Maneuver
Overhead
Exp. 2
Overhead
Occultation
Unused Orbital Visibility = 0
GS Acq
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14618, Visit 43 Fri Jul 29 18:01:39 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: PCS MODE FINE; SCHED 90%; AFTER 01 BY 210 D TO 211 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true		(1)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

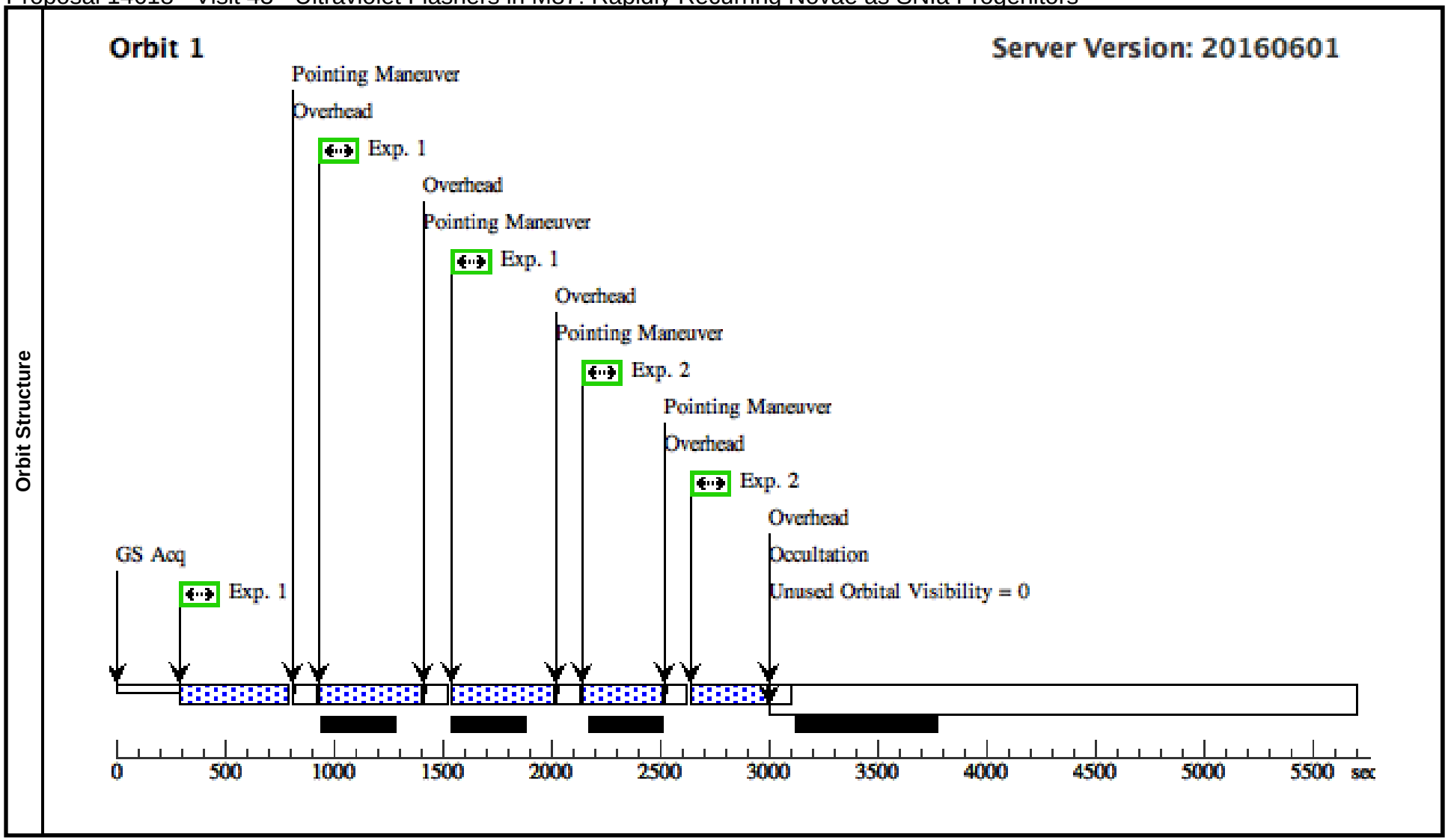
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M-87	RA: 12 30 49.4234 (187.7059308d) Dec: +12 23 28.04 (12.39112d) Equinox: J2000		V=8.63	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F275W	FLASH=10		Pattern 1, Exps 1-1 in Visit 43 (1)	472 Secs (1416 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
2		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F606W			Pattern 2, Exps 2-2 in Visit 43 (2)	349 Secs (698 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20160601
Pointing Maneuver
Overhead
Exp. 1
Overhead
Pointing Maneuver
Exp. 1
Overhead
Pointing Maneuver
Exp. 2
Pointing Maneuver
Overhead
Exp. 2
Overhead
Occultation
Unused Orbital Visibility = 0
GS Acq
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14618, Visit 44 Fri Jul 29 18:01:39 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: PCS MODE FINE; SCHED 90%; AFTER 01 BY 215 D TO 216 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true		(1)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

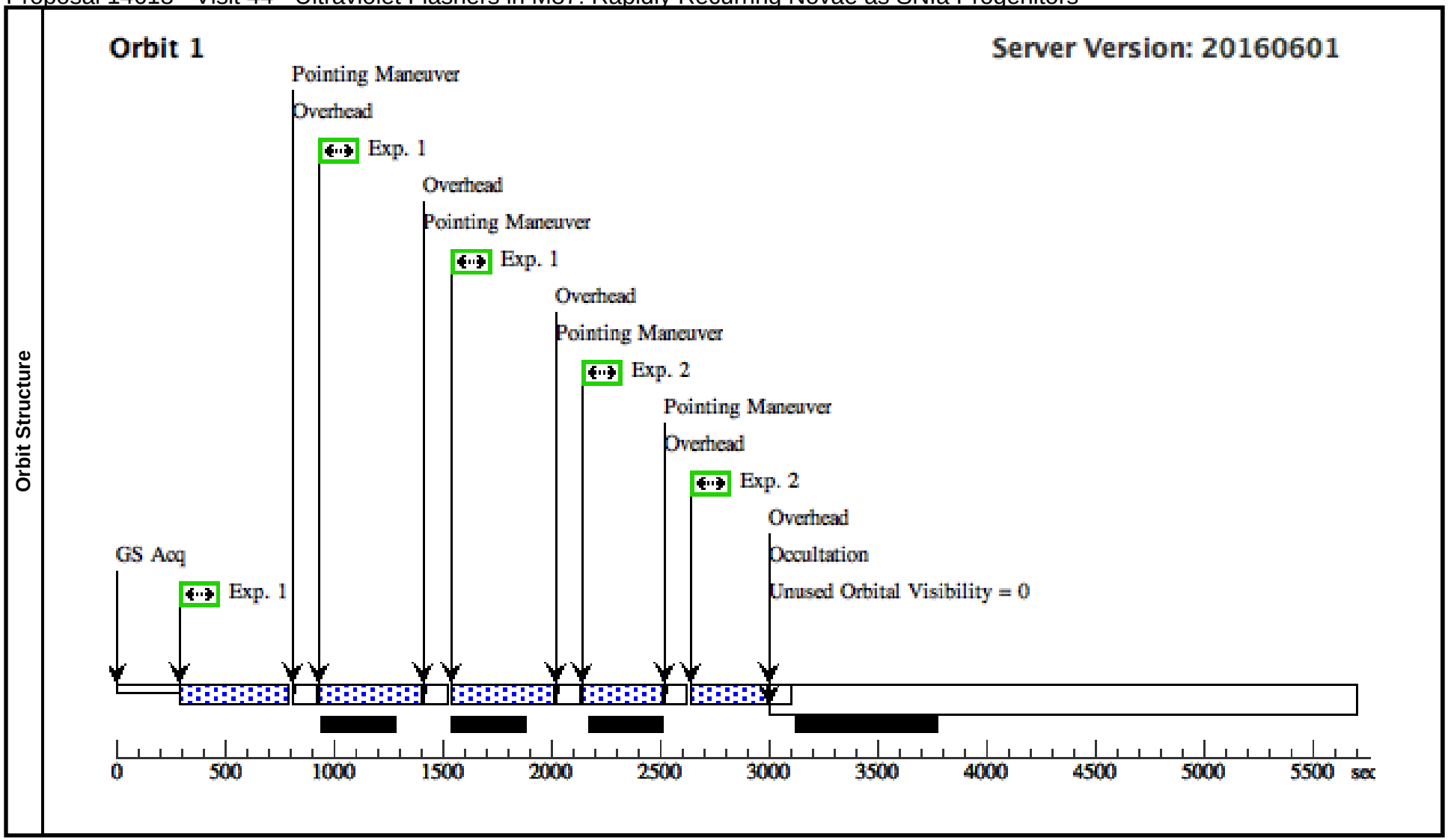
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M-87	RA: 12 30 49.4234 (187.7059308d) Dec: +12 23 28.04 (12.39112d) Equinox: J2000		V=8.63	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F275W	FLASH=10		Pattern 1, Exps 1-1 in Visit 44 (1)	472 Secs (1416 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
2		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F606W			Pattern 2, Exps 2-2 in Visit 44 (2)	349 Secs (698 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***


Orbit 1
Server Version: 20160601
Orbit Structure
Pointing Maneuver
Overhead
Exp. 1
Overhead
Pointing Maneuver
Exp. 1
Overhead
Pointing Maneuver
Exp. 2
Pointing Maneuver
Overhead
Exp. 2
Overhead
Occultation
Unused Orbital Visibility = 0
GS Acq
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14618, Visit 45 Fri Jul 29 18:01:39 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: PCS MODE FINE; SCHED 90%; AFTER 01 BY 220 D TO 221 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true		(1)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

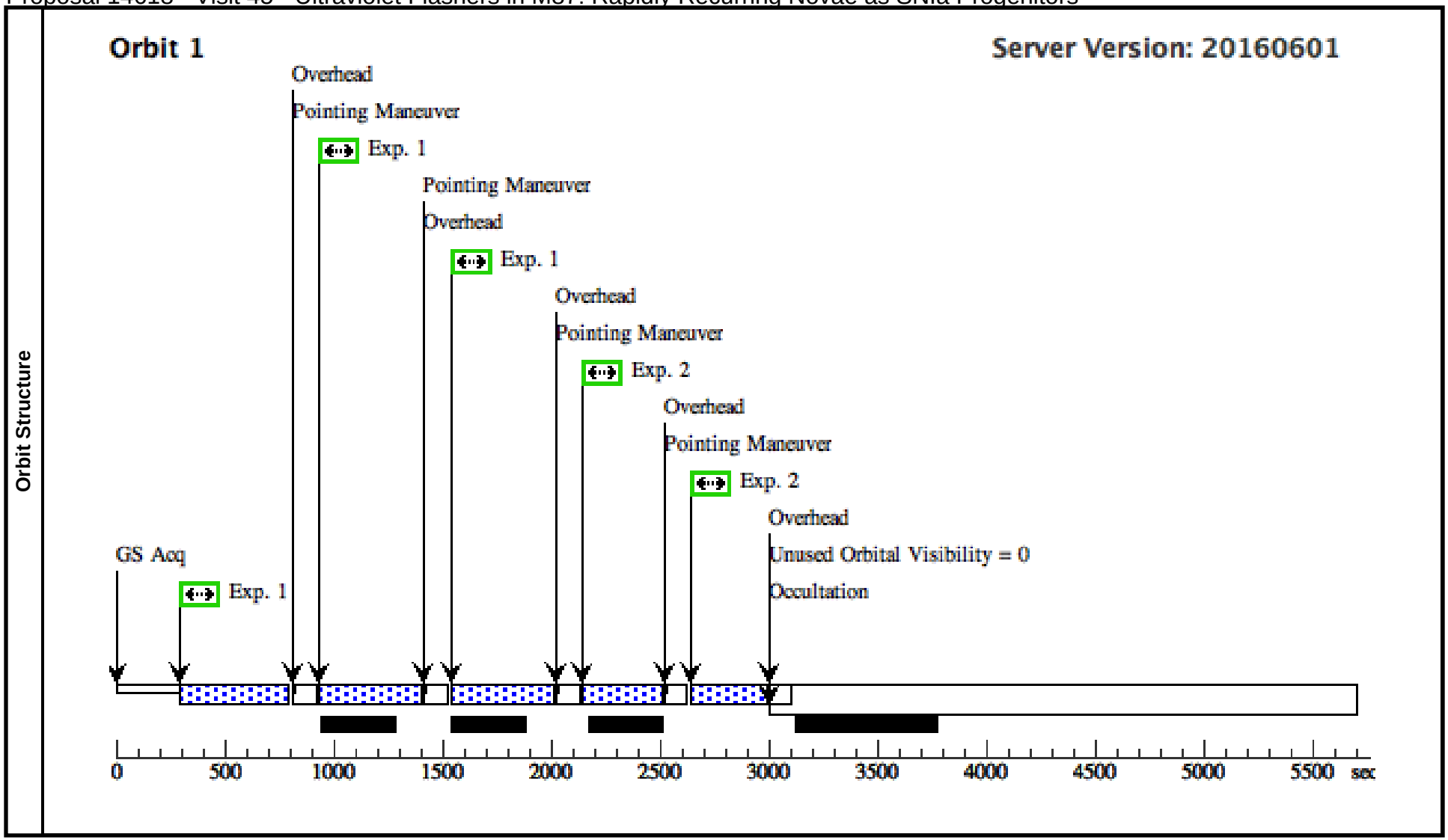
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M-87	RA: 12 30 49.4234 (187.7059308d) Dec: +12 23 28.04 (12.39112d) Equinox: J2000		V=8.63	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F275W	FLASH=10		Pattern 1, Exps 1-1 in Visit 45 (1)	472 Secs (1416 Secs)	
								[==>(Pattern 1)] *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
2		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F606W			Pattern 2, Exps 2-2 in Visit 45 (2)	349 Secs (698 Secs)	
								[==>(Pattern 1)] *[==>(Pattern 2)]*	***[1]***


Orbit 1
Server Version: 20160601
Orbit Structure
Overhead
Pointing Maneuver
Exp. 1
Pointing Maneuver
Overhead
Exp. 1
Overhead
Pointing Maneuver
Exp. 2
Overhead
Pointing Maneuver
Exp. 2
Overhead
Unused Orbital Visibility = 0
Occultation
GS Acq
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14618, Visit 46 Fri Jul 29 18:01:40 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: PCS MODE FINE; SCHED 90%; AFTER 01 BY 225 D TO 226 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true		(1)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

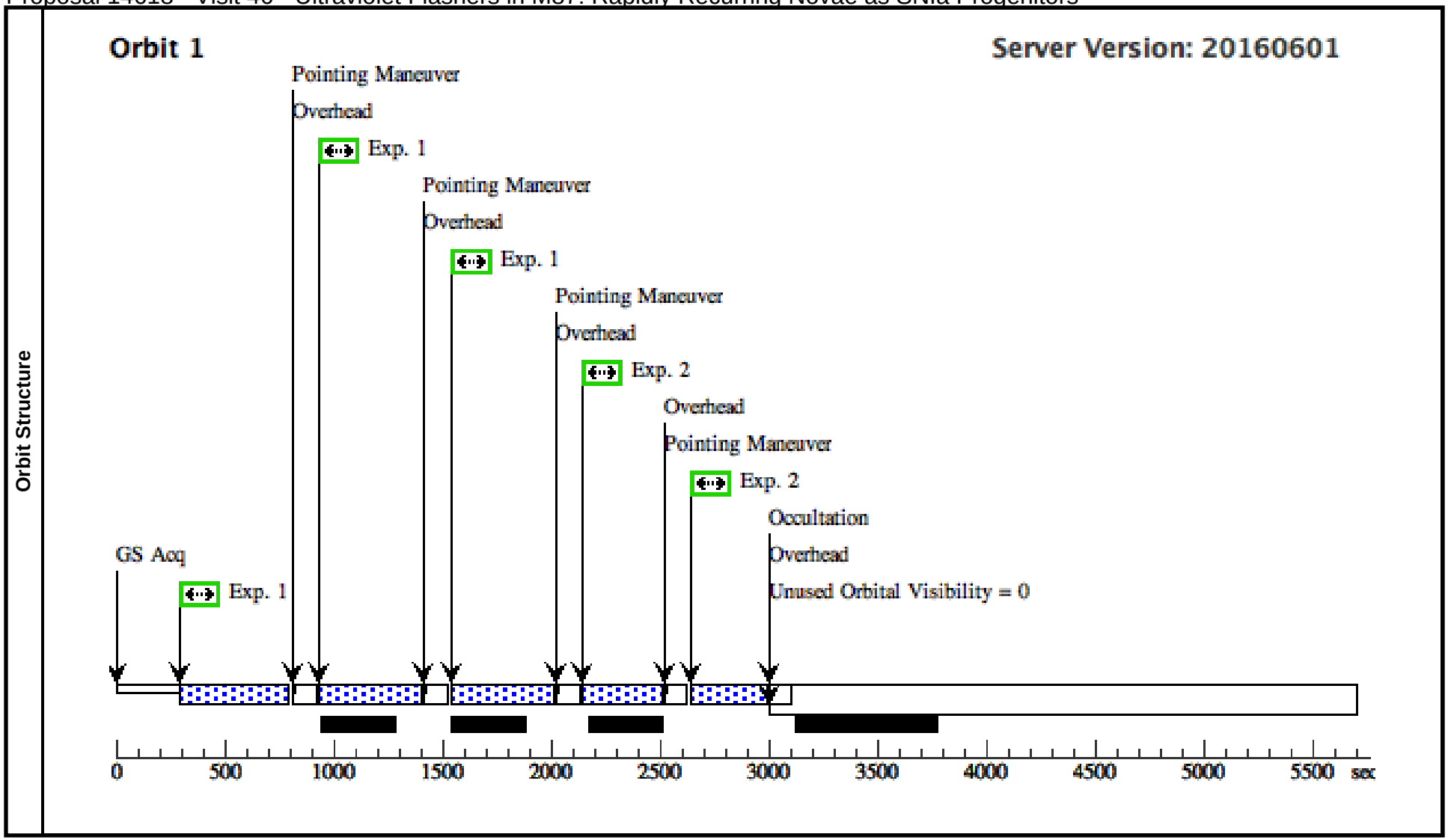
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M-87	RA: 12 30 49.4234 (187.7059308d) Dec: +12 23 28.04 (12.39112d) Equinox: J2000		V=8.63	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F275W	FLASH=10		Pattern 1, Exps 1-1 in Visit 46 (1)	472 Secs (1416 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
2		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F606W			Pattern 2, Exps 2-2 in Visit 46 (2)	349 Secs (698 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***


Orbit 1
Server Version: 20160601
Orbit Structure
Pointing Maneuver
Overhead
Exp. 1
Pointing Maneuver
Overhead
Exp. 1
Pointing Maneuver
Overhead
Exp. 2
Overhead
Pointing Maneuver
Exp. 2
Occultation
Overhead
Unused Orbital Visibility = 0
GS Acq
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14618, Visit 47 Fri Jul 29 18:01:40 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: PCS MODE FINE; SCHED 90%; AFTER 01 BY 230 D TO 231 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true		(1)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

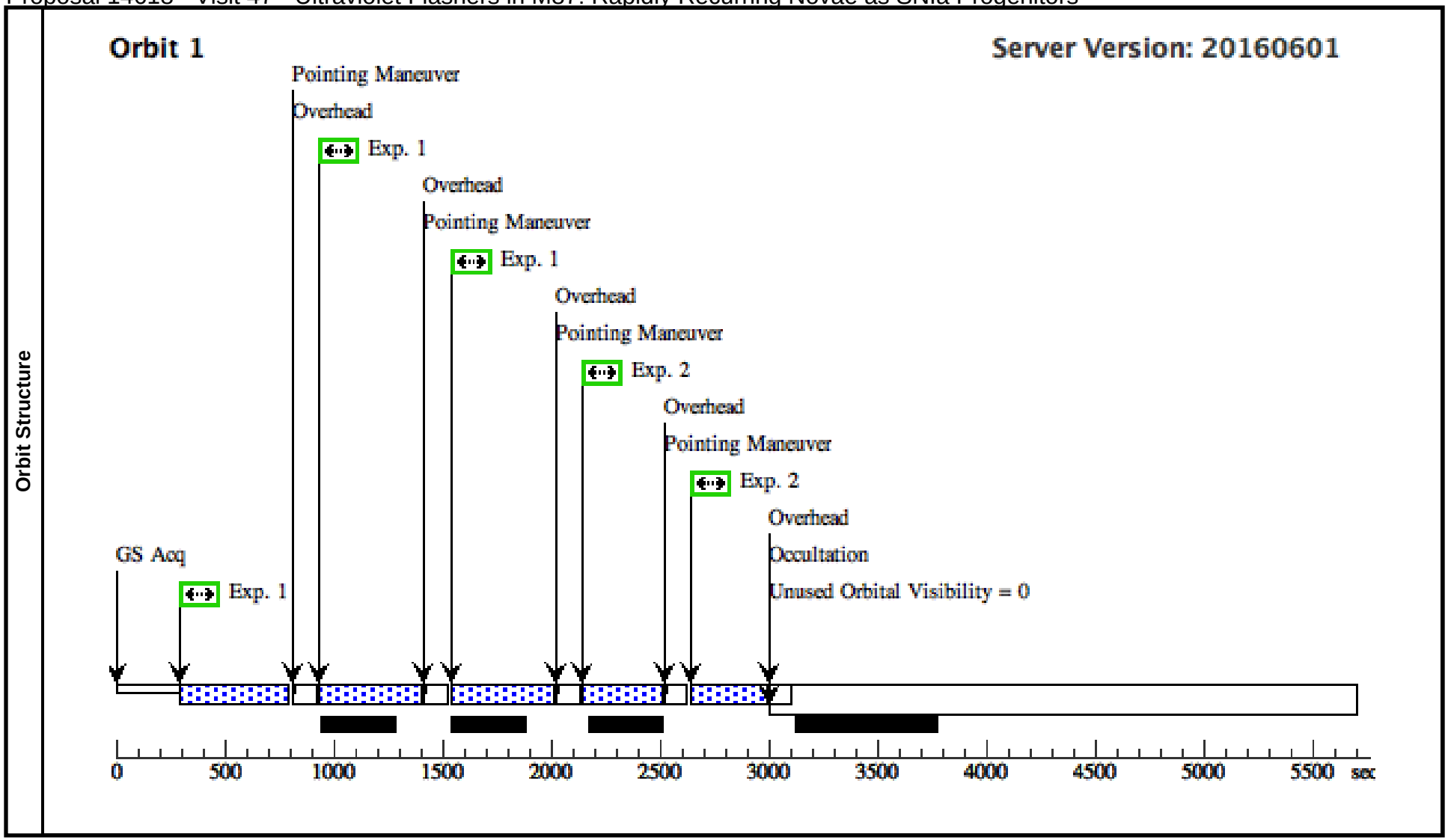
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M-87	RA: 12 30 49.4234 (187.7059308d) Dec: +12 23 28.04 (12.39112d) Equinox: J2000		V=8.63	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F275W	FLASH=10		Pattern 1, Exps 1-1 in Visit 47 (1)	472 Secs (1416 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
2		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F606W			Pattern 2, Exps 2-2 in Visit 47 (2)	349 Secs (698 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***


Orbit 1
Server Version: 20160601
Orbit Structure
Pointing Maneuver
Overhead
Exp. 1
Overhead
Pointing Maneuver
Exp. 1
Overhead
Pointing Maneuver
Exp. 2
Overhead
Pointing Maneuver
Exp. 2
Overhead
Occultation
Unused Orbital Visibility = 0
GS Acq
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14618, Visit 48 Fri Jul 29 18:01:40 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: PCS MODE FINE; SCHED 90%; AFTER 01 BY 235 D TO 236 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true		(1)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

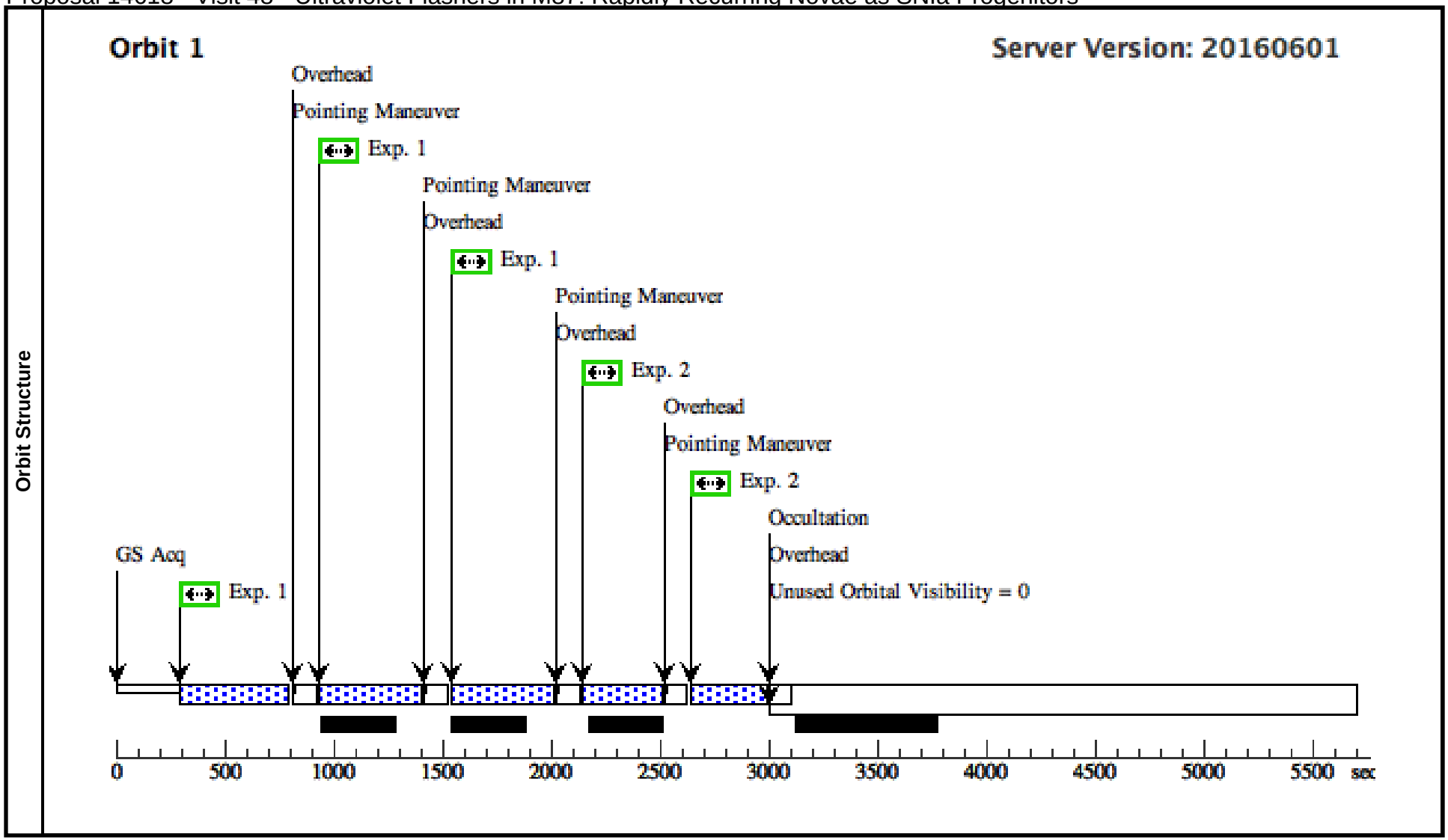
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M-87	RA: 12 30 49.4234 (187.7059308d) Dec: +12 23 28.04 (12.39112d) Equinox: J2000		V=8.63	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F275W	FLASH=10		Pattern 1, Exps 1-1 in Visit 48 (1)	472 Secs (1416 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
2		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F606W			Pattern 2, Exps 2-2 in Visit 48 (2)	349 Secs (698 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20160601
Overhead
Pointing Maneuver
Exp. 1
Pointing Maneuver
Overhead
Exp. 1
Pointing Maneuver
Overhead
Exp. 2
Overhead
Pointing Maneuver
Exp. 2
Occultation
Overhead
Unused Orbital Visibility = 0
GS Acq
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14618, Visit 49 Fri Jul 29 18:01:40 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: PCS MODE FINE; SCHED 90%; AFTER 01 BY 240 D TO 241 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true		(1)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

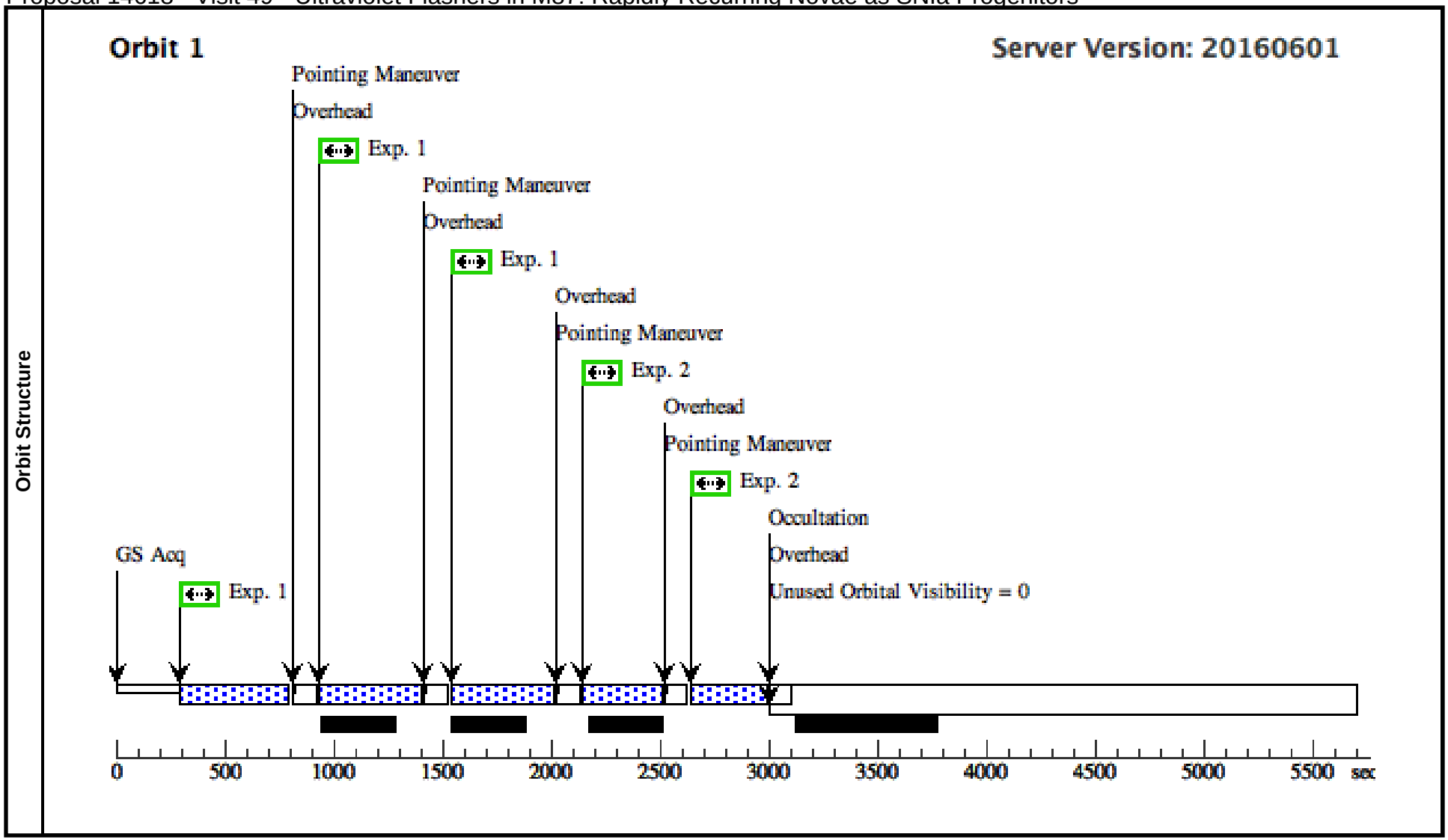
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M-87	RA: 12 30 49.4234 (187.7059308d) Dec: +12 23 28.04 (12.39112d) Equinox: J2000		V=8.63	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F275W	FLASH=10		Pattern 1, Exps 1-1 in Visit 49 (1)	472 Secs (1416 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
2		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F606W			Pattern 2, Exps 2-2 in Visit 49 (2)	349 Secs (698 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***


Orbit 1
Server Version: 20160601
Orbit Structure
Pointing Maneuver
Overhead
Exp. 1
Pointing Maneuver
Overhead
Exp. 1
Overhead
Pointing Maneuver
Exp. 2
Overhead
Pointing Maneuver
Exp. 2
Occultation
Overhead
Unused Orbital Visibility = 0
GS Acq
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14618, Visit 50 Fri Jul 29 18:01:40 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: PCS MODE FINE; SCHED 90%; AFTER 01 BY 245 D TO 246 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true		(1)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

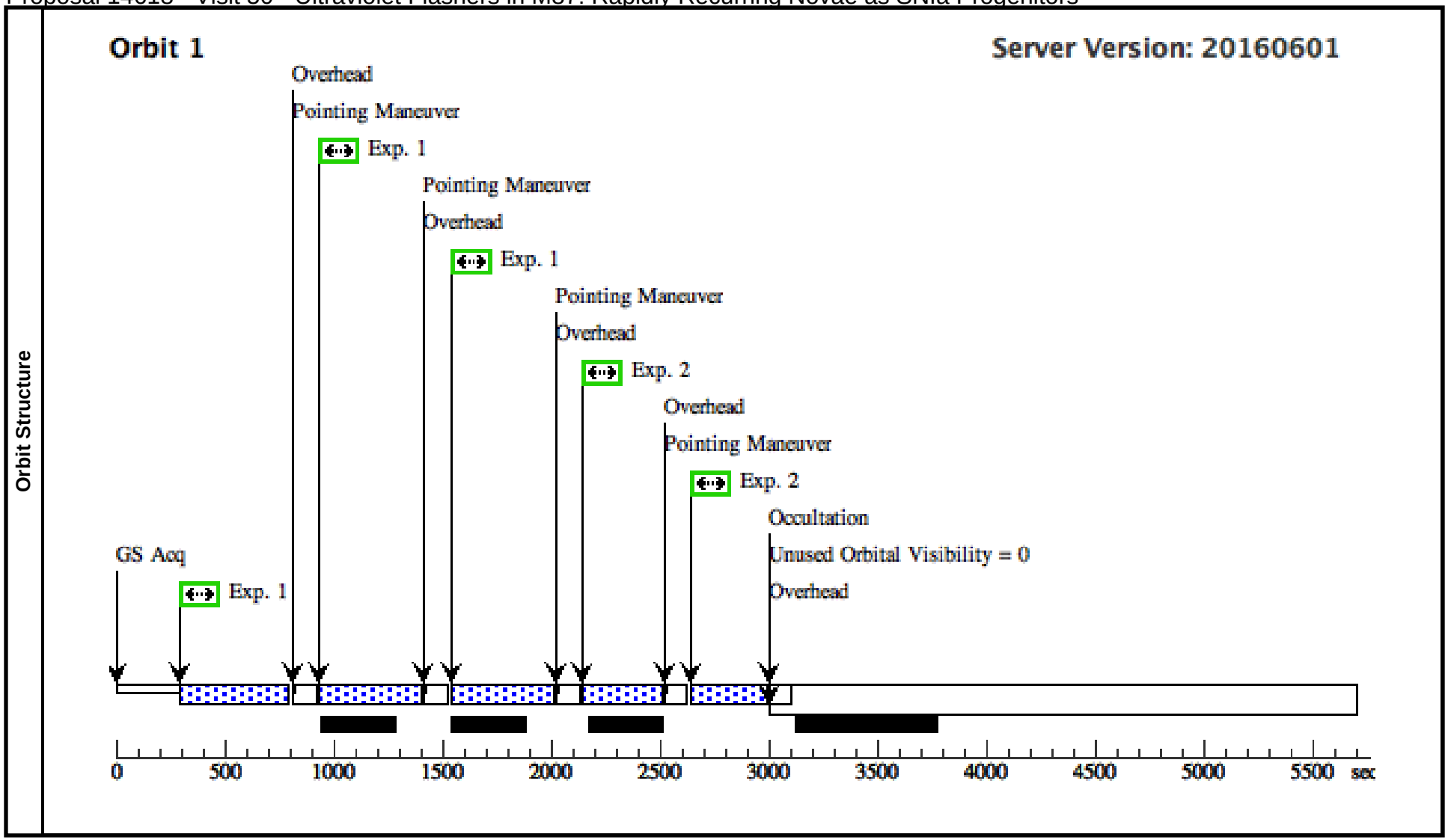
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M-87	RA: 12 30 49.4234 (187.7059308d) Dec: +12 23 28.04 (12.39112d) Equinox: J2000		V=8.63	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F275W	FLASH=10		Pattern 1, Exps 1-1 in Visit 50 (1)	472 Secs (1416 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
2		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F606W			Pattern 2, Exps 2-2 in Visit 50 (2)	349 Secs (698 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***


Orbit 1
Server Version: 20160601
Orbit Structure
Overhead
Pointing Maneuver
Exp. 1
Pointing Maneuver
Overhead
Exp. 1
Pointing Maneuver
Overhead
Exp. 2
Overhead
Pointing Maneuver
Exp. 2
Occultation
Unused Orbital Visibility = 0
Overhead
GS Acq
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14618, Visit 51 Fri Jul 29 18:01:40 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: PCS MODE FINE; SCHED 90%; AFTER 01 BY 250 D TO 251 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true		(1)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

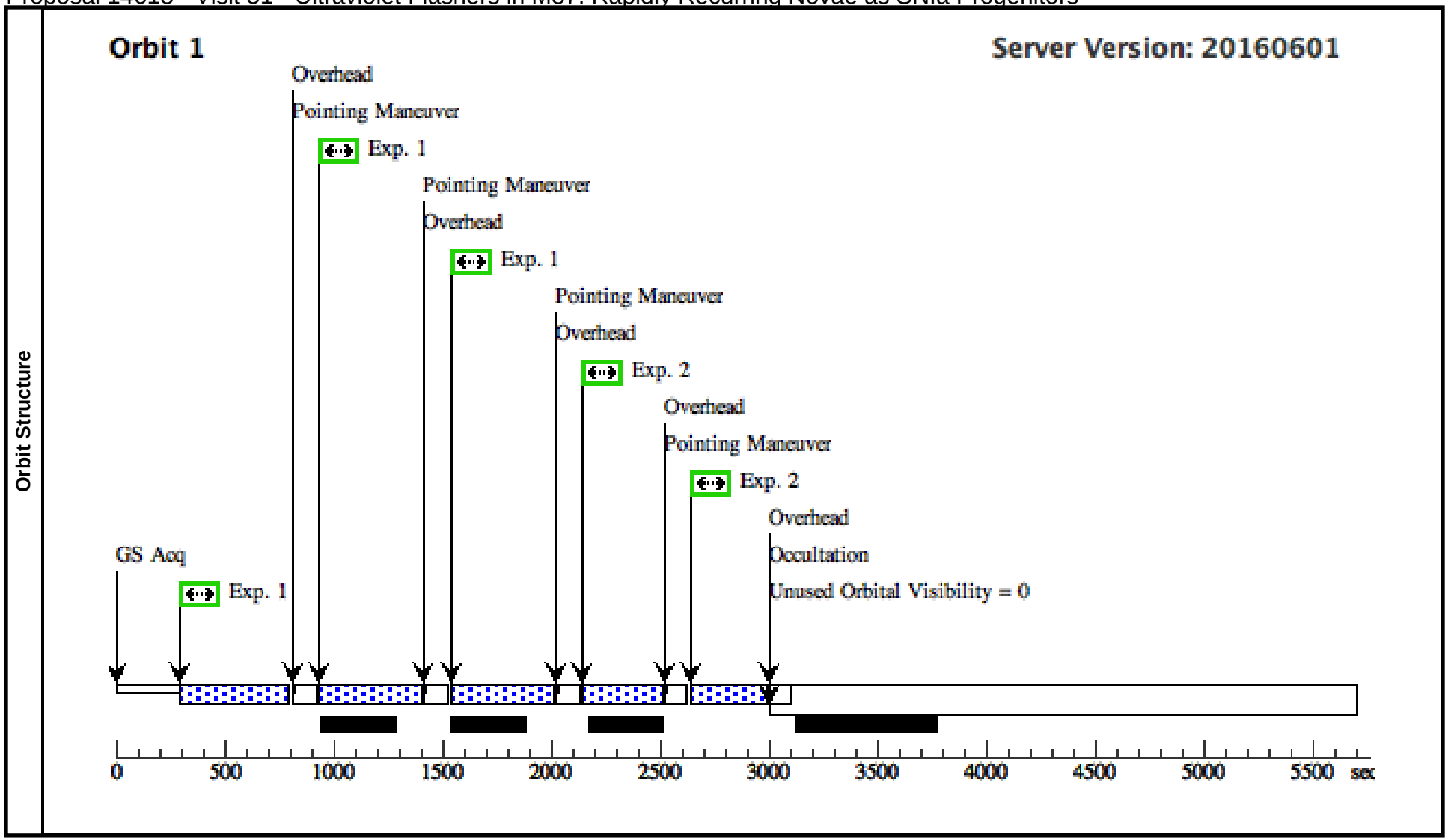
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M-87	RA: 12 30 49.4234 (187.7059308d) Dec: +12 23 28.04 (12.39112d) Equinox: J2000		V=8.63	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F275W	FLASH=10		Pattern 1, Exps 1-1 in Visit 51 (1)	472 Secs (1416 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
2		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F606W			Pattern 2, Exps 2-2 in Visit 51 (2)	349 Secs (698 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***


Orbit 1
Server Version: 20160601
Orbit Structure
Overhead
Pointing Maneuver
Exp. 1
Pointing Maneuver
Overhead
Exp. 1
Pointing Maneuver
Overhead
Exp. 2
Overhead
Pointing Maneuver
Exp. 2
Overhead
Occultation
Unused Orbital Visibility = 0
GS Acq
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14618, Visit 52 Fri Jul 29 18:01:40 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: PCS MODE FINE; SCHED 90%; AFTER 01 BY 255 D TO 256 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true		(1)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

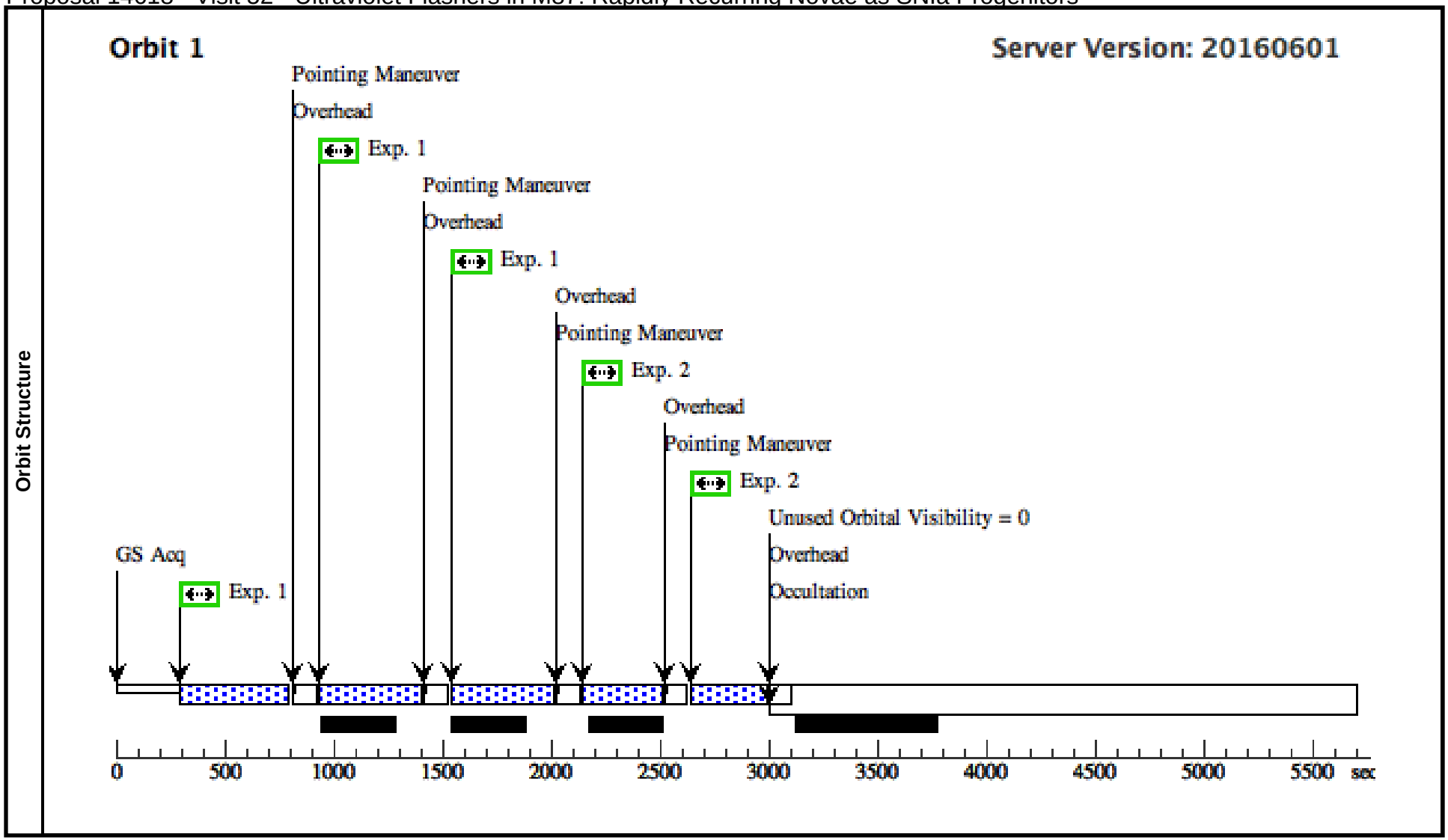
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M-87	RA: 12 30 49.4234 (187.7059308d) Dec: +12 23 28.04 (12.39112d) Equinox: J2000		V=8.63	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F275W	FLASH=10		Pattern 1, Exps 1-1 in Visit 52 (1)	472 Secs (1416 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
2		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F606W			Pattern 2, Exps 2-2 in Visit 52 (2)	349 Secs (698 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***


Orbit 1
Server Version: 20160601
Orbit Structure
Pointing Maneuver
Overhead
Exp. 1
Pointing Maneuver
Overhead
Exp. 1
Overhead
Pointing Maneuver
Exp. 2
Overhead
Pointing Maneuver
Exp. 2
Unused Orbital Visibility = 0
Overhead
Occultation
GS Acq
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14618, Visit 53 Fri Jul 29 18:01:40 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: PCS MODE FINE; SCHED 90%; AFTER 01 BY 260 D TO 261 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-GAP-LINE Purpose=DITHER Number Of Points=3 Point Spacing=2.414 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.759 Angle Between Sides= Center Pattern=true		(1)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)

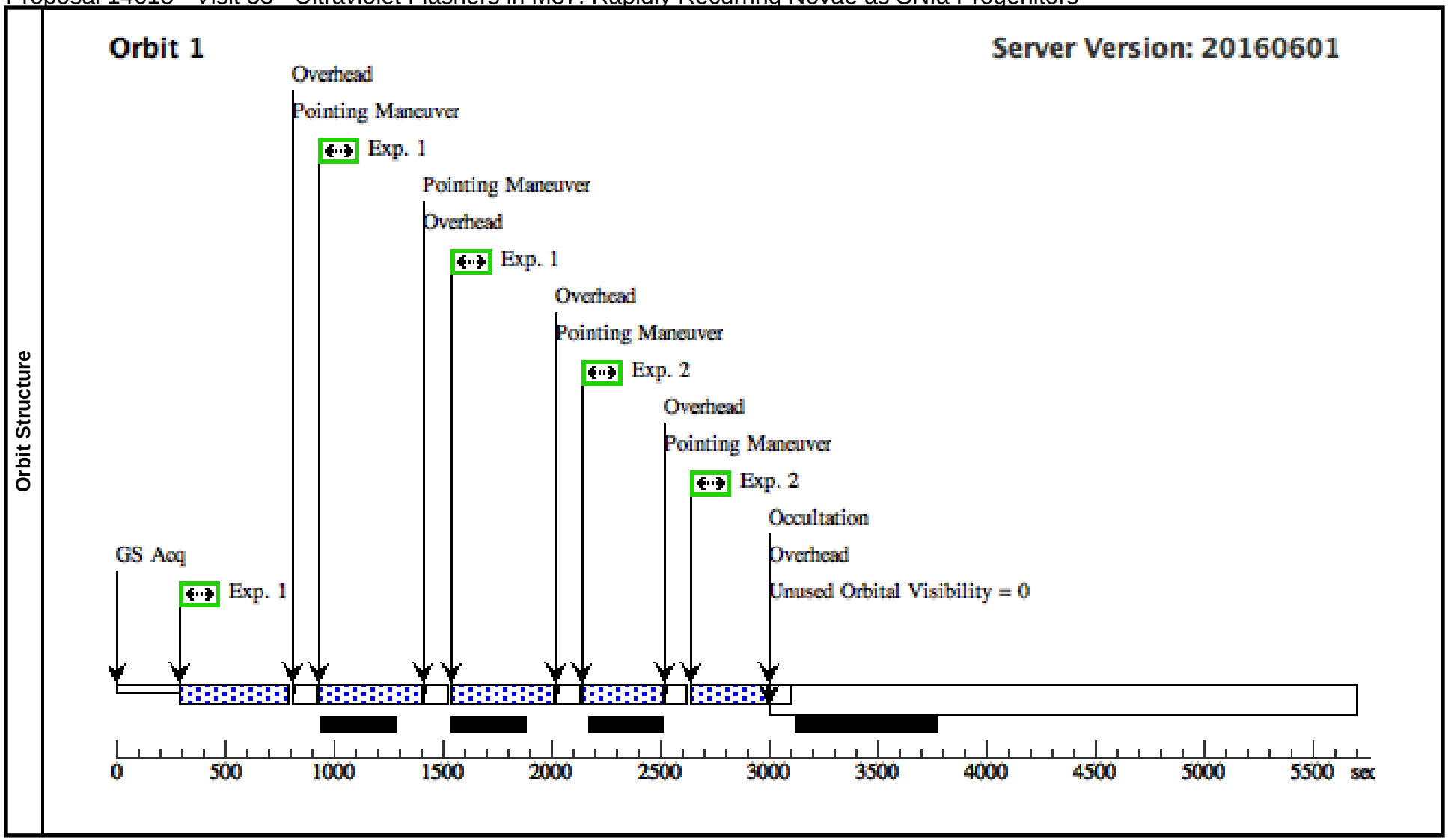
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M-87	RA: 12 30 49.4234 (187.7059308d) Dec: +12 23 28.04 (12.39112d) Equinox: J2000		V=8.63	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F275W	FLASH=10		Pattern 1, Exps 1-1 in Visit 53 (1)	472 Secs (1416 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***
2		(1) M-87	WFC3/UVIS, ACCUM, UVIS-FIX	F606W			Pattern 2, Exps 2-2 in Visit 53 (2)	349 Secs (698 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***


Orbit 1
Server Version: 20160601
Orbit Structure
GS Acq
Exp. 1
Overhead
Pointing Maneuver
Exp. 1
Pointing Maneuver
Overhead
Exp. 1
Overhead
Pointing Maneuver
Exp. 2
Overhead
Pointing Maneuver
Exp. 2
Occultation
Overhead
Unused Orbital Visibility = 0
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec