12942 - Testing the Merger Hypothesis for Black Hole/Galaxy Co-Evolution at z~2

Cycle: 20, Proposal Category: GO

(Availability Mode: SUPPORTED)

INVESTIGATORS

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VISITS

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
02	(2) F2M0738+2750	WFC3/IR	1	03-Jul-2012 23:02:31.0	yes
03	(3) F2M0921+1918	WFC3/IR	1	03-Jul-2012 23:02:42.0	yes
04	(4) F2M0943+5417	WFC3/IR	1	03-Jul-2012 23:02:50.0	yes
17	(4) F2M0943+5417	WFC3/IR	1	03-Jul-2012 23:02:59.0	yes
06	(5) F2M1036+2828	WFC3/IR	1	03-Jul-2012 23:03:07.0	yes
07	(6) F2M1341+3301	WFC3/IR	1	03-Jul-2012 23:03:16.0	yes
08	(7) F2M1344+2839	WFC3/IR	1	03-Jul-2012 23:03:24.0	yes
09	(8) F2M1359+3157	WFC3/IR	1	03-Jul-2012 23:03:33.0	yes
10	(9) F2M1427+3723	WFC3/IR	1	03-Jul-2012 23:03:41.0	yes
11	(10) F2M1531+2423	WFC3/IR	1	03-Jul-2012 23:03:49.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
18	(10) F2M1531+2423	WFC3/IR	1	03-Jul-2012 23:03:57.0	yes
13	(11) F2M2222-0202	WFC3/IR	1	03-Jul-2012 23:04:05.0	yes
19	(11) F2M2222-0202	WFC3/IR	1	03-Jul-2012 23:04:13.0	yes
15	(1) F2M0030+0025	WFC3/IR	1	03-Jul-2012 23:04:21.0	yes
20	(1) F2M0030+0025	WFC3/IR	1	03-Jul-2012 23:04:32.0	yes

15 Total Orbits Used

ABSTRACT

We propose to use WFC3 in the near-infrared to image the host galaxies of a sample of luminous, dust-reddened quasars at z~2 to look for evidence of mergers and interaction. We have identified a large sample of red quasars by matching the FIRST and 2MASS surveys and spectroscopically following up very red objects. Detailed study of this population reveals that red quasars are the most intrinsically luminous objects in the Universe at all redshifts, and appear to represent a transitional phase in the merger-driven black hole growth scenario, based on Hubble Space Telescope imaging at z~0.7. The images proposed here will sample the host galaxies in rest-frame visible light, which will reveal the presence of any tidal features and other merger signatures. Since morphologies of the host galaxies of lower-luminosity AGN at z=2 do not support the merger-driven co-evolution picture, it is important to test this picture in high luminosity systems. Evidence for mergers in these quasar hosts would support a picture in which luminous quasars and galaxies co-evolve through major-mergers, which trigger both star formation and black hole growth. The absence of mergers in our data would call for a new theoretical framework for co-evolution.

OBSERVING DESCRIPTION

We will image 11 F2M red quasars with z > 1.7 and for which we posses a near-infrared spectrum using broad WFC3 filters. The large amounts of absorption in these quasars minimizes contamination from the quasar and allows for better sensitivity to low surface brightness features in the host galaxies. We select WFC3-IR filters, chosen to straddle the 4000A break, in the quasars' rest frame. In order to facilitate the use of MultiDrizzle (or its successor, DrizzlePac) to improve the resolution of our final reduced images and to fully sample the PSF we will perform our observations using a 4 pointing box dither pattern. To reach a 3-sigma surface brightness depth of 25 magnitudes arcsec-2 extracted over a 2 x 2 pixel area in the H/F160W band, we require ~1600 seconds, which we will observe in 4 dithered frames.

We will obtain a shallower exposure of the quasar hosts in a bluer filter for color information and identification of dense star forming regions. In the

bluer band (F105W or F125W depending on the redshift of the source) we will aim for a 3-sigma depth of ~24.7 AB magnitudes arcsec2 extracted over a 2 x 2 pixel area. We will expose on F105W or F125W filters of ~900 seconds, respectively.

Since our sample of quasars spans a significant range in redshift and surface brightness
dims as (1+z)^5, we will increase the exposure time for the highest redshift (z > 2.2) quasars
to ensure a close uniform surface brightness limit for the sample as a whole.

Visit

Proposal 12942, F2M0738p2750 (02) Wed Jul 04 03:04:40 GMT 2012

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: (none)

Patterns

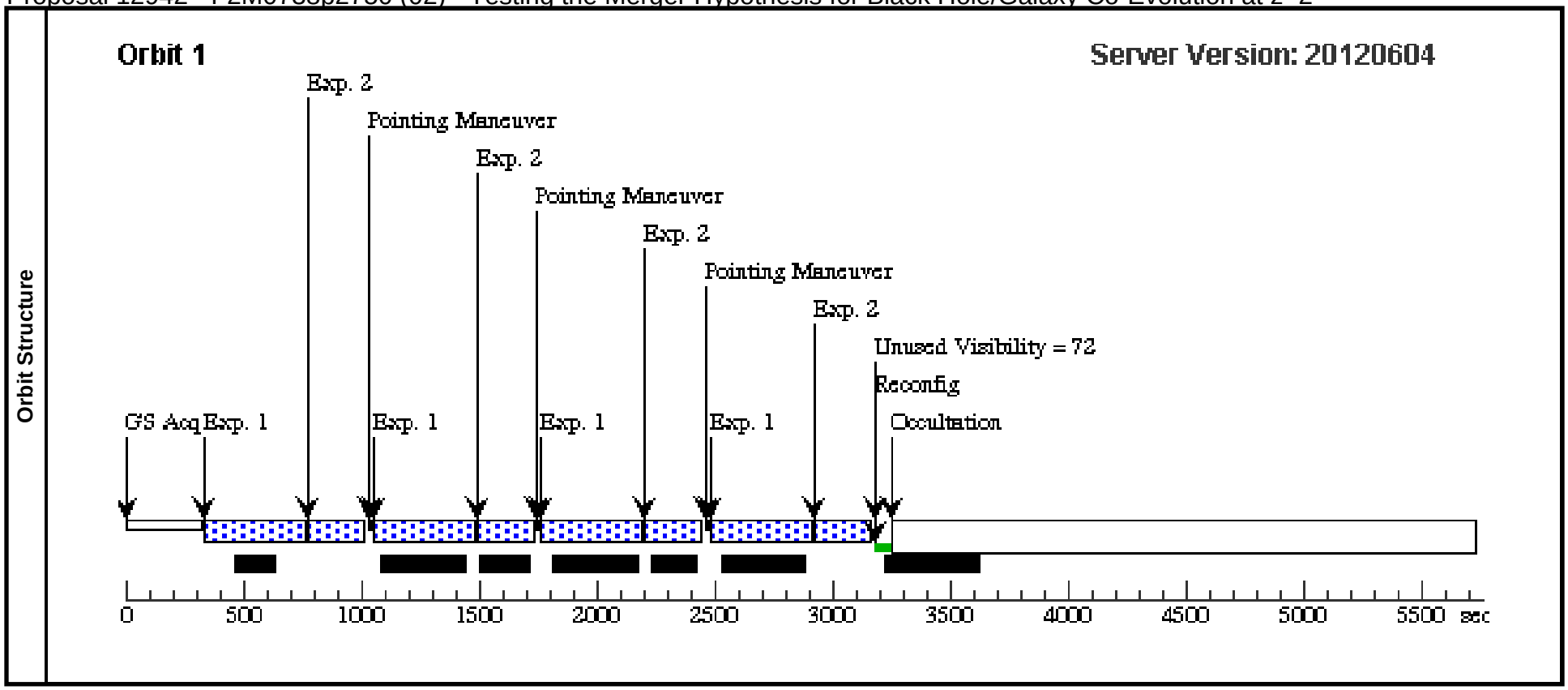
#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=0.572 Line Spacing=0.365	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(1-2)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	F2M0738+2750	RA: 07 38 20.1010 (114.5837542d) Dec: +27 50 45.51 (27.84598d) Equinox: J2000	Redshift: 1.985	V=22.7+/-0.2 K=15.28	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	F2M0738p2750-H	(2) F2M0738+2750	WFC3/IR, MULTIACCUM, IR	F160W	SAMP-SEQ=STEP100; NSAMP=10		Pattern 1, Exps 1-2 in F2M0738p2750 (02) (1)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
2	F2M0738p2750-Y	(2) F2M0738+2750	WFC3/IR, MULTIACCUM, IR	F105W	SAMP-SEQ=STEP25; NSAMP=13		Pattern 1, Exps 1-2 in F2M0738p2750 (02) (1)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***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Exp. 2
Pointing Maneuver
Exp. 2
Pointing Maneuver
Exp. 2
Pointing Maneuver
Exp. 2
Unused Visibility = 72
Reconfig
Occultation
GS Acq
Exp. 1
Exp. 1
Exp. 1
Exp. 1
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500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 12942, F2M0921p1918 (03) Wed Jul 04 03:04:42 GMT 2012

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: (none)

Patterns

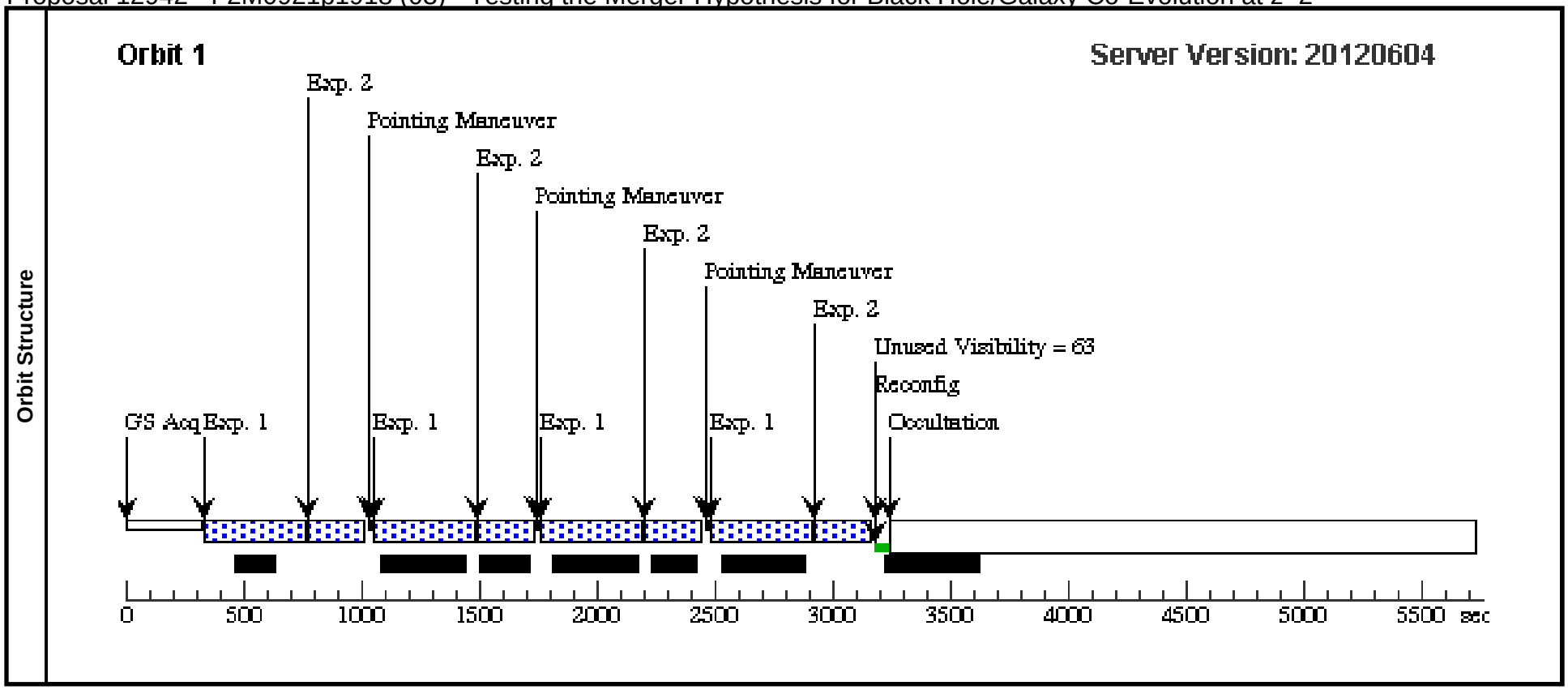
#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=0.572 Line Spacing=0.365	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(1-2)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	F2M0921+1918	RA: 09 21 45.6920 (140.4403833d) Dec: +19 18 12.63 (19.30351d) Equinox: J2000	Redshift: 1.791	V=22.5+/-0.1 K=14.58	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	F2M0921p1918-H	(3) F2M0921+1918	WFC3/IR, MULTIACCUM, IR	F160W	SAMP-SEQ=STEP100; NSAMP=10		Pattern 1, Exps 1-2 in F2M0921p1918 (03) (1)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
2	F2M0921p1918-Y	(3) F2M0921+1918	WFC3/IR, MULTIACCUM, IR	F105W	SAMP-SEQ=STEP25; NSAMP=13		Pattern 1, Exps 1-2 in F2M0921p1918 (03) (1)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***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Server Version: 20120604
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Pointing Maneuver
Exp. 2
Pointing Maneuver
Exp. 2
Unused Visibility = 63
Reconfig
Occultation
GS Acq
Exp. 1
Exp. 1
Exp. 1
Exp. 1
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2000
2500
3000
3500
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4500
5000
5500
sec

Visit

Proposal 12942, F2M0943p5417-1 (04) Wed Jul 04 03:04:43 GMT 2012

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: (none)

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=0.572 Line Spacing=0.365	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(1-2)

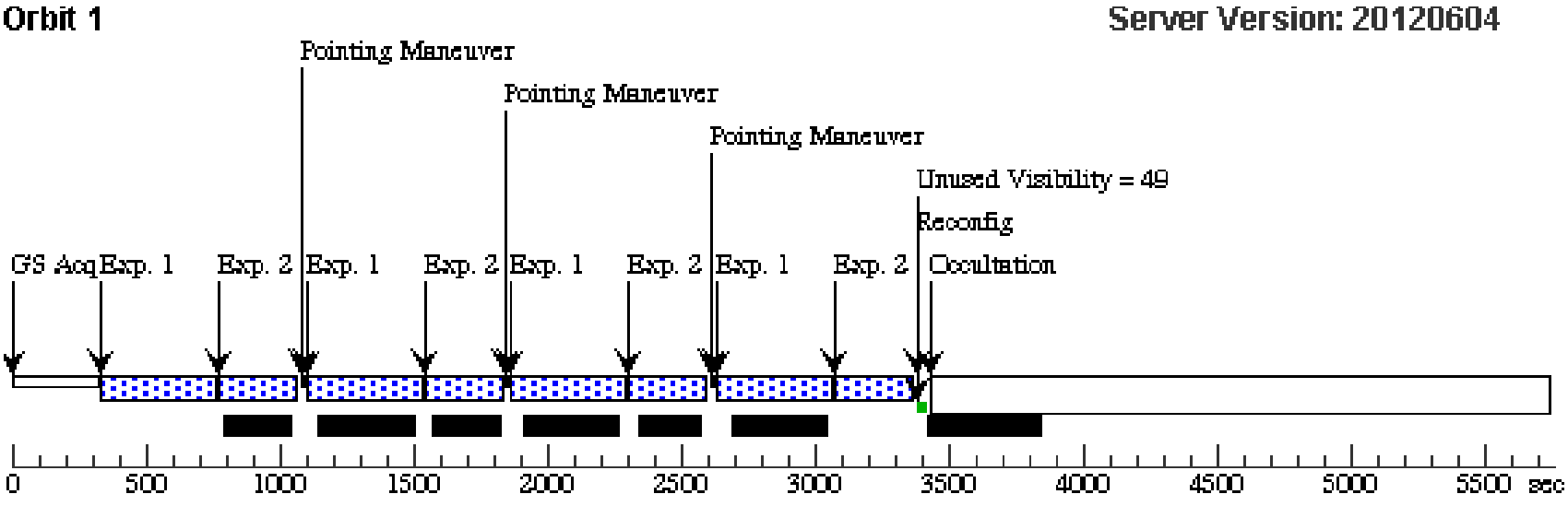
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	F2M0943+5417	RA: 09 43 17.6760 (145.8236500d) Dec: +54 17 5.54 (54.28487d) Equinox: J2000	Redshift: 2.232	V=23.38+/-0.26 K=14.25	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	F2M0943p5417-H	(4) F2M0943+5417	WFC3/IR, MULTIACCUM, IR	F160W	SAMP-SEQ=STEP100; NSAMP=10		Pattern 1, Exps 1-2 in F2M0943p5417-1 (04) (1)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
2	F2M0943p5417-Y	(4) F2M0943+5417	WFC3/IR, MULTIACCUM, IR	F105W	SAMP-SEQ=STEP25; NSAMP=15		Pattern 1, Exps 1-2 in F2M0943p5417-1 (04) (1)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***

Orbit Structure



Visit

Proposal 12942, F2M0943p5417-2 (17) Wed Jul 04 03:04:44 GMT 2012

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: (none)

Patterns

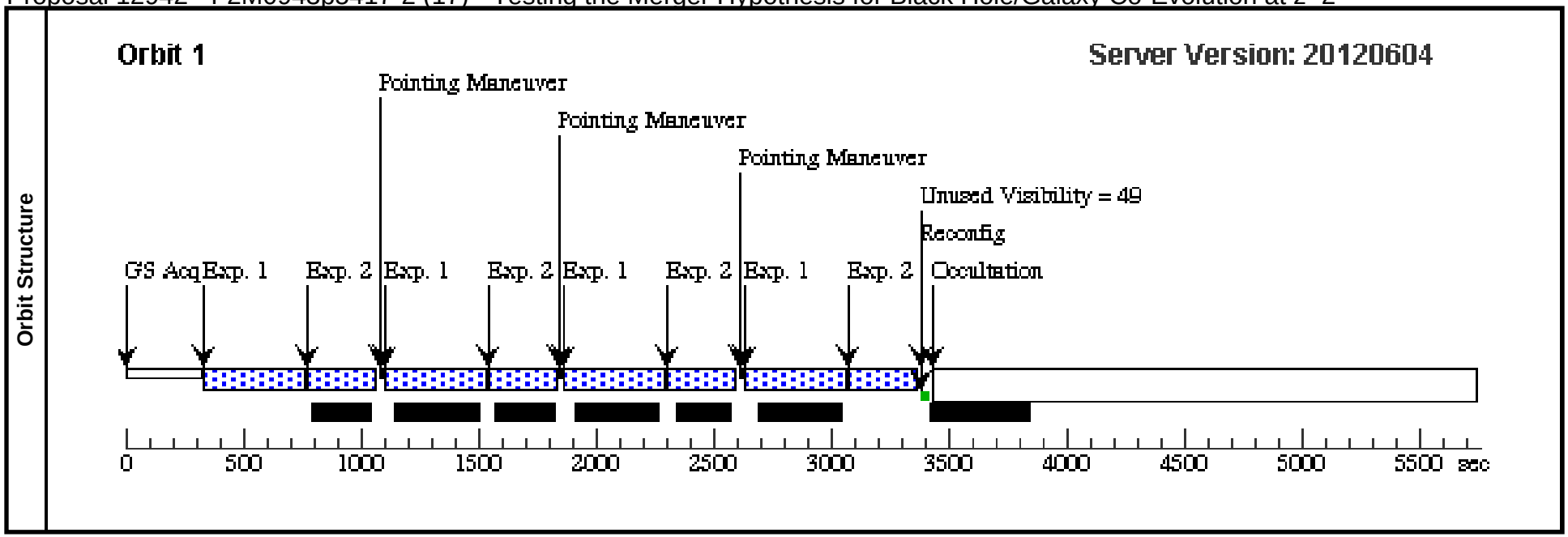
#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=0.572 Line Spacing=0.365	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(1-2)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	F2M0943+5417	RA: 09 43 17.6760 (145.8236500d) Dec: +54 17 5.54 (54.28487d) Equinox: J2000	Redshift: 2.232	V=23.38+/-0.26 K=14.25	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	F2M0943p5417-H	(4) F2M0943+5417	WFC3/IR, MULTIACCUM, IR	F160W	SAMP-SEQ=STEP100; NSAMP=10		Pattern 1, Exps 1-2 in F2M0943p5417-2 (17) (1)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
2	F2M0943p5417-Y	(4) F2M0943+5417	WFC3/IR, MULTIACCUM, IR	F105W	SAMP-SEQ=STEP25; NSAMP=15		Pattern 1, Exps 1-2 in F2M0943p5417-2 (17) (1)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***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Pointing Maneuver
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Reconfig
GS Acq
Exp. 1
Exp. 2
Exp. 1
Exp. 2
Exp. 1
Exp. 2
Exp. 1
Exp. 2
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 12942, F2M1036p2828 (06) Wed Jul 04 03:04:45 GMT 2012

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: (none)

Patterns

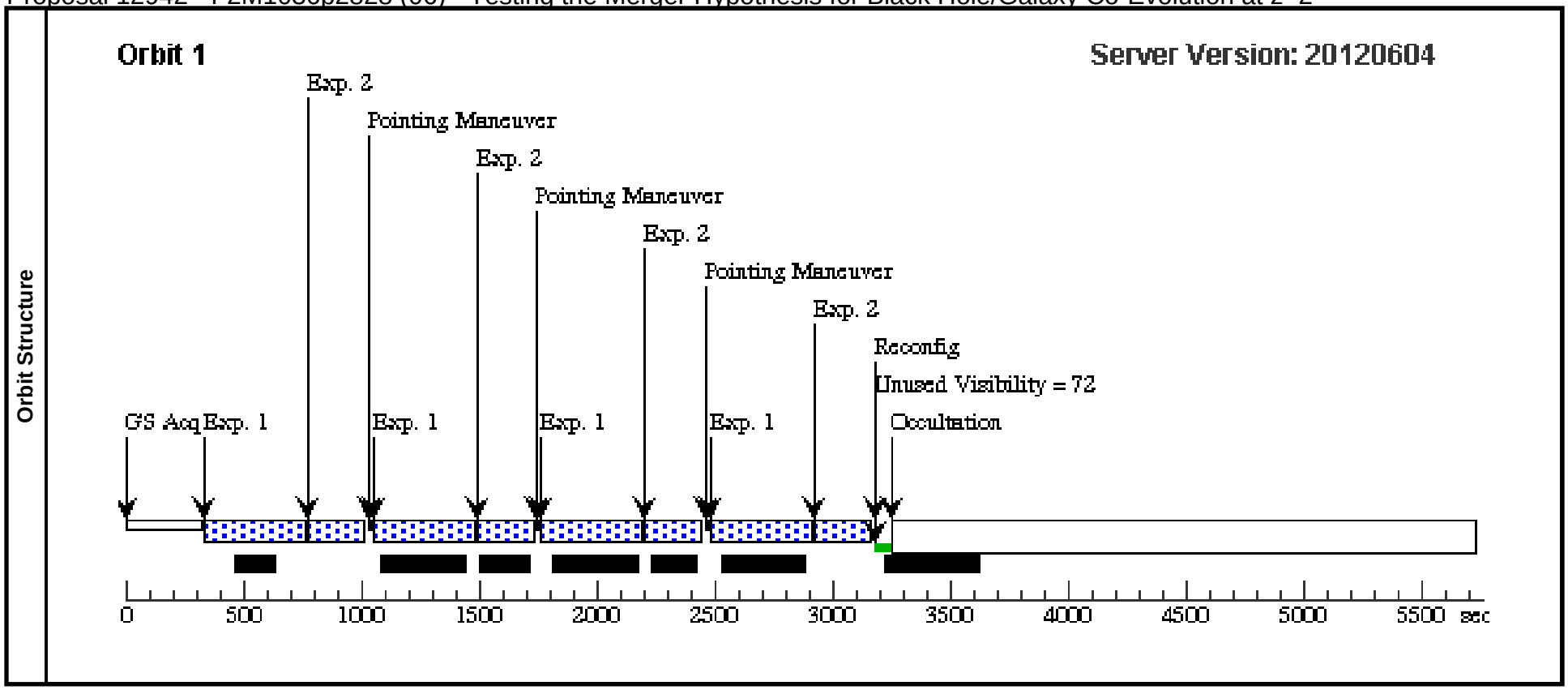
#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=0.572 Line Spacing=0.365	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(1-2)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(5)	F2M1036+2828	RA: 10 36 33.5420 (159.1397583d) Dec: +28 28 21.56 (28.47266d) Equinox: J2000	Redshift: 1.762	V=21.12+/-0.03 K=15.25	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	F2M1036p2828-H	(5) F2M1036+2828	WFC3/IR, MULTIACCUM, IR	F160W	SAMP-SEQ=STEP100; NSAMP=10		Pattern 1, Exps 1-2 in F2M1036p2828 (06) (1)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
2	F2M1036p2828-Y	(5) F2M1036+2828	WFC3/IR, MULTIACCUM, IR	F105W	SAMP-SEQ=STEP25; NSAMP=13		Pattern 1, Exps 1-2 in F2M1036p2828 (06) (1)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***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Pointing Maneuver
Exp. 2
Reconfig
Unused Visibility = 72
GS Acq
Exp. 1
Exp. 1
Exp. 1
Exp. 1
Occultation
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500
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2000
2500
3000
3500
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4500
5000
5500
sec

Visit

Proposal 12942, F2M1341p3301 (07) Wed Jul 04 03:04:46 GMT 2012

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: (none)

Patterns

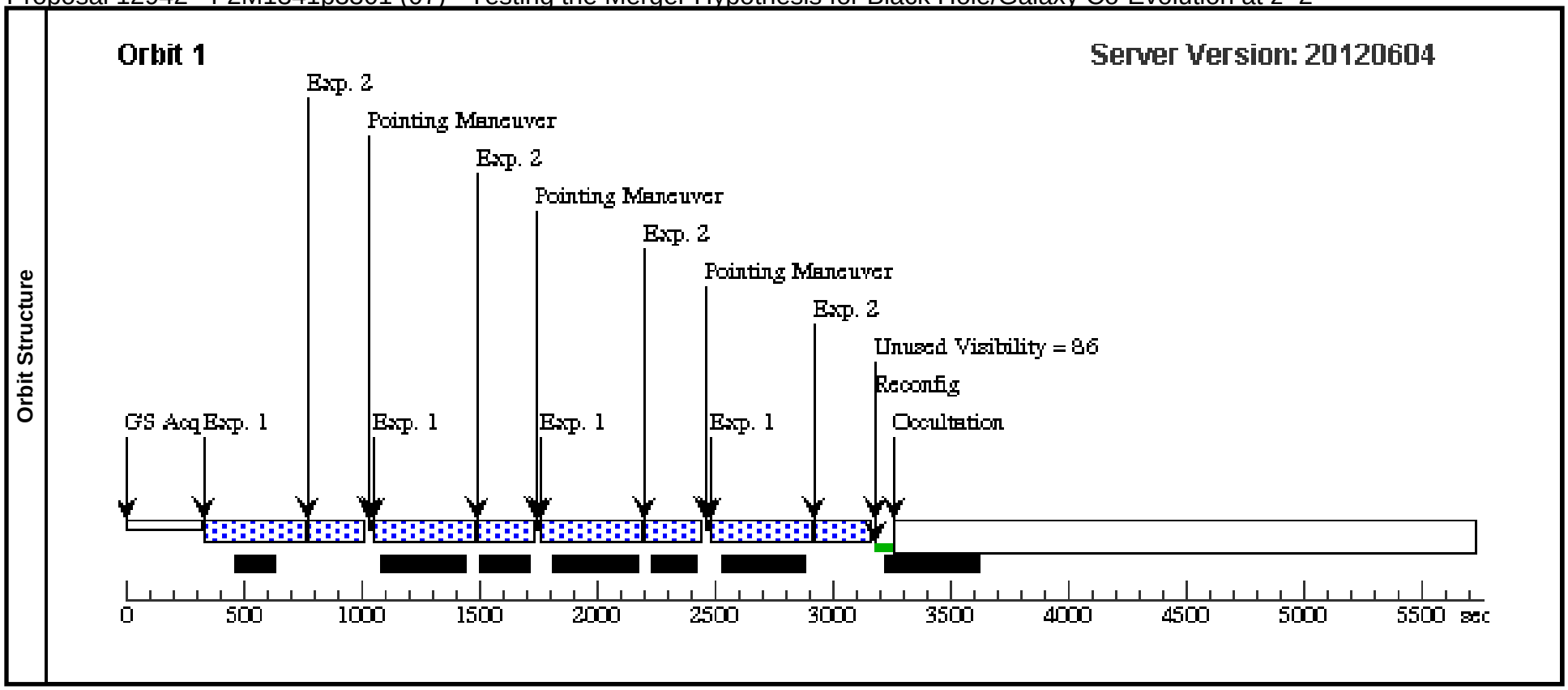
#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=0.572 Line Spacing=0.365	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(1-2)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(6)	F2M1341+3301	RA: 13 41 8.1120 (205.2838000d) Dec: +33 01 10.25 (33.01951d) Equinox: J2000	Redshift: 1.715	V=22.6+/-0.1 K=14.91	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	F2M1341p3301-H	(6) F2M1341+3301	WFC3/IR, MULTIACCUM, IR	F160W	SAMP-SEQ=STEP100; NSAMP=10		Pattern 1, Exps 1-2 in F2M1341p3301 (07) (1)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
2	F2M1341p3301-Y	(6) F2M1341+3301	WFC3/IR, MULTIACCUM, IR	F105W	SAMP-SEQ=STEP25; NSAMP=13		Pattern 1, Exps 1-2 in F2M1341p3301 (07) (1)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***


Orbit Structure
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Pointing Maneuver
Exp. 2
Pointing Maneuver
Exp. 2
Unused Visibility = 86
Reconfig
GS Acq
Exp. 1
Exp. 1
Exp. 1
Exp. 1
Occultation
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500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 12942, F2M1344p2839 (08) Wed Jul 04 03:04:47 GMT 2012

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: (none)

Patterns

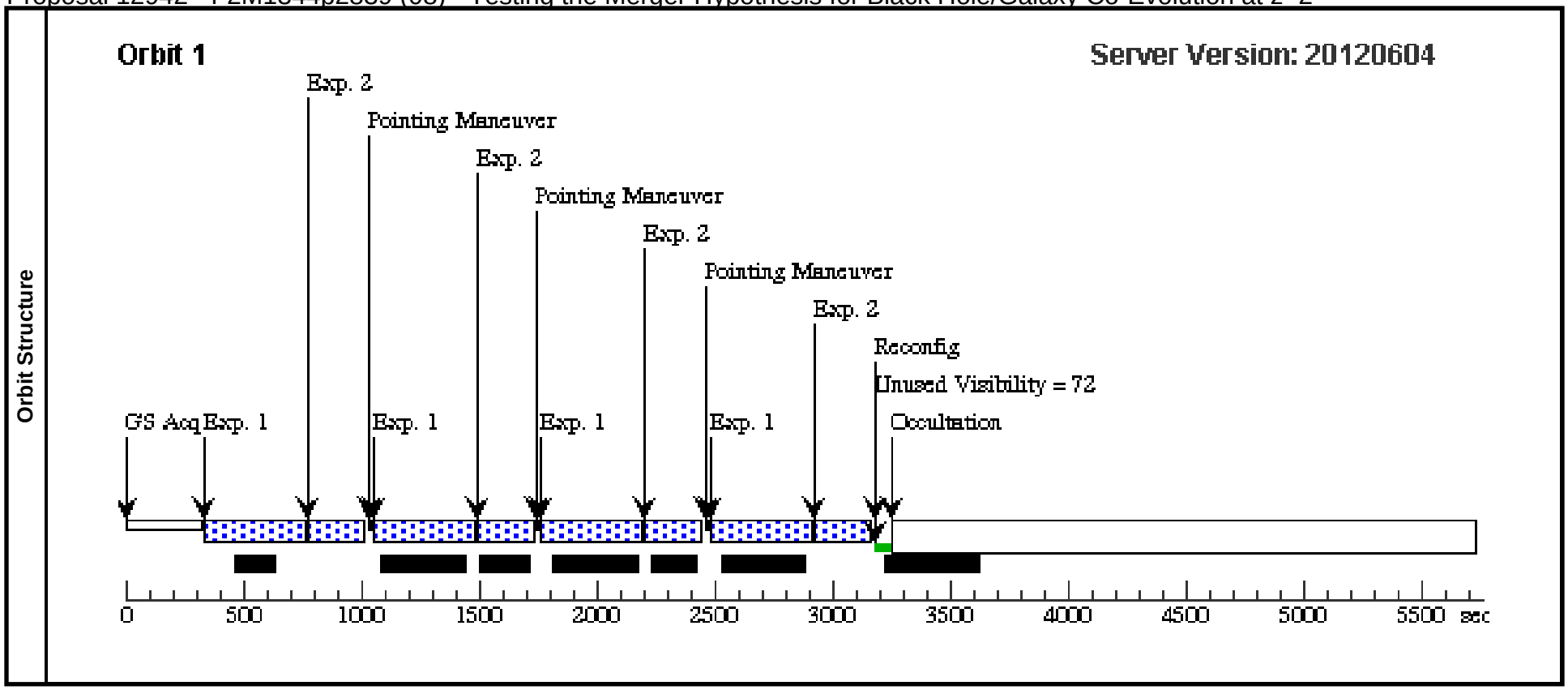
#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=0.572 Line Spacing=0.365	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(1-2)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(7)	F2M1344+2839	RA: 13 44 8.3140 (206.0346417d) Dec: +28 39 31.98 (28.65888d) Equinox: J2000	Redshift: 1.770	V=21.95+/-0.07 K=14.76	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	F2M1344p2839-H	(7) F2M1344+2839	WFC3/IR, MULTIACCUM, IR	F160W	SAMP-SEQ=STEP100; NSAMP=10		Pattern 1, Exps 1-2 in F2M1344p2839 (08) (1)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
2	F2M1344p2839-Y	(7) F2M1344+2839	WFC3/IR, MULTIACCUM, IR	F105W	SAMP-SEQ=STEP25; NSAMP=13		Pattern 1, Exps 1-2 in F2M1344p2839 (08) (1)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***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Pointing Maneuver
Exp. 2
Reconfig
Unused Visibility = 72
GS Acq
Exp. 1
Exp. 1
Exp. 1
Exp. 1
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 12942, F2M1359p3157 (09) Wed Jul 04 03:04:48 GMT 2012

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: (none)

Patterns

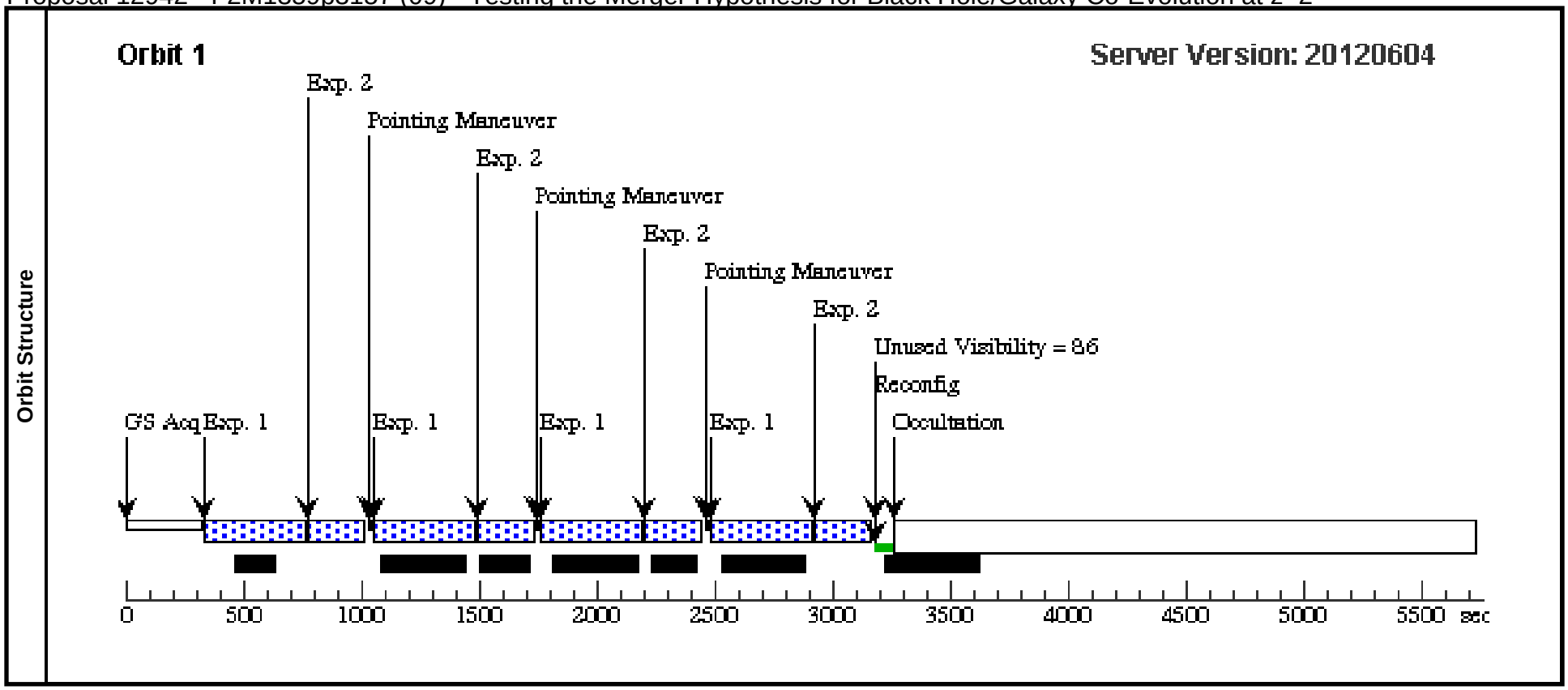
#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=0.572 Line Spacing=0.365	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(1-2)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(8)	F2M1359+3157	RA: 13 59 41.1820 (209.9215917d) Dec: +31 57 40.54 (31.96126d) Equinox: J2000	Redshift: 1.724	V=22.9+/-0.2 K=14.82	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	F2M1359p3157-H	(8) F2M1359+3157	WFC3/IR, MULTIACCUM, IR	F160W	SAMP-SEQ=STEP100; NSAMP=10	GS ACQ SCENARIO BASE1B3	Pattern 1, Exps 1-2 in F2M1359p3157 (09) (1)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
2	F2M1359p3157-Y	(8) F2M1359+3157	WFC3/IR, MULTIACCUM, IR	F105W	SAMP-SEQ=STEP25; NSAMP=13		Pattern 1, Exps 1-2 in F2M1359p3157 (09) (1)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***


Orbit Structure
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Exp. 2
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Pointing Maneuver
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Pointing Maneuver
Exp. 2
Unused Visibility = 86
Reconfig
GS Acq
Exp. 1
Exp. 1
Exp. 1
Exp. 1
Occultation
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500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 12942, F2M1427p3723 (10) Wed Jul 04 03:04:49 GMT 2012

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: (none)

Patterns

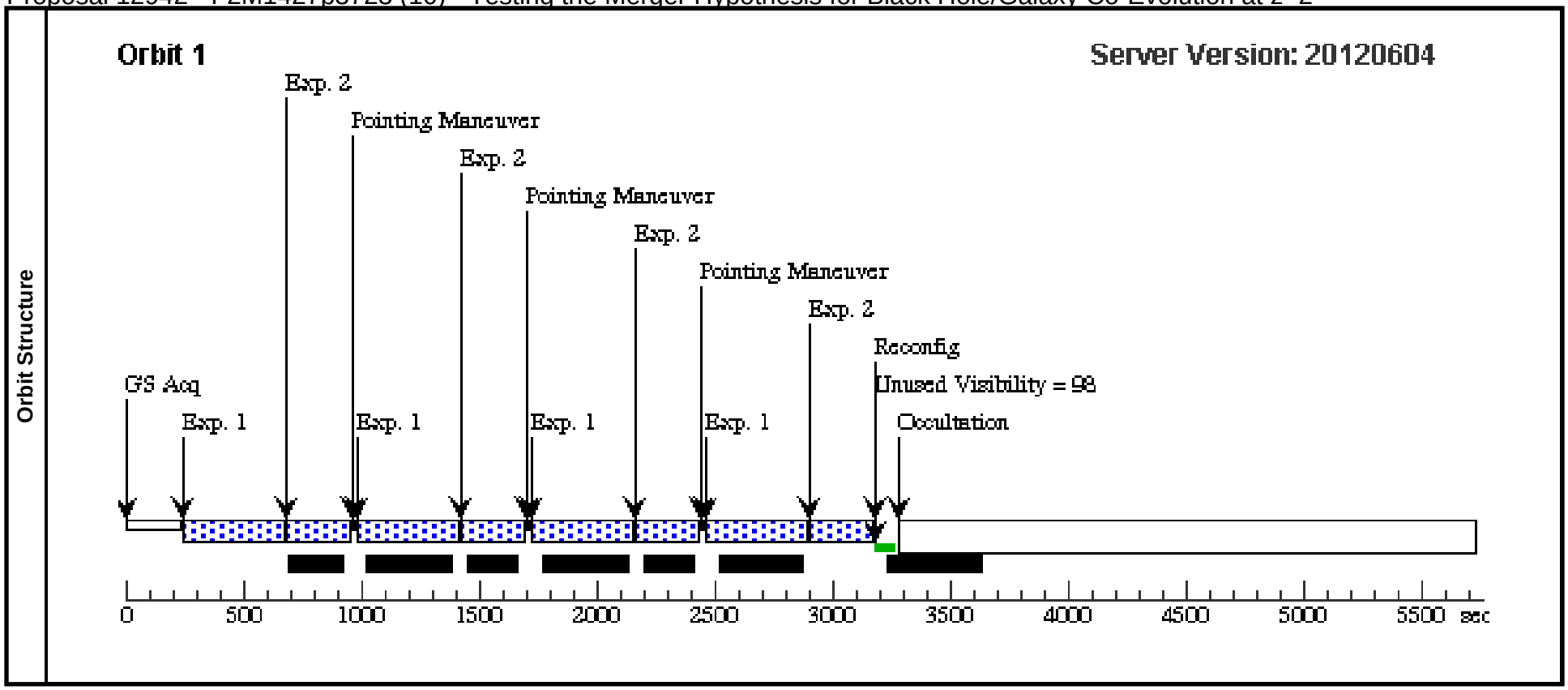
#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=0.572 Line Spacing=0.365	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(1-2)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(9)	F2M1427+3723	RA: 14 27 44.3430 (216.9347625d) Dec: +37 23 37.45 (37.39374d) Equinox: J2000	Redshift: 2.168	V=21.19+/-0.04 K=15.09	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	F2M1427p3723-H	(9) F2M1427+3723	WFC3/IR, MULTIACCUM, IR	F160W	SAMP-SEQ=STEP100; NSAMP=10	GS ACQ SCENARIO SINGLE	Pattern 1, Exps 1-2 in F2M1427p3723 (10) (1)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
2	F2M1427p3723-Y	(9) F2M1427+3723	WFC3/IR, MULTIACCUM, IR	F105W	SAMP-SEQ=STEP25; NSAMP=14		Pattern 1, Exps 1-2 in F2M1427p3723 (10) (1)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20120604
Exp. 2
Pointing Maneuver
Exp. 2
Pointing Maneuver
Exp. 2
Pointing Maneuver
Exp. 2
Reconfig
GS Acq
Unused Visibility = 98
Exp. 1
Exp. 1
Exp. 1
Exp. 1
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 12942, F2M1531p2423-1 (11) Wed Jul 04 03:04:50 GMT 2012

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: (none)

Patterns

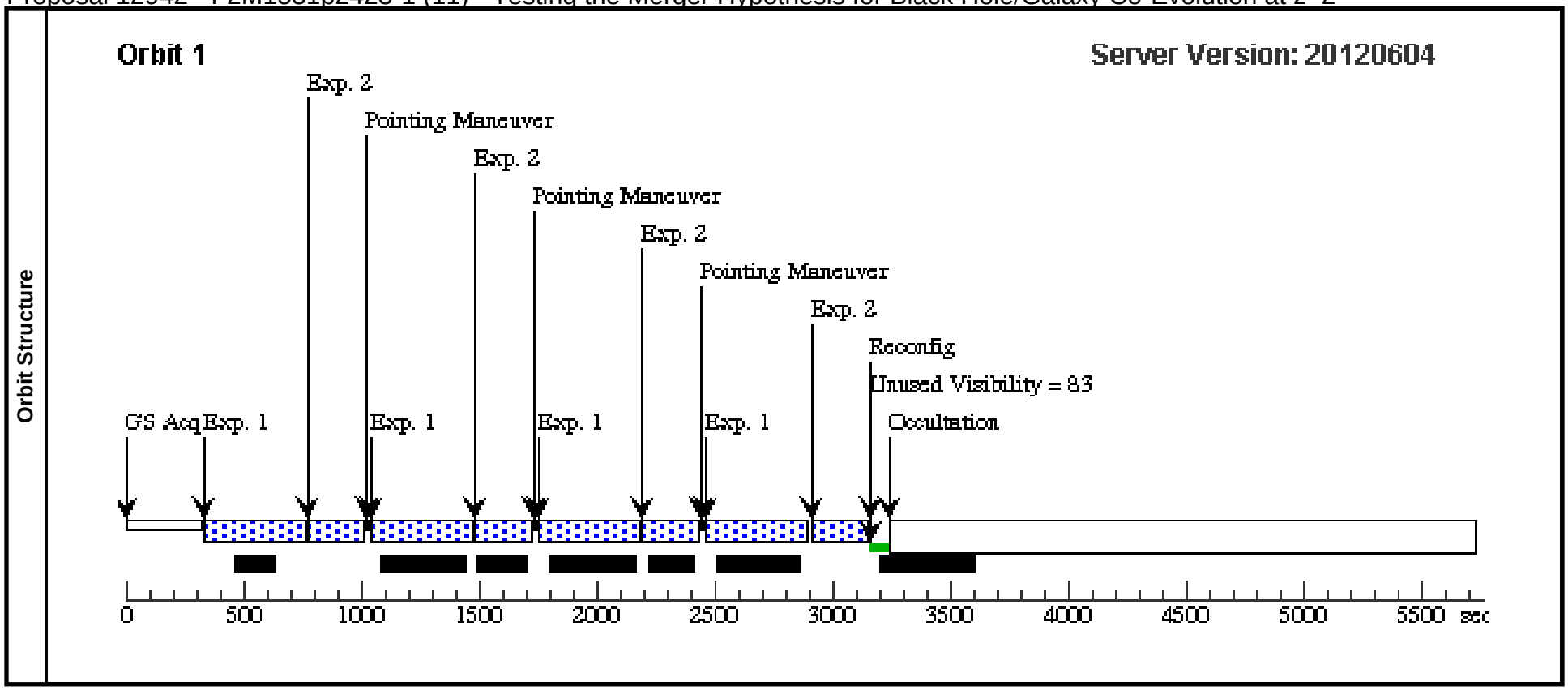
#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=0.572 Line Spacing=0.365	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(1-2)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(10)	F2M1531+2423	RA: 15 31 50.4750 (232.9603125d) Dec: +24 23 17.62 (24.38823d) Equinox: J2000	Redshift: 2.287	V=21.35+/-0.04 K=14.7	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	F2M1531p2423-H	(10) F2M1531+2423	WFC3/IR, MULTIACCUM, IR	F160W	SAMP-SEQ=STEP100; NSAMP=10		Pattern 1, Exps 1-2 in F2M1531p2423-1 (11) (1)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
2	F2M1531p2423-J	(10) F2M1531+2423	WFC3/IR, MULTIACCUM, IR	F125W	SAMP-SEQ=STEP25; NSAMP=13		Pattern 1, Exps 1-2 in F2M1531p2423-1 (11) (1)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20120604
Exp. 2
Pointing Maneuver
Exp. 2
Pointing Maneuver
Exp. 2
Pointing Maneuver
Exp. 2
Reconfig
Unused Visibility = 83
GS Acq
Exp. 1
Exp. 1
Exp. 1
Exp. 1
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 12942, F2M1531p2423-2 (18) Wed Jul 04 03:04:51 GMT 2012

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: (none)

Patterns

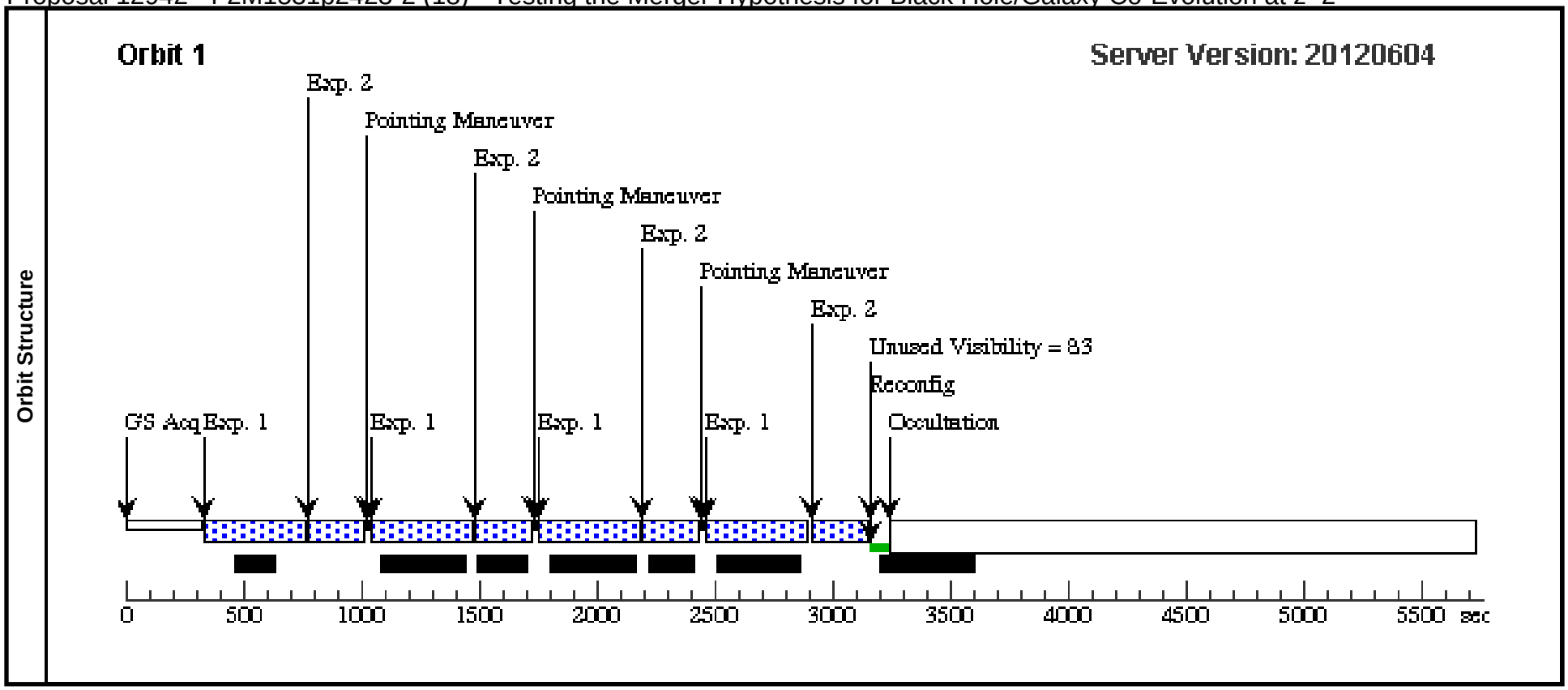
#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=0.572 Line Spacing=0.365	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(1-2)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(10)	F2M1531+2423	RA: 15 31 50.4750 (232.9603125d) Dec: +24 23 17.62 (24.38823d) Equinox: J2000	Redshift: 2.287	V=21.35+/-0.04 K=14.7	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	F2M1531p2423-H	(10) F2M1531+2423	WFC3/IR, MULTIACCUM, IR	F160W	SAMP-SEQ=STEP100; NSAMP=10		Pattern 1, Exps 1-2 in F2M1531p2423-2 (18) (1)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
2	F2M1531p2423-J	(10) F2M1531+2423	WFC3/IR, MULTIACCUM, IR	F125W	SAMP-SEQ=STEP25; NSAMP=13		Pattern 1, Exps 1-2 in F2M1531p2423-2 (18) (1)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20120604
Exp. 2
Pointing Maneuver
Exp. 2
Pointing Maneuver
Exp. 2
Pointing Maneuver
Exp. 2
Unused Visibility = 83
Reconfig
Occultation
GS Acq
Exp. 1
Exp. 1
Exp. 1
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 12942, F2M2222m0202-1 (13) Wed Jul 04 03:04:52 GMT 2012

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: (none)

Patterns

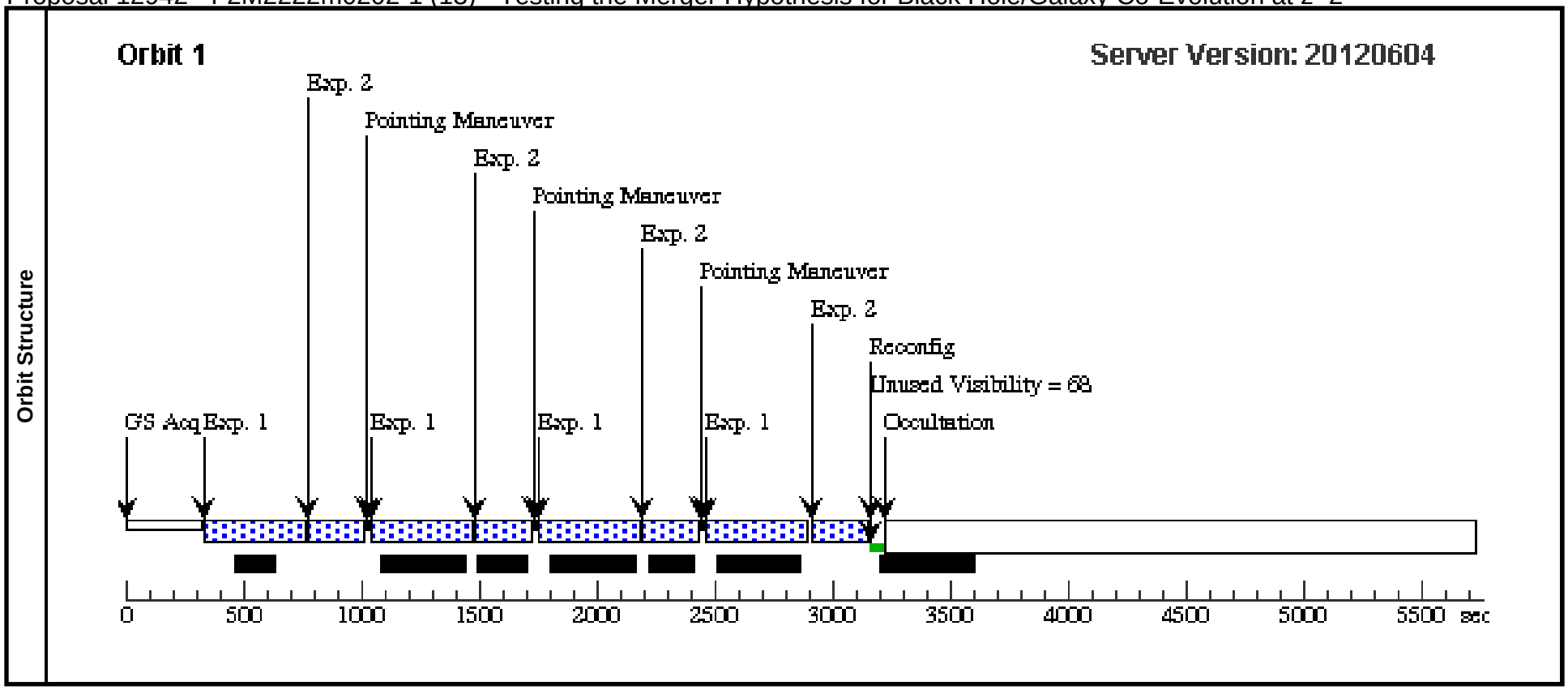
#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=0.572 Line Spacing=0.365	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(1-2)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(11)	F2M2222-0202	RA: 22 22 52.7800 (335.7199167d) Dec: -02 02 57.44 (-2.04929d) Equinox: J2000	Redshift: 2.252	V=21.39+/-0.04 K=15.17	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	F2M2222m0202-H	(11) F2M2222-0202	WFC3/IR, MULTIACCUM, IR	F160W	SAMP-SEQ=STEP100; NSAMP=10		Pattern 1, Exps 1-2 in F2M2222m0202-1 (13) (1)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
2	F2M2222m0202-J	(11) F2M2222-0202	WFC3/IR, MULTIACCUM, IR	F125W	SAMP-SEQ=STEP25; NSAMP=13		Pattern 1, Exps 1-2 in F2M2222m0202-1 (13) (1)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20120604
Exp. 2
Pointing Maneuver
Exp. 2
Pointing Maneuver
Exp. 2
Pointing Maneuver
Exp. 2
Reconfig
Unused Visibility = 68
GS Acq
Exp. 1
Exp. 1
Exp. 1
Exp. 1
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 12942, F2M2222m0202-2 (19) Wed Jul 04 03:04:53 GMT 2012

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: (none)

Patterns

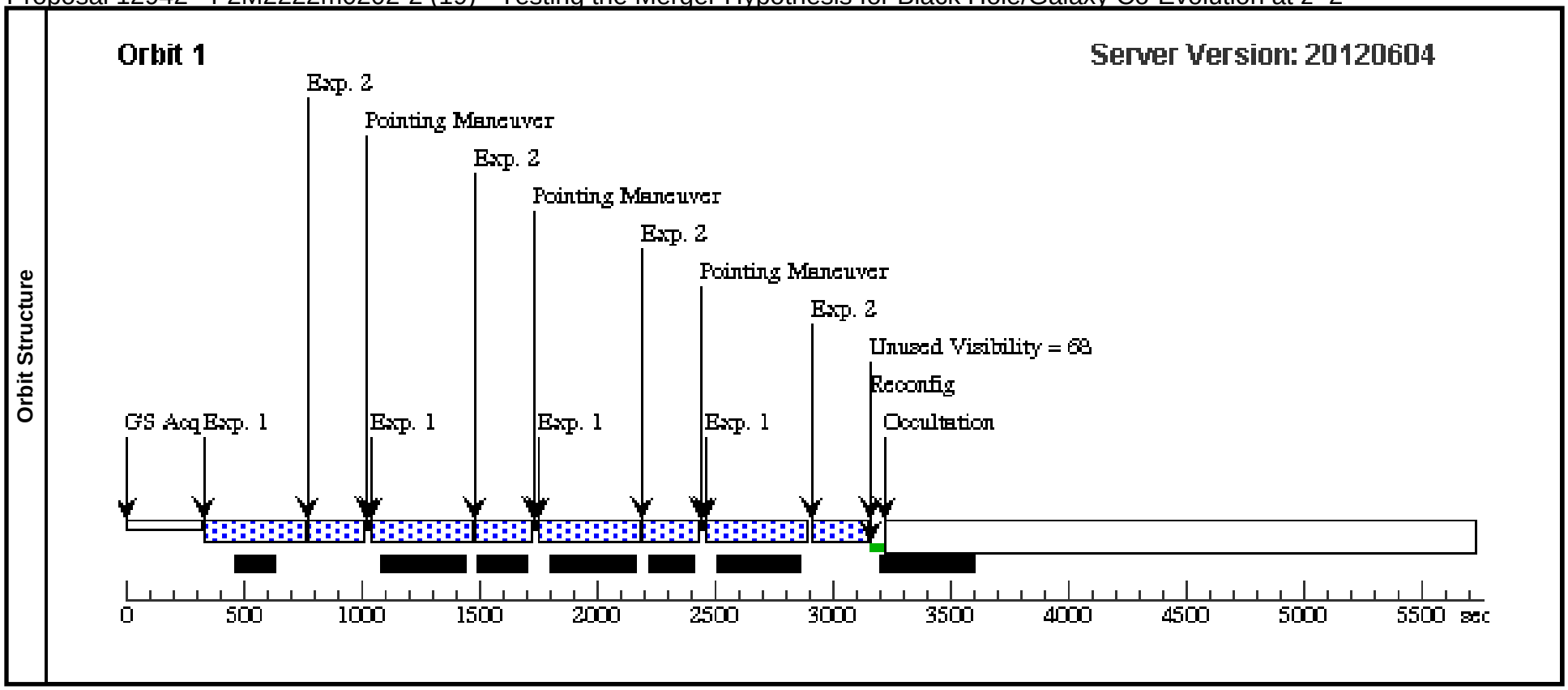
#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=0.572 Line Spacing=0.365	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(1-2)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(11)	F2M2222-0202	RA: 22 22 52.7800 (335.7199167d) Dec: -02 02 57.44 (-2.04929d) Equinox: J2000	Redshift: 2.252	V=21.39+/-0.04 K=15.17	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	F2M2222m0202-H	(11) F2M2222-0202	WFC3/IR, MULTIACCUM, IR	F160W	SAMP-SEQ=STEP100; NSAMP=10		Pattern 1, Exps 1-2 in F2M2222m0202-2 (19) (1)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
2	F2M2222m0202-J	(11) F2M2222-0202	WFC3/IR, MULTIACCUM, IR	F125W	SAMP-SEQ=STEP25; NSAMP=13		Pattern 1, Exps 1-2 in F2M2222m0202-2 (19) (1)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20120604
Exp. 2
Pointing Maneuver
Exp. 2
Pointing Maneuver
Exp. 2
Pointing Maneuver
Exp. 2
Unused Visibility = 68
Reconfig
Occultation
GS Acq
Exp. 1
Exp. 1
Exp. 1
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 12942, F2M0030p0035-1 (15) Wed Jul 04 03:04:54 GMT 2012

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: SCHED 100%

Patterns

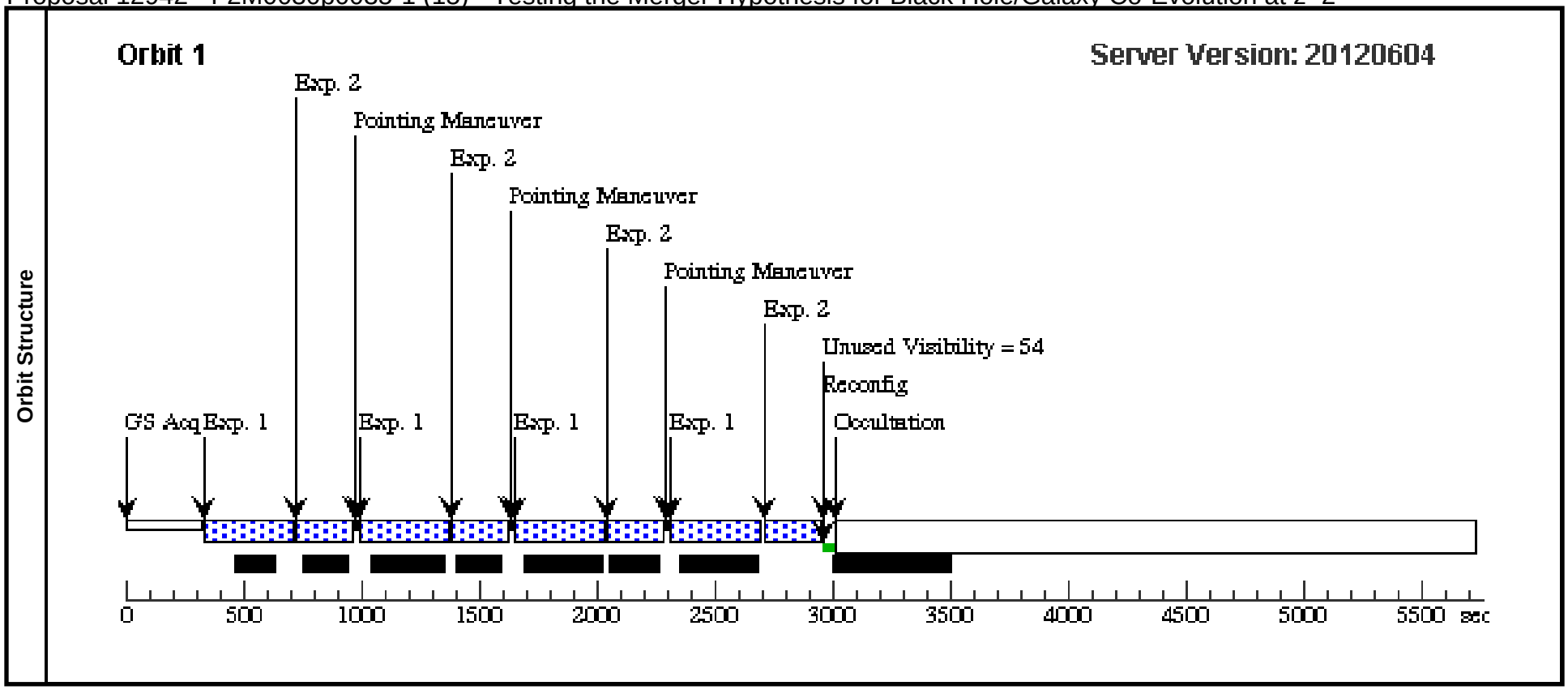
#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=0.572 Line Spacing=0.365	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(1-2)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	F2M0030+0025	RA: 00 30 4.9600 (7.5206667d) Dec: +00 25 1.42 (.41706d) Equinox: J2000	Redshift: 2.299	V=22.65+/-0.18 K=16.11	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	F2M0030p0035-H	(1) F2M0030+0025	WFC3/IR, MULTIACCUM, IR	F160W	SAMP-SEQ=STEP50; NSAMP=12		Pattern 1, Exps 1-2 in F2M0030p0035-1 (15) (1)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
2	F2M0030p0035-J	(1) F2M0030+0025	WFC3/IR, MULTIACCUM, IR	F125W	SAMP-SEQ=STEP25; NSAMP=13		Pattern 1, Exps 1-2 in F2M0030p0035-1 (15) (1)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20120604
Exp. 2
Pointing Maneuver
Exp. 2
Pointing Maneuver
Exp. 2
Pointing Maneuver
Exp. 2
Unused Visibility = 54
Reconfig
GS Acq
Exp. 1
Exp. 1
Exp. 1
Exp. 1
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 12942, F2M0030p0035-2 (20) Wed Jul 04 03:04:54 GMT 2012

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: SCHED 100%

Patterns

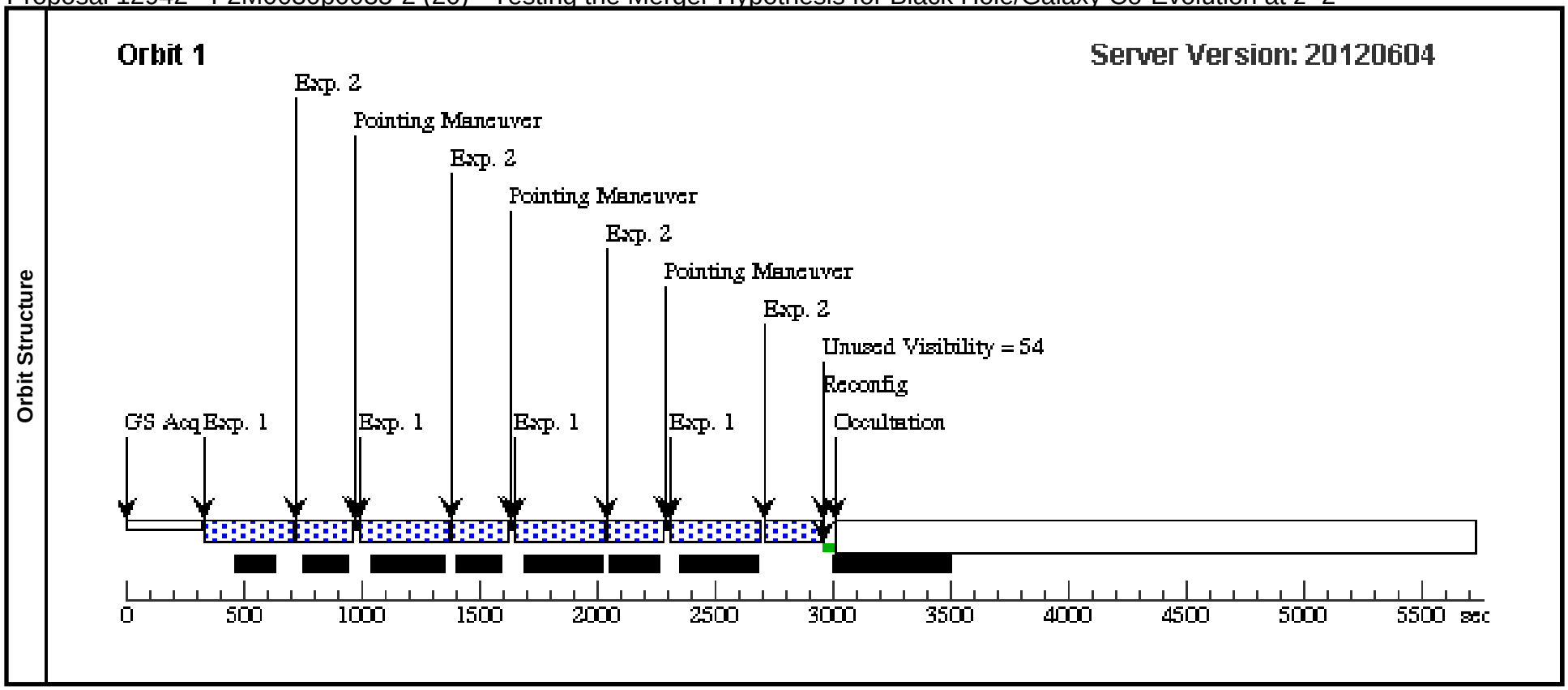
#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=0.572 Line Spacing=0.365	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(1-2)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	F2M0030+0025	RA: 00 30 4.9600 (7.5206667d) Dec: +00 25 1.42 (.41706d) Equinox: J2000	Redshift: 2.299	V=22.65+/-0.18 K=16.11	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	F2M0030p0035-H	(1) F2M0030+0025	WFC3/IR, MULTIACCUM, IR	F160W	SAMP-SEQ=STEP50; NSAMP=12		Pattern 1, Exps 1-2 in F2M0030p0035-2 (20) (1)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
2	F2M0030p0035-J	(1) F2M0030+0025	WFC3/IR, MULTIACCUM, IR	F125W	SAMP-SEQ=STEP25; NSAMP=13		Pattern 1, Exps 1-2 in F2M0030p0035-2 (20) (1)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20120604
Exp. 2
Pointing Maneuver
Exp. 2
Pointing Maneuver
Exp. 2
Pointing Maneuver
Exp. 2
Unused Visibility = 54
Reconfig
Occultation
GS Acq
Exp. 1
Exp. 1
Exp. 1
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec