



# 10596 - AGNs with Intermediate-mass Black Holes: A Test of the Black Hole-Bulge Paradigm

Cycle: 14, Proposal Category: GO  
(Availability Mode: SUPPORTED)

## INVESTIGATORS

<i>Name</i>	<i>Institution</i>	<i>E-Mail</i>
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## VISITS

<i>Visit</i>	<i>Targets</i>	<i>Configurations</i>	<i>Orbits Used</i>	<i>Last Orbit Planner Run</i>	<i>OP Current with Visit?</i>
01	(1) GH01	ACS/WFC	1	18-Jan-2006 21:01:04.0	yes
02	(2) GH02	ACS/WFC	1	18-Jan-2006 21:01:10.0	yes
03	(3) GH03	ACS/WFC	1	18-Jan-2006 21:01:14.0	yes
04	(4) GH04	ACS/WFC	1	18-Jan-2006 21:01:17.0	yes
05	(5) GH05	ACS/WFC	1	18-Jan-2006 21:01:21.0	yes
06	(6) GH06	ACS/WFC	1	18-Jan-2006 21:01:24.0	yes
07	(7) GH07	ACS/WFC	1	18-Jan-2006 21:01:28.0	yes
08	(8) GH08	ACS/WFC	1	18-Jan-2006 21:01:31.0	yes
09	(9) GH09	ACS/WFC	1	18-Jan-2006 21:01:35.0	yes

## Proposal 10596 - Overview

<i>Visit</i>	<i>Targets</i>	<i>Configurations</i>	<i>Orbits Used</i>	<i>Last Orbit Planner Run</i>	<i>OP Current with Visit?</i>
10	(10) GH10	ACS/WFC	1	18-Jan-2006 21:01:38.0	yes
11	(11) GH11	ACS/WFC	1	18-Jan-2006 21:01:42.0	yes
12	(12) GH12	ACS/WFC	1	18-Jan-2006 21:01:45.0	yes
13	(13) GH13	ACS/WFC	1	18-Jan-2006 21:01:49.0	yes
14	(14) GH14	ACS/WFC	1	18-Jan-2006 21:01:53.0	yes
15	(15) GH15	ACS/WFC	1	18-Jan-2006 21:01:56.0	yes
16	(16) GH16	ACS/WFC	1	18-Jan-2006 21:02:00.0	yes
17	(17) GH17	ACS/WFC	1	18-Jan-2006 21:02:03.0	yes
18	(18) GH18	ACS/WFC	1	18-Jan-2006 21:02:07.0	yes
19	(19) GH19	ACS/WFC	1	18-Jan-2006 21:02:10.0	yes

19 Total Orbits Used

### **ABSTRACT**

The recent progress in the study of central black holes in galactic nuclei has led to a general consensus that supermassive ( $10^6$ - $10^9$  solar mass) black holes are closely connected with the formation and evolutionary history of large galaxies, especially their bulge component. Two outstanding issues, however, remain unresolved. Can central black holes form in the absence of a bulge? And does the mass function of central black holes extend below  $10^6$  solar masses? Intermediate-mass black holes ( $10^4$ - $10^6$  solar masses), if they exist, may offer important clues to the nature of the seeds of supermassive black holes. In a first systematic search using the Sloan Digital Sky Survey, we have recently discovered 19 Type 1 AGNs with candidate intermediate-mass black holes that reside in low-luminosity, presumably late-type host galaxies. Follow-up observations with Keck indicate that these objects obey the low-mass extension of the well-known correlation between black hole mass and bulge stellar velocity dispersion. However, very little is known about the host galaxies themselves, including the crucial question of whether they have bulges or not. We propose to obtain ACS/WFC images of this unique sample of AGNs in order to investigate the detailed structural properties of the host galaxies. We are particularly keen to determine whether the hosts contain bulges, and if so, where they lie on the fundamental plane of spheroids compared to the

bulges of supermassive black holes. We will also be able to measure an accurate optical luminosity for the AGN, which is an essential ingredient to improve the current mass estimates.

### **OBSERVING DESCRIPTION**

**Choice of Camera:** The ACS/WFC is preferred over PC2 because of its larger FOV and higher throughput. The larger FOV provides the necessary area for proper background subtraction, which is important for accurate modeling of the disk component. Moreover, the large FOV allows us to investigate the local environments of these sources. We choose the WFC over the HRC again because of the FOV, and because its pixel scale is more favorable for detection of low-surface brightness emission in short exposures.

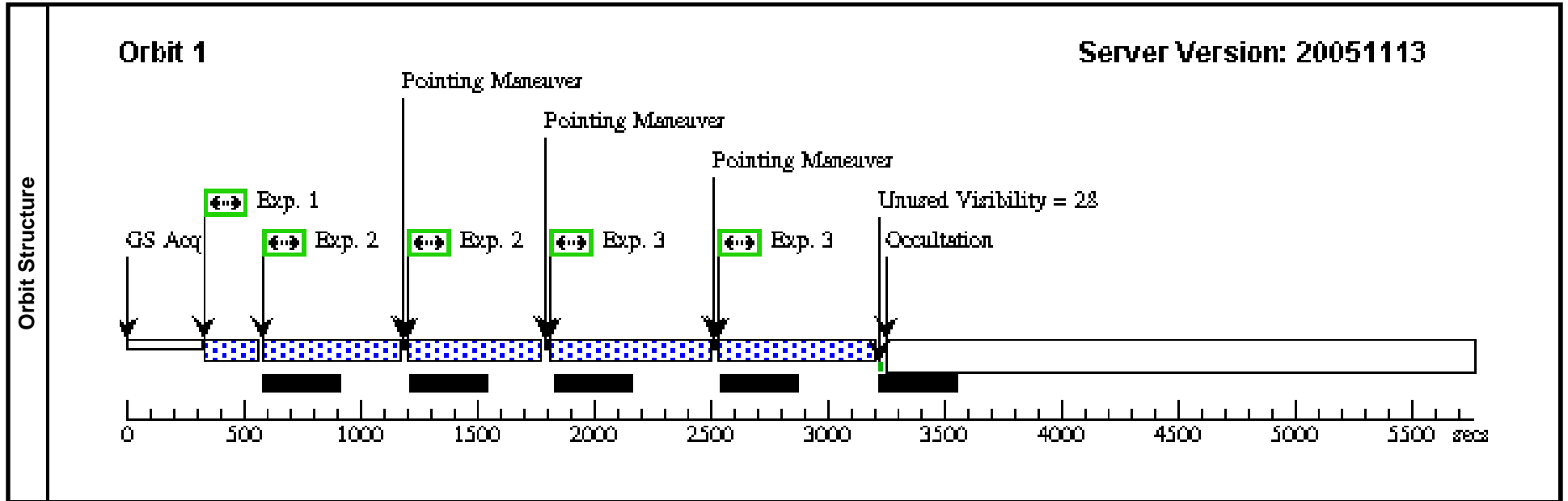
**Choice of Filters:** We will observe in two filters, since color information can be useful in understanding the stellar populations of the host galaxy. We choose the F814W (broad I) filter because it has a high throughput and because its red bandpass is well optimized to study the underlying host galaxy. The F435W (Johnson B) filter will highlight young stellar populations, and allow us to compare directly with previous photometry of AGN bulges performed in B.

**Observational Plan:** We request one orbit of ACS/WFC imaging for each galaxy. For a typical visibility of 55 sec, we will obtain a short (20 s) and two dithered 450 sec exposures in F814W, and two dithered 550 sec exposures in F435W, once overheads for guide-star acquisition (366 s) and readout (240 s) are taken into account. Since saturation in F814W occurs in  $\sim 400$  sec, we require a short exposure to obtain an unsaturated image of the AGN core. We will use the standard ACS dither pattern for optimal rejection of cosmic rays and hot pixels. According to the online ACS ETC, we will reach a surface brightness in I of  $\sim 23$  mag arcsec<sup>-2</sup> with  $S/N = 3$  over a  $2 \times 2$  pixel aperture, assuming an elliptical galaxy spectrum. The 435W image will be noisier ( $S/N \sim 1$ ), but, on the other hand, star-forming regions and spiral arms would show enhanced surface brightness. By applying two-dimensional model fitting techniques or azimuthal averaging, we expect to be able to trace the galaxy surface brightness profile to  $\mu_I \sim 25$  mag arcsec<sup>-2</sup>, which is deep enough to probe the outer regions of disks. Thus, the estimated sensitivity is sufficient to accomplish all of our main science goals.

Proposal 10596 - Visit 01 - AGNs with Intermediate-mass Black Holes: A Test of the Black Hole-Bulge Paradigm

Thu Jan 19 02:02:12 GMT 2006

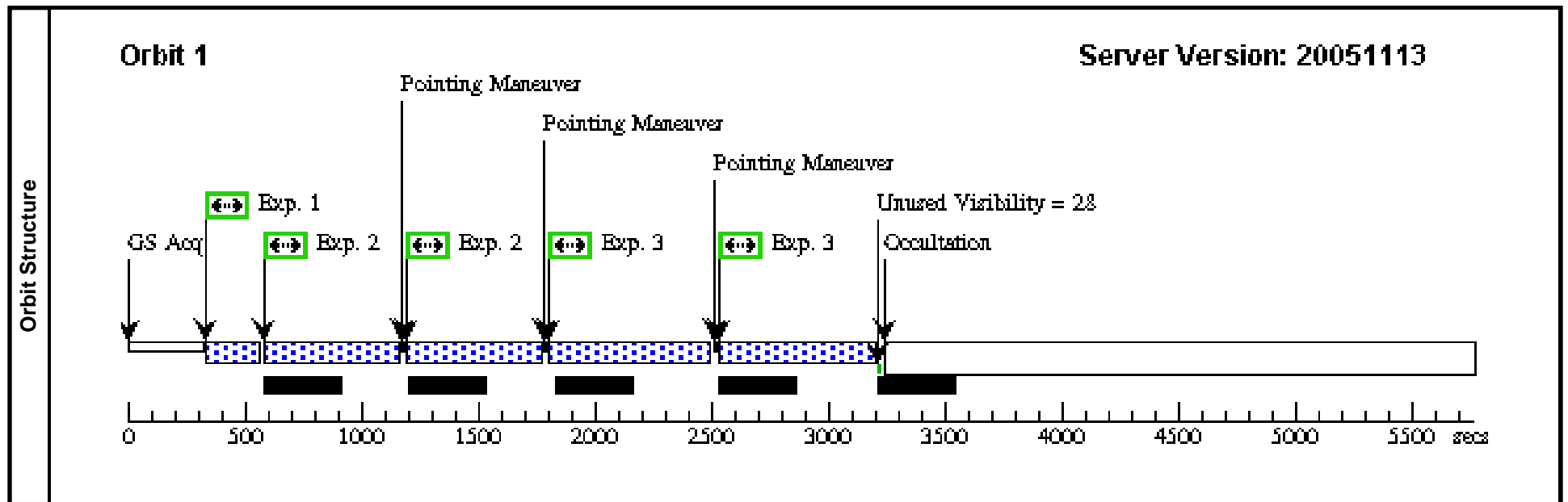
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Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(1)	GH01	RA: 01 07 12.0300 (16.8001250d) Dec: +14 08 44.90 (14.14581d) Equinox: J2000 Plate Id: (?)	Redshift: 0.0768	V=(?) i=18.2, g=18.49	Coordinate Source: Sloan Digital Sky Survey				
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	1		(1) GH01	ACS/WFC, ACCUM, WFC	F814W	CR-SPLIT=NO			30.0 Secs	
									[==>20.0 Secs ]	[1]
	2		(1) GH01	ACS/WFC, ACCUM, WFC	F814W	CR-SPLIT=NO		Pattern 2-2 (1)	450.0 Secs	
								[==>467.0 Secs (Pattern 1)]	[1]	
								[==>(Pattern 2)]		
3		(1) GH01	ACS/WFC, ACCUM, WFC	F435W	CR-SPLIT=NO			Pattern 3-3 (1)	550.0 Secs	
								[==>(Pattern 1)]		
								[==>(Pattern 2)]	[1]	



Proposal 10596 - Visit 02 - AGNs with Intermediate-mass Black Holes: A Test of the Black Hole-Bulge Paradigm

Thu Jan 19 02:02:13 GMT 2006

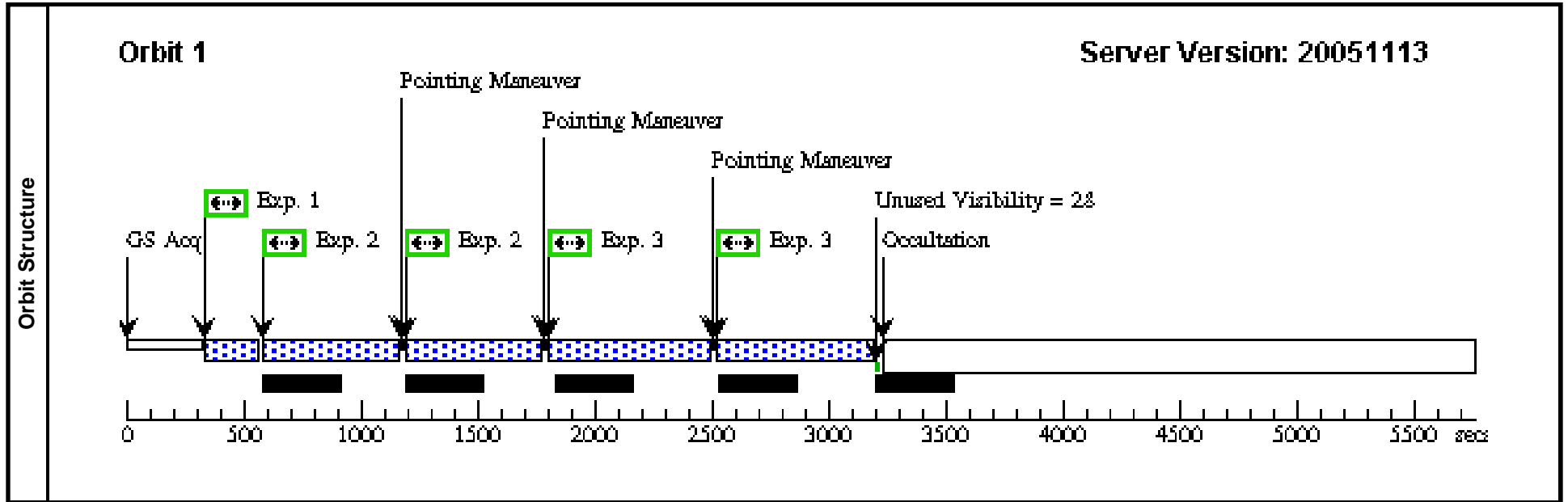
Visit	<b>Proposal 10596, Visit 02</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: ACS/WFC Special Requirements: (none)									
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Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(2)	GH02	RA: 02 49 12.8600 (42.3035833d) Dec: -08 15 25.60 (-8.25711d) Equinox: J2000 Plate Id: (?)	Redshift: 0.0295	V=(?) i=17.9, g=16.55	Coordinate Source: SDSS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(2) GH02	ACS/WFC, ACCUM, WFC	F814W	CR-SPLIT=NO			20.0 Secs	
									[==>]	[1]
	2		(2) GH02	ACS/WFC, ACCUM, WFC	F814W	CR-SPLIT=NO		Pattern 2-2 (1)	450.0 Secs	
								[==>458.0 Secs (Pattern 1)]	[1]	
								[==>458.0 Secs (Pattern 2)]		
3		(2) GH02	ACS/WFC, ACCUM, WFC	F435W	CR-SPLIT=NO			Pattern 3-3 (1)	550.0 Secs	
									[==>546.0 Secs (Pattern 1)]	[1]
									[==>546.0 Secs (Pattern 2)]	



Proposal 10596 - Visit 03 - AGNs with Intermediate-mass Black Holes: A Test of the Black Hole-Bulge Paradigm

Thu Jan 19 02:02:13 GMT 2006

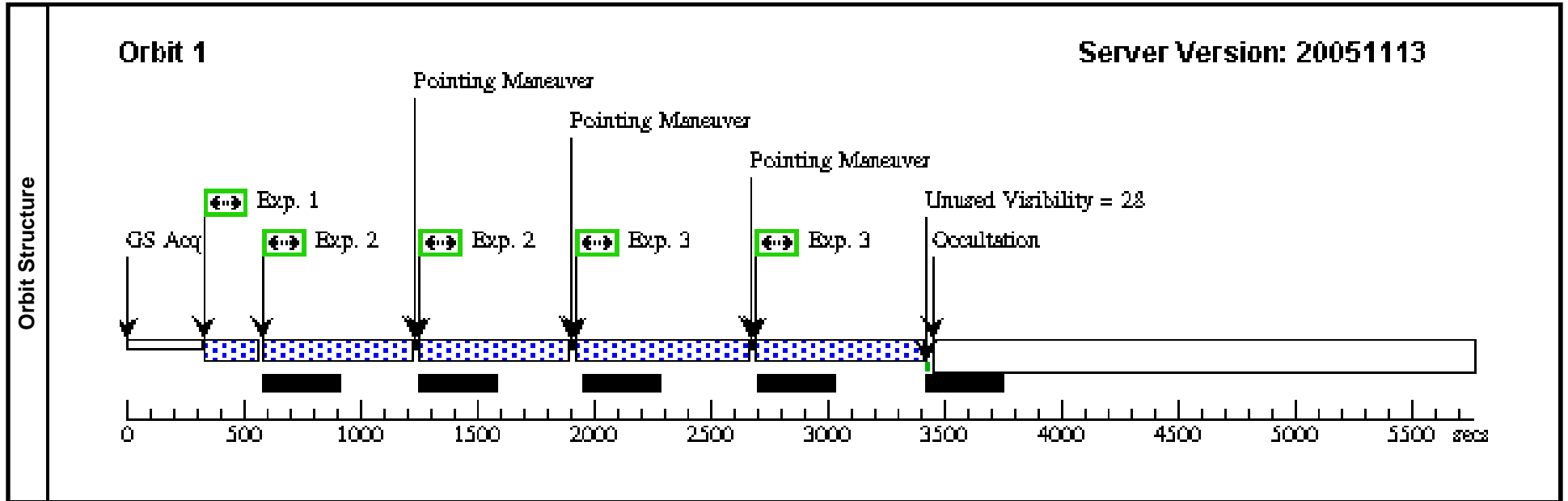
Visit	<b>Proposal 10596, Visit 03</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: ACS/WFC Special Requirements: (none)									
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Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(3)	GH03	RA: 03 25 15.5900 (51.3149583d) Dec: +00 34 8.40 (.56900d) Equinox: J2000 Plate Id: (?)	Redshift: 0.102	V=(?) i=18.9, g=19.51	Coordinate Source: SDSS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(3) GH03	ACS/WFC, ACCUM, WFC1	F814W	CR-SPLIT=NO			30.0 Secs	
									[==>20.0 Secs ]	[1]
	2		(3) GH03	ACS/WFC, ACCUM, WFC1	F814W	CR-SPLIT=NO		Pattern 2-2 (1)	450.0 Secs	
								[==>456.0 Secs (Pattern 1)]		
								[==>456.0 Secs (Pattern 2)]	[1]	
3		(3) GH03	ACS/WFC, ACCUM, WFC1	F435W	CR-SPLIT=NO			Pattern 3-3 (1)	550.0 Secs	
									[==>545.0 Secs (Pattern 1)]	
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Proposal 10596 - Visit 04 - AGNs with Intermediate-mass Black Holes: A Test of the Black Hole-Bulge Paradigm

Thu Jan 19 02:02:13 GMT 2006

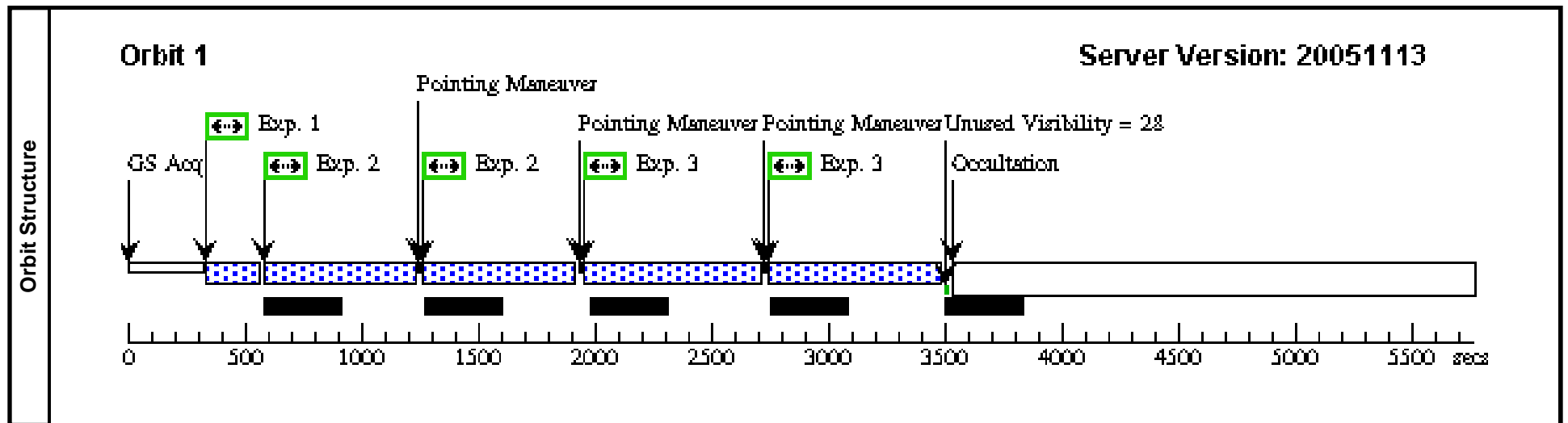
Visit	<b>Proposal 10596, Visit 04</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: ACS/WFC Special Requirements: (none)									
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Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(4)	GH04	RA: 08 29 12.6700 (127.3027917d) Dec: +50 06 52.30 (50.11453d) Equinox: J2000 Plate Id: (?)	Redshift: 0.0434	V=(?) i=17.4, g=17.68	Coordinate Source: SDSS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(4) GH04	ACS/WFC, ACCUM, WFC	F814W	CR-SPLIT=NO			20.0 Secs	
									[==>]	[1]
	2		(4) GH04	ACS/WFC, ACCUM, WFC	F814W	CR-SPLIT=NO		Pattern 2-2 (1)	450.0 Secs	
								[==>515.0 Secs (Pattern 1)]	[1]	
								[==>516.0 Secs (Pattern 2)]		
3		(4) GH04	ACS/WFC, ACCUM, WFC	F435W	CR-SPLIT=NO			Pattern 3-3 (1)	550.0 Secs	
								[==>594.0 Secs (Pattern 1)]		
								[==>594.0 Secs (Pattern 2)]	[1]	



Proposal 10596 - Visit 05 - AGNs with Intermediate-mass Black Holes: A Test of the Black Hole-Bulge Paradigm

Thu Jan 19 02:02:14 GMT 2006

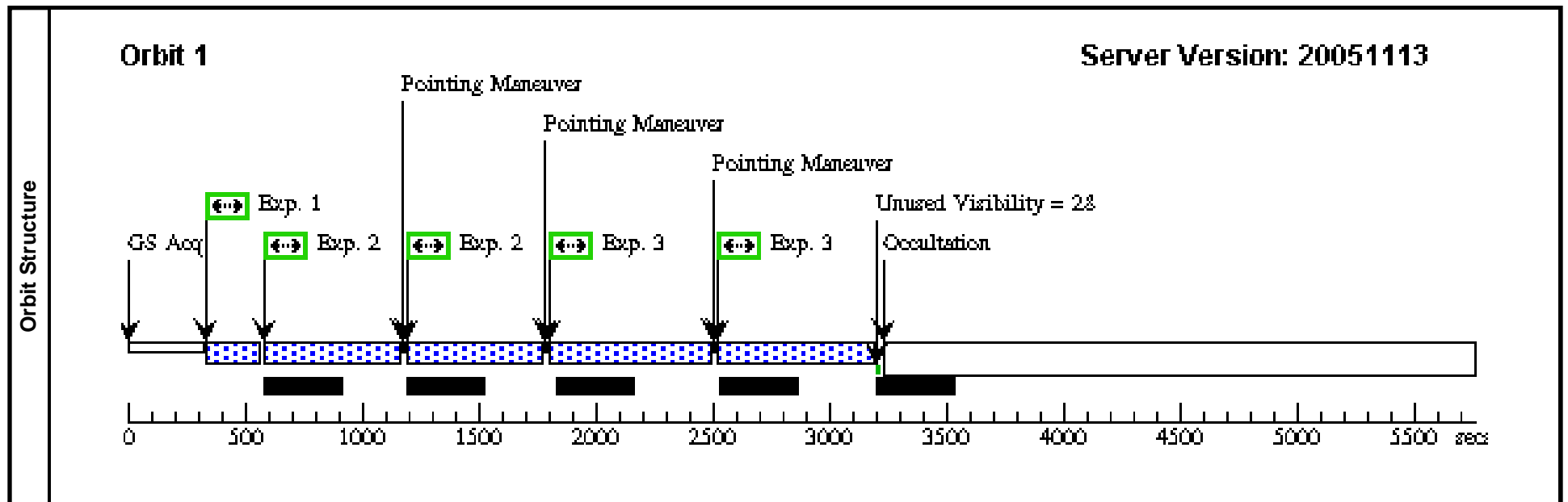
Visit	<b>Proposal 10596, Visit 05</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: ACS/WFC Special Requirements: (none)									
	Patterns	#	Primary Pattern			Secondary Pattern			Exposures	
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Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(5)	GH05	RA: 09 43 10.1200 (145.7921667d) Dec: +60 45 59.10 (60.76642d) Equinox: J2000 Plate Id: (?)	Redshift: 0.0742	V=(?) i=18.2, g=18.32	Coordinate Source: SDSS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(5) GH05	ACS/WFC, ACCUM, WFC	F814W	CR-SPLIT=NO			20.0 Secs	
									[==>]	[1]
	2		(5) GH05	ACS/WFC, ACCUM, WFC	F814W	CR-SPLIT=NO		Pattern 2-2 (1)	450.0 Secs	
								[==>531.0 Secs (Pattern 1)]	[1]	
								[==>530.0 Secs (Pattern 2)]		
3		(5) GH05	ACS/WFC, ACCUM, WFC	F435W	CR-SPLIT=NO		Pattern 3-3 (1)	550.0 Secs		
								[==>618.0 Secs (Pattern 1)]	[1]	
								[==>618.0 Secs (Pattern 2)]		



Proposal 10596 - Visit 06 - AGNs with Intermediate-mass Black Holes: A Test of the Black Hole-Bulge Paradigm

Thu Jan 19 02:02:14 GMT 2006

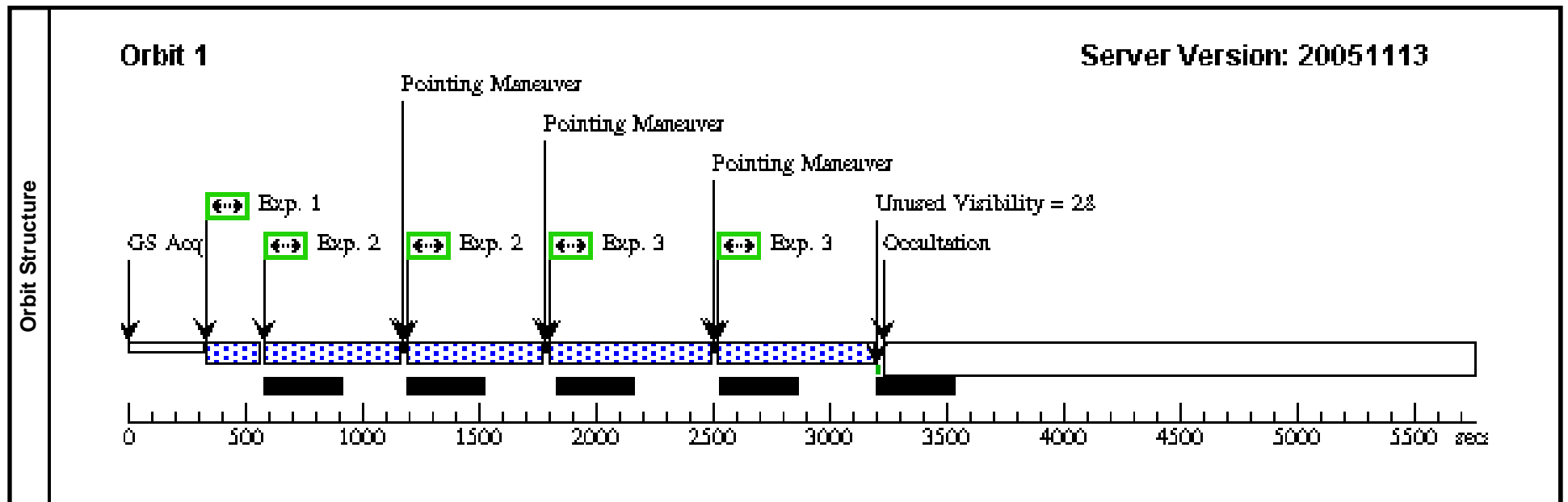
Visit	Proposal 10596, Visit 06 Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: (none)									
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Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(6)	GH06	RA: 10 11 8.4000 (152.7850000d) Dec: +00 29 8.70 (.48575d) Equinox: J2000 Plate Id: (?)	Redshift: 0.1	V=(?) i=18.9, g=19.39	Coordinate Source: SDSS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(6) GH06	ACS/WFC, ACCUM, WFC	F814W	CR-SPLIT=NO			20.0 Secs	
									[==>]	[1]
	2		(6) GH06	ACS/WFC, ACCUM, WFC	F814W	CR-SPLIT=NO		Pattern 2-2 (1)	450.0 Secs	
								[==>456.0 Secs (Pattern 1)]	[1]	
								[==>456.0 Secs (Pattern 2)]		
3		(6) GH06	ACS/WFC, ACCUM, WFC	F435W	CR-SPLIT=NO		Pattern 3-3 (1)	550.0 Secs		
								[==>545.0 Secs (Pattern 1)]	[1]	
								[==>545.0 Secs (Pattern 2)]		



Proposal 10596 - Visit 07 - AGNs with Intermediate-mass Black Holes: A Test of the Black Hole-Bulge Paradigm

Thu Jan 19 02:02:15 GMT 2006

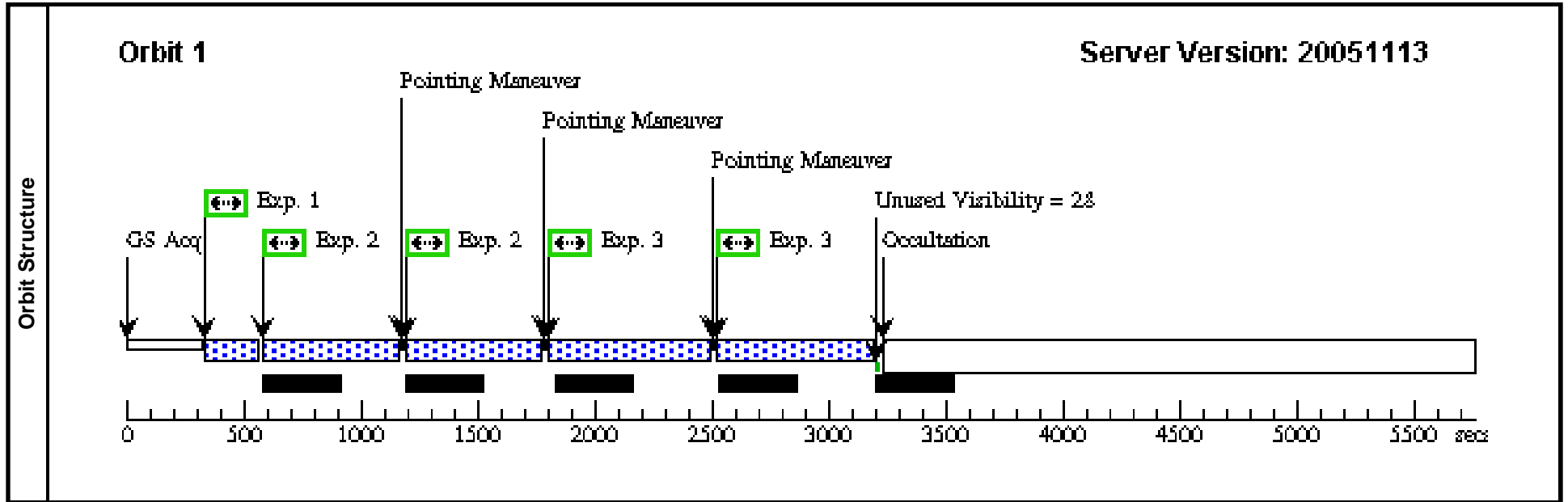
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Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(7)	GH07	RA: 10 16 27.3200 (154.1138333d) Dec: -00 07 14.50 (-.12069d) Equinox: J2000 Plate Id: (?)	Redshift: 0.0943	V=(?) i=18.9, g=19.31	Coordinate Source: SDSS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(7) GH07	ACS/WFC, ACCUM, WFC	F814W	CR-SPLIT=NO			20.0 Secs	
									[==>]	[1]
	2		(7) GH07	ACS/WFC, ACCUM, WFC	F814W	CR-SPLIT=NO		Pattern 2-2 (1)	450.0 Secs	
								[==>456.0 Secs (Pattern 1)]	[1]	
								[==>456.0 Secs (Pattern 2)]		
3		(7) GH07	ACS/WFC, ACCUM, WFC	F435W	CR-SPLIT=NO		Pattern 3-3 (1)	550.0 Secs		
								[==>545.0 Secs (Pattern 1)]	[1]	
								[==>545.0 Secs (Pattern 2)]		



Proposal 10596 - Visit 08 - AGNs with Intermediate-mass Black Holes: A Test of the Black Hole-Bulge Paradigm

Thu Jan 19 02:02:16 GMT 2006

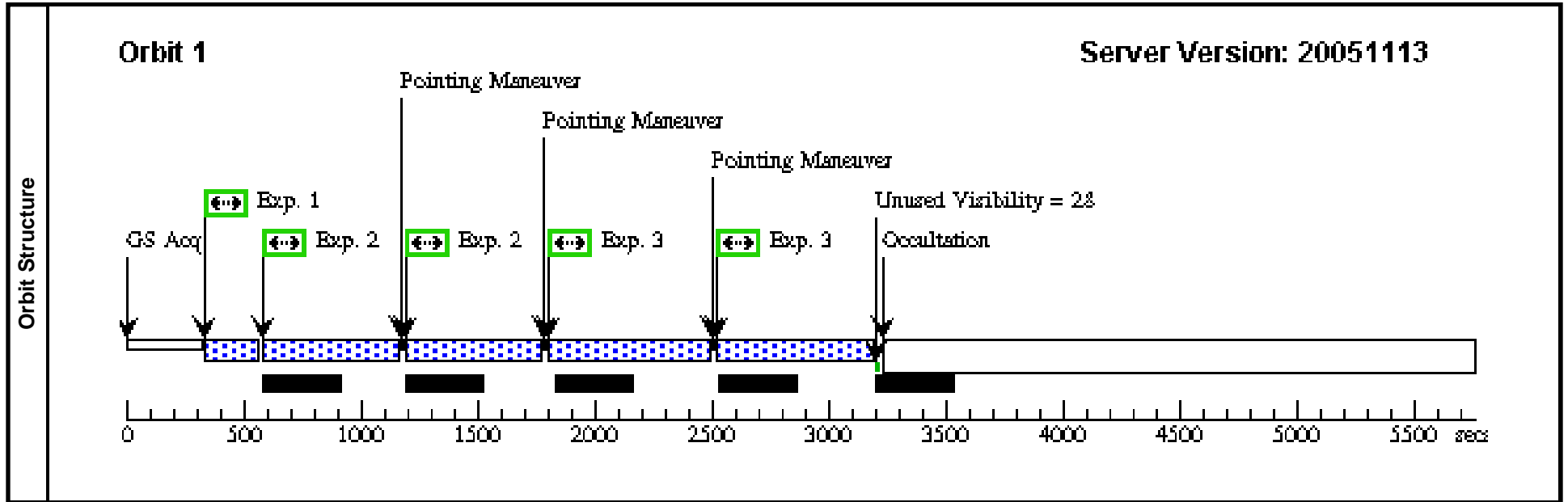
Visit	Proposal 10596, Visit 08 Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: (none)									
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Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(8)	GH08	RA: 11 40 8.7100 (175.0362917d) Dec: +03 07 11.40 (3.11983d) Equinox: J2000 Plate Id: (?)	Redshift: 0.0811	V=(?) i=17.9, g=17.32	Coordinate Source: SDSS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(8) GH08	ACS/WFC, ACCUM, WFC	F814W	CR-SPLIT=NO			20.0 Secs	
									[==>]	[1]
	2		(8) GH08	ACS/WFC, ACCUM, WFC	F814W	CR-SPLIT=NO		Pattern 2-2 (1)	450.0 Secs	
								[==>456.0 Secs (Pattern 1)]	[1]	
								[==>456.0 Secs (Pattern 2)]		
3		(8) GH08	ACS/WFC, ACCUM, WFC	F435W	CR-SPLIT=NO		Pattern 3-3 (1)	550.0 Secs		
								[==>545.0 Secs (Pattern 1)]	[1]	
								[==>545.0 Secs (Pattern 2)]		



Proposal 10596 - Visit 09 - AGNs with Intermediate-mass Black Holes: A Test of the Black Hole-Bulge Paradigm

Thu Jan 19 02:02:16 GMT 2006

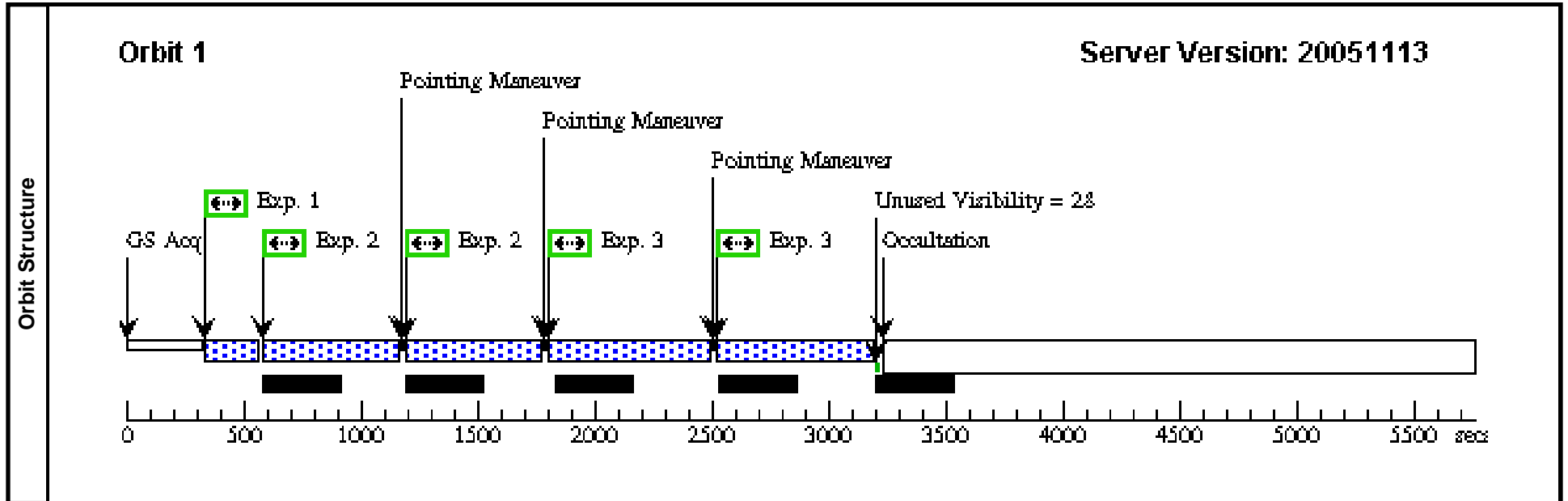
Visit	<b>Proposal 10596, Visit 09</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: ACS/WFC Special Requirements: (none)									
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Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(9)	GH09	RA: 11 51 38.2400 (177.9093333d) Dec: +00 49 46.40 (.82956d) Equinox: J2000 Plate Id: (?)	Redshift: 0.194	V=(?) i=18.3, g=19.02	Coordinate Source: SDSS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(9) GH09	ACS/WFC, ACCUM, WFC	F814W	CR-SPLIT=NO			20.0 Secs	
									[==>]	[1]
	2		(9) GH09	ACS/WFC, ACCUM, WFC	F814W	CR-SPLIT=NO		Pattern 2-2 (1)	450.0 Secs	
								[==>456.0 Secs (Pattern 1)]	[1]	
								[==>456.0 Secs (Pattern 2)]		
3		(9) GH09	ACS/WFC, ACCUM, WFC	F435W	CR-SPLIT=NO			Pattern 3-3 (1)	450.0 Secs	
									[==>545.0 Secs (Pattern 1)]	[1]
									[==>545.0 Secs (Pattern 2)]	



Proposal 10596 - Visit 10 - AGNs with Intermediate-mass Black Holes: A Test of the Black Hole-Bulge Paradigm

Thu Jan 19 02:02:16 GMT 2006

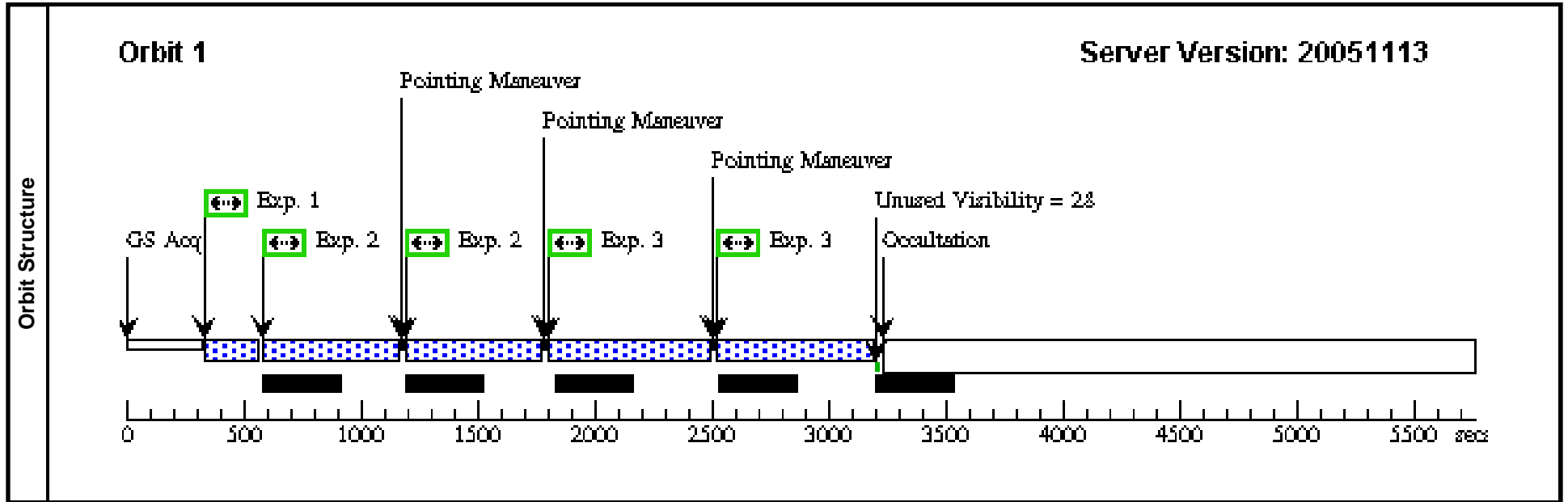
Visit	<b>Proposal 10596, Visit 10</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: ACS/WFC Special Requirements: (none)									
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		(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.146 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=47.2 Angle Between Sides= Center Pattern=false					(2), (3)	
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections		Fluxes	Miscellaneous			
	(10)	GH10	RA: 12 40 35.8100 (190.1492083d) Dec: -00 29 19.40 (-.48872d) Equinox: J2000 Plate Id: (?)	Redshift: 0.0809		V=(?) i=17.3, g=18.00	Coordinate Source: SDSS			
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(10) GH10	ACS/WFC, ACCUM, WFC	F814W	CR-SPLIT=NO			20.0 Secs	
									[==>]	[1]
	2		(10) GH10	ACS/WFC, ACCUM, WFC	F814W	CR-SPLIT=NO		Pattern 2-2 (1)	450.0 Secs	
								[==>456.0 Secs (Pattern 1)]	[1]	
								[==>456.0 Secs (Pattern 2)]		
3		(10) GH10	ACS/WFC, ACCUM, WFC	F435W	CR-SPLIT=NO			Pattern 3-3 (1)	550.0 Secs	
								[==>545.0 Secs (Pattern 1)]	[1]	
								[==>545.0 Secs (Pattern 2)]		



Proposal 10596 - Visit 11 - AGNs with Intermediate-mass Black Holes: A Test of the Black Hole-Bulge Paradigm

Thu Jan 19 02:02:17 GMT 2006

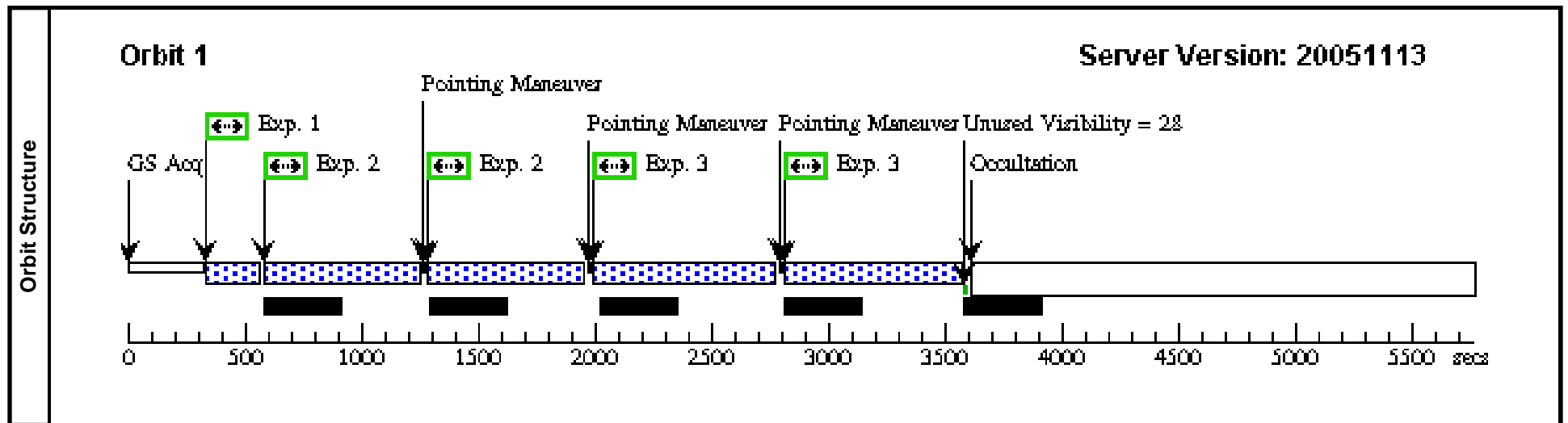
Visit	<b>Proposal 10596, Visit 11</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: ACS/WFC Special Requirements: (none)									
	Patterns	#	Primary Pattern			Secondary Pattern			Exposures	
		(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.146 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=47.2 Angle Between Sides= Center Pattern=false					(2), (3)	
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous	
	(11)	GH11	RA: 12 50 55.2800 (192.7303333d) Dec: -01 55 56.60 (-1.93239d) Equinox: J2000 Plate Id: (?)		Redshift: 0.0814		V=(?) i=17.7, g=18.23	Coordinate Source: SDSS		
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(11) GH11	ACS/WFC, ACCUM, WFC	F814W	CR-SPLIT=NO			20.0 Secs	
									[==>]	[1]
	2		(11) GH11	ACS/WFC, ACCUM, WFC	F814W	CR-SPLIT=NO		Pattern 2-2 (1)	450.0 Secs	
								[==>456.0 Secs (Pattern 1)]	[1]	
								[==>456.0 Secs (Pattern 2)]		
3		(11) GH11	ACS/WFC, ACCUM, WFC	F435W	CR-SPLIT=NO		Pattern 3-3 (1)	550.0 Secs		
								[==>545.0 Secs (Pattern 1)]	[1]	
								[==>545.0 Secs (Pattern 2)]		



Proposal 10596 - Visit 12 - AGNs with Intermediate-mass Black Holes: A Test of the Black Hole-Bulge Paradigm

Thu Jan 19 02:02:17 GMT 2006

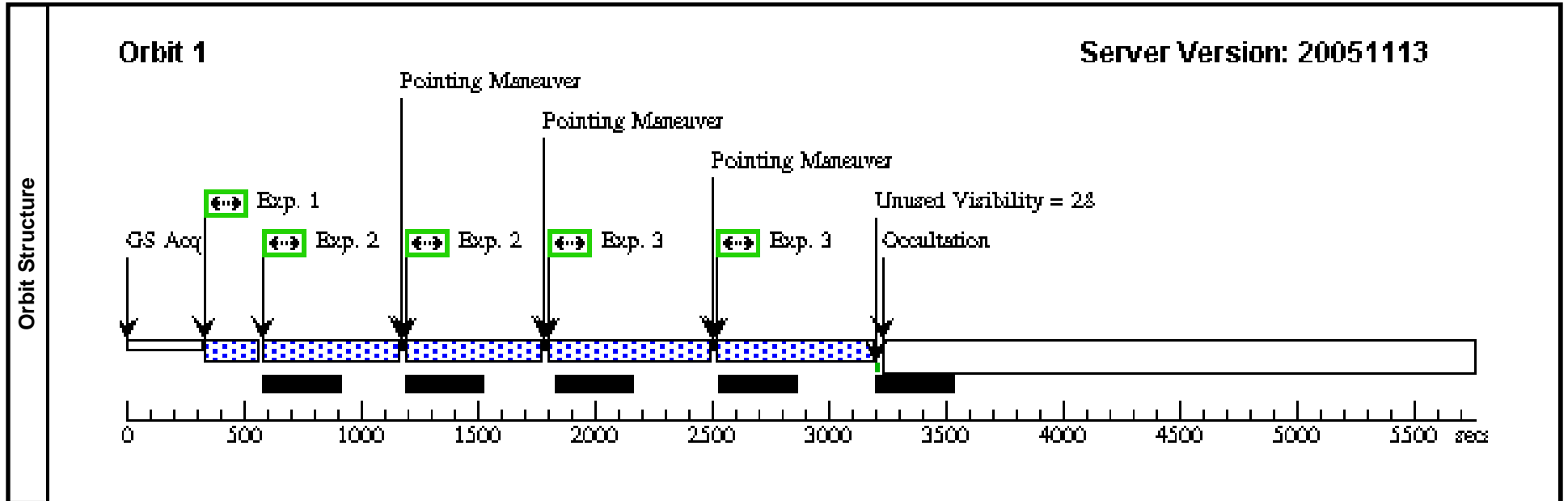
Visit	<b>Proposal 10596, Visit 12</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: ACS/WFC Special Requirements: (none)									
	Patterns	#	Primary Pattern			Secondary Pattern			Exposures	
		(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.146 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=47.2 Angle Between Sides= Center Pattern=false					(2), (3)	
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(12)	GH12	RA: 13 57 24.5200 (209.3521667d) Dec: +65 25 5.80 (65.41828d) Equinox: J2000 Plate Id: (?)	Redshift: 0.106	V=(?) i=18.1, 18.45	Coordinate Source: SDSS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(12) GH12	ACS/WFC, ACCUM, WFC	F814W	CR-SPLIT=NO			20.0 Secs	
									[==>]	[1]
	2		(12) GH12	ACS/WFC, ACCUM, WFC	F814W	CR-SPLIT=NO		Pattern 2-2 (1)	450.0 Secs	
								[==>551.0 Secs (Pattern 1)]	[1]	
								[==>551.0 Secs (Pattern 2)]		
3		(12) GH12	ACS/WFC, ACCUM, WFC	F435W	CR-SPLIT=NO		Pattern 3-3 (1)	550.0 Secs		
								[==>639.0 Secs (Pattern 1)]	[1]	
								[==>639.0 Secs (Pattern 2)]		



Proposal 10596 - Visit 13 - AGNs with Intermediate-mass Black Holes: A Test of the Black Hole-Bulge Paradigm

Thu Jan 19 02:02:17 GMT 2006

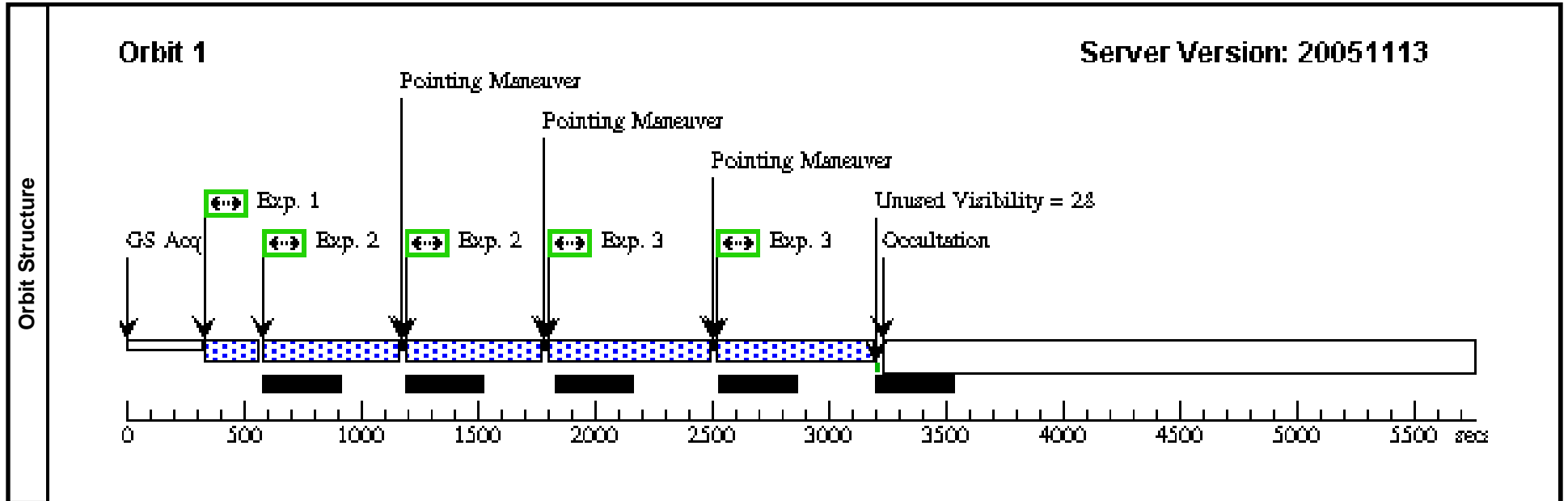
Visit	<b>Proposal 10596, Visit 13</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: ACS/WFC Special Requirements: (none)									
	Patterns	#	Primary Pattern			Secondary Pattern			Exposures	
		(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.146 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=47.2 Angle Between Sides= Center Pattern=false					(2), (3)	
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(13)	GH13	RA: 14 12 34.6700 (213.1444583d) Dec: -00 35 0.00 (-.58333d) Equinox: J2000 Plate Id: (?)	Redshift: 0.126	V=(?) i=18.5, g=18.19	Coordinate Source: SDSS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(13) GH13	ACS/WFC, ACCUM, WFC	F814W	CR-SPLIT=NO			20.0 Secs	
									[==>]	[1]
	2		(13) GH13	ACS/WFC, ACCUM, WFC	F814W	CR-SPLIT=NO		Pattern 2-2 (1)	450.0 Secs	
								[==>456.0 Secs (Pattern 1)]	[1]	
								[==>456.0 Secs (Pattern 2)]		
3		(13) GH13	ACS/WFC, ACCUM, WFC	F435W	CR-SPLIT=NO		Pattern 3-3 (1)	550.0 Secs		
								[==>545.0 Secs (Pattern 1)]	[1]	
								[==>545.0 Secs (Pattern 2)]		



Proposal 10596 - Visit 14 - AGNs with Intermediate-mass Black Holes: A Test of the Black Hole-Bulge Paradigm

Thu Jan 19 02:02:17 GMT 2006

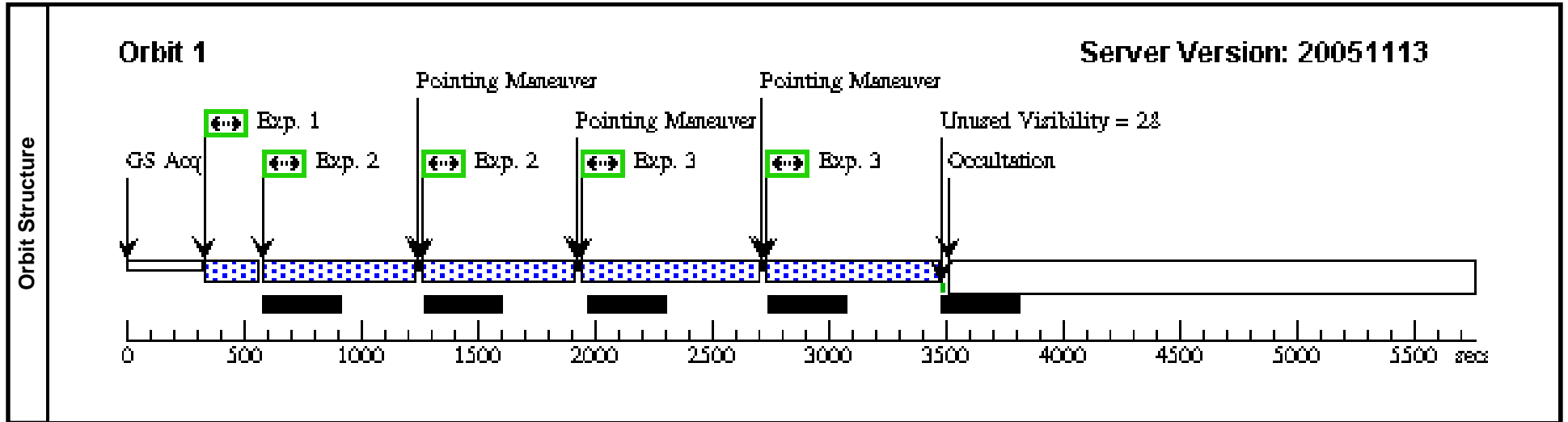
Visit	<b>Proposal 10596, Visit 14</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: ACS/WFC Special Requirements: (none)									
	Patterns	#	Primary Pattern			Secondary Pattern			Exposures	
		(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.146 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=47.2 Angle Between Sides= Center Pattern=false					(2), (3)	
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(14)	GH14	RA: 14 34 50.6200 (218.7109167d) Dec: +03 38 42.50 (3.64514d) Equinox: J2000 Plate Id: (?)	Redshift: 0.0281	V=(?) i=17.6, g=15.60	Coordinate Source: SDSS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(14) GH14	ACS/WFC, ACCUM, WFC1	F814W	CR-SPLIT=NO			20.0 Secs	
									[==>]	[1]
	2		(14) GH14	ACS/WFC, ACCUM, WFC1	F814W	CR-SPLIT=NO		Pattern 2-2 (1)	450.0 Secs	
								[==>456.0 Secs (Pattern 1)]		
								[==>456.0 Secs (Pattern 2)]	[1]	
3		(14) GH14	ACS/WFC, ACCUM, WFC1	F435W	CR-SPLIT=NO		Pattern 3-3 (1)	550.0 Secs		
								[==>545.0 Secs (Pattern 1)]		
								[==>545.0 Secs (Pattern 2)]	[1]	



Proposal 10596 - Visit 15 - AGNs with Intermediate-mass Black Holes: A Test of the Black Hole-Bulge Paradigm

Thu Jan 19 02:02:18 GMT 2006

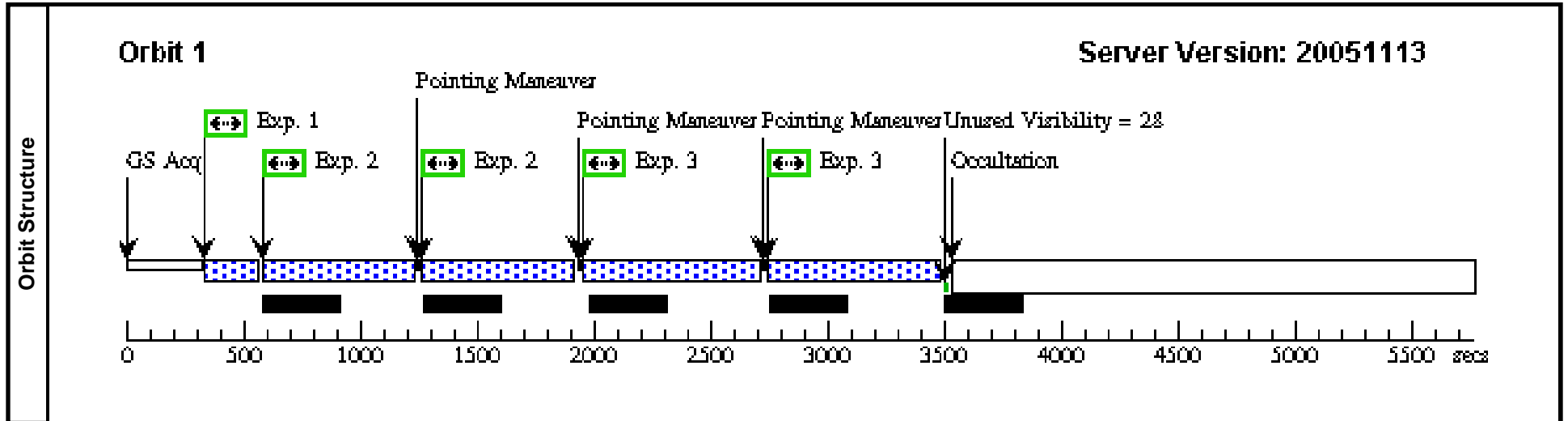
Visit	<b>Proposal 10596, Visit 15</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: ACS/WFC Special Requirements: (none)									
	Patterns	#	Primary Pattern			Secondary Pattern			Exposures	
		(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.146 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=47.2 Angle Between Sides= Center Pattern=false					(2), (3)	
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(15)	GH15	RA: 14 45 7.3000 (221.2804167d) Dec: +59 36 49.90 (59.61386d) Equinox: J2000 Plate Id: (?)	Redshift: 0.127	V=(?) i=19.1, g=19.98	Coordinate Source: SDSS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(15) GH15	ACS/WFC, ACCUM, WFC	F814W	CR-SPLIT=NO			20.0 Secs	
									[==>]	[1]
	2		(15) GH15	ACS/WFC, ACCUM, WFC	F814W	CR-SPLIT=NO		Pattern 2-2 (1)	450.0 Secs	
								[==>527.0 Secs (Pattern 1)]	[1]	
								[==>526.0 Secs (Pattern 2)]		
3		(15) GH15	ACS/WFC, ACCUM, WFC	F435W	CR-SPLIT=NO		Pattern 3-3 (1)	550.0 Secs		
								[==>615.0 Secs (Pattern 1)]	[1]	
								[==>615.0 Secs (Pattern 2)]		



Proposal 10596 - Visit 16 - AGNs with Intermediate-mass Black Holes: A Test of the Black Hole-Bulge Paradigm

Thu Jan 19 02:02:18 GMT 2006

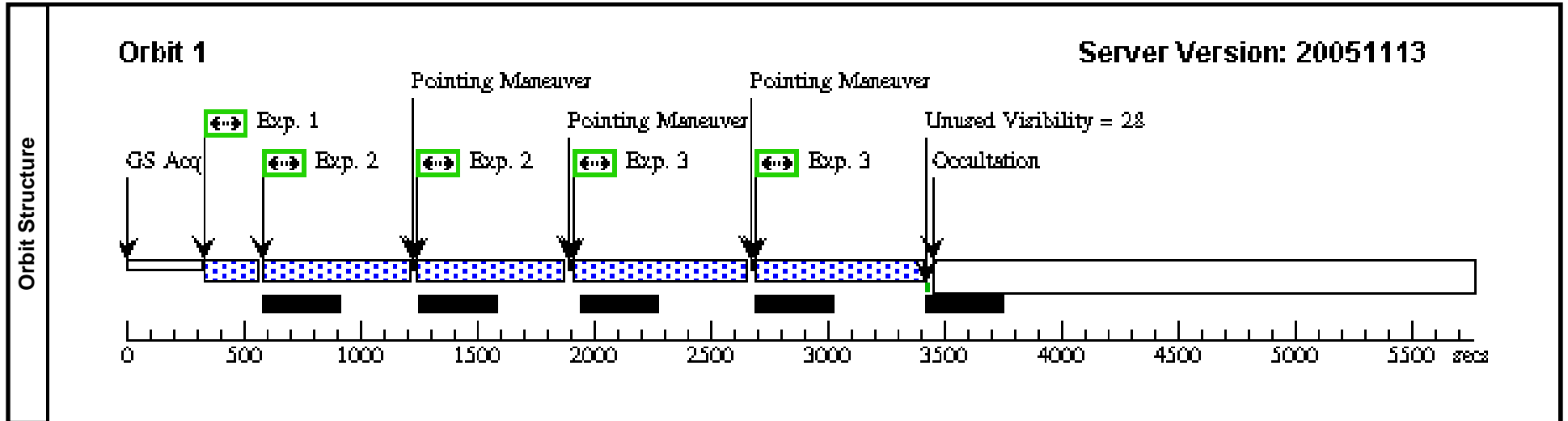
Visit	<b>Proposal 10596, Visit 16</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: ACS/WFC Special Requirements: (none)									
	Patterns	#	Primary Pattern			Secondary Pattern			Exposures	
		(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.146 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=47.2 Angle Between Sides= Center Pattern=false					(2), (3)	
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(16)	GH16	RA: 17 02 46.0900 (255.6920417d) Dec: +60 28 18.90 (60.47192d) Equinox: J2000 Plate Id: (?)	Redshift: 0.069	V=(?) i=17.7, g=18.22	Coordinate Source: SDSS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(16) GH16	ACS/WFC, ACCUM, WFC	F814W	CR-SPLIT=NO			20.0 Secs	
									[==>]	[1]
	2		(16) GH16	ACS/WFC, ACCUM, WFC	F814W	CR-SPLIT=NO		Pattern 2-2 (1)	450.0 Secs	
								[==>531.0 Secs (Pattern 1)]	[1]	
								[==>530.0 Secs (Pattern 2)]		
3		(16) GH16	ACS/WFC, ACCUM, WFC	F435W	CR-SPLIT=NO		Pattern 3-3 (1)	550.0 Secs		
								[==>618.0 Secs (Pattern 1)]	[1]	
								[==>618.0 Secs (Pattern 2)]		



Proposal 10596 - Visit 17 - AGNs with Intermediate-mass Black Holes: A Test of the Black Hole-Bulge Paradigm

Thu Jan 19 02:02:18 GMT 2006

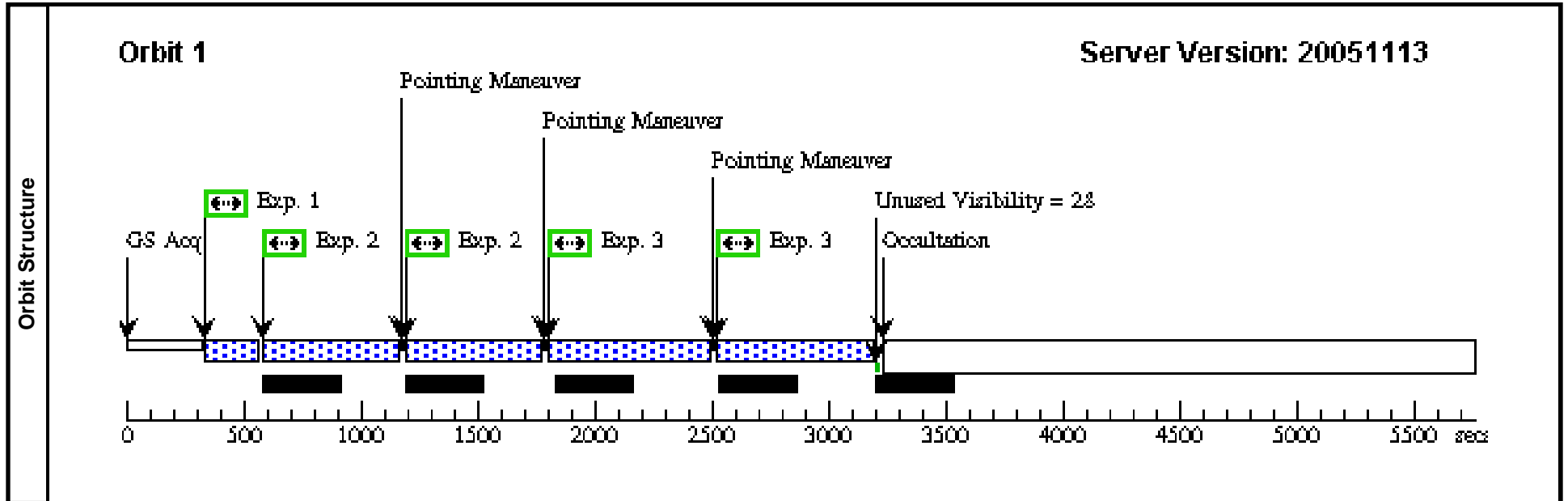
Visit	<b>Proposal 10596, Visit 17</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: ACS/WFC Special Requirements: (none)									
	Patterns	#	Primary Pattern			Secondary Pattern			Exposures	
		(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.146 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=47.2 Angle Between Sides= Center Pattern=false					(2), (3)	
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous	
	(17)	GH17	RA: 17 27 59.1500 (261.9964583d) Dec: +54 21 47.00 (54.36306d) Equinox: J2000 Plate Id: (?)		Redshift: 0.0994		V=(?) i=18.6, g=19.27	Coordinate Source: SDSS		
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(17) GH17	ACS/WFC, ACCUM, WFC	F814W	CR-SPLIT=NO			20.0 Secs	
									[==>]	[1]
	2		(17) GH17	ACS/WFC, ACCUM, WFC	F814W	CR-SPLIT=NO		Pattern 2-2 (1)	450.0 Secs	
								[==>511.0 Secs (Pattern 1)]	[1]	
								[==>510.0 Secs (Pattern 2)]		
3		(17) GH17	ACS/WFC, ACCUM, WFC	F435W	CR-SPLIT=NO		Pattern 3-3 (1)	550.0 Secs		
								[==>599.0 Secs (Pattern 1)]	[1]	
								[==>599.0 Secs (Pattern 2)]		



Proposal 10596 - Visit 18 - AGNs with Intermediate-mass Black Holes: A Test of the Black Hole-Bulge Paradigm

Thu Jan 19 02:02:18 GMT 2006

Visit	<b>Proposal 10596, Visit 18</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: ACS/WFC Special Requirements: (none)									
	Patterns	#	Primary Pattern			Secondary Pattern			Exposures	
		(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.146 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=47.2 Angle Between Sides= Center Pattern=false					(2), (3)	
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(18)	GH18	RA: 23 21 59.0600 (350.4960833d) Dec: +00 07 38.80 (.12744d) Equinox: J2000 Plate Id: (?)	Redshift: 0.183	V=(?) i=19.3, g=19.39	Coordinate Source: SDSS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(18) GH18	ACS/WFC, ACCUM, WFC1	F814W	CR-SPLIT=NO			20.0 Secs	
									[==>]	[1]
	2		(18) GH18	ACS/WFC, ACCUM, WFC1	F814W	CR-SPLIT=NO		Pattern 2-2 (1)	450.0 Secs	
								[==>456.0 Secs (Pattern 1)]		
								[==>456.0 Secs (Pattern 2)]	[1]	
3		(18) GH18	ACS/WFC, ACCUM, WFC1	F435W	CR-SPLIT=NO		Pattern 3-3 (1)	550.0 Secs		
								[==>545.0 Secs (Pattern 1)]		
								[==>545.0 Secs (Pattern 2)]	[1]	



Proposal 10596 - Visit 19 - AGNs with Intermediate-mass Black Holes: A Test of the Black Hole-Bulge Paradigm

Thu Jan 19 02:02:19 GMT 2006

Visit	<b>Proposal 10596, Visit 19</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: ACS/WFC Special Requirements: (none)										
	Patterns	#	Primary Pattern			Secondary Pattern			Exposures		
		(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.146 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=47.2 Angle Between Sides= Center Pattern=false					(2), (3)		
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(19)	GH19	RA: 23 38 37.1000 (354.6545833d) Dec: -00 28 10.30 (-.46953d) Equinox: J2000 Plate Id: (?)		Redshift: 0.0355		V=(?) i=18.2, g=16.87	Coordinate Source: SDSS			
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit
	1		(19) GH19	ACS/WFC, ACCUM, WFC1	F814W	CR-SPLIT=NO			20.0 Secs		
									[==>]		[1]
	2		(19) GH19	ACS/WFC, ACCUM, WFC1	F814W	CR-SPLIT=NO		Pattern 2-2 (1)	450.0 Secs		
								[==>445.0 Secs (Pattern 1)]		[1]	
								[==>445.0 Secs (Pattern 2)]			
3		(19) GH19	ACS/WFC, ACCUM, WFC1	F435W	CR-SPLIT=NO		Pattern 3-3 (1)	550.0 Secs			
								[==>545.0 Secs (Pattern 1)]		[1]	
								[==>545.0 Secs (Pattern 2)]			

