



10917 - Afterglows and Environments of Short-Hard Gamma-Ray Bursts

Cycle: 15, Proposal Category: GO

(Availability Mode: SUPPORTED)

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VISITS

<i>Visit</i>	<i>Targets used in Visit</i>	<i>Configurations used in Visit</i>	<i>Orbits Used</i>	<i>Last Orbit Planner Run</i>	<i>OP Current with Visit?</i>
11	(12) GRB061006	ACS/WFC	3	20-Mar-2007 22:07:02.0	yes
12	(12) GRB061006	ACS/WFC	3	20-Mar-2007 22:07:28.0	yes
13	(12) GRB061006	ACS/WFC	3	20-Mar-2007 22:07:43.0	yes
21	(2) SHBAFTERGLOW-2	ACS/WFC	3	20-Mar-2007 22:07:59.0	yes
22	(2) SHBAFTERGLOW-2	ACS/WFC	3	20-Mar-2007 22:08:22.0	yes
31	(11) GRB060614	ACS/WFC	3	20-Mar-2007 22:08:39.0	yes
41	(13) GRB061201	ACS/WFC	2	20-Mar-2007 22:08:52.0	yes
51	(5) SHBHOST-3	ACS/WFC	2	20-Mar-2007 22:09:02.0	yes
52	(5) SHBHOST-3	ACS/WFC	2	20-Mar-2007 22:09:19.0	yes
61	(6) GRB051210	WFPC2	3	20-Mar-2007 22:09:30.0	yes
71	(7) GRB051221	WFPC2	3	20-Mar-2007 22:09:40.0	yes
81	(8) GRB051227	ACS/WFC	2	20-Mar-2007 22:09:51.0	yes
A1	(10) GRB060313	ACS/WFC	2	20-Mar-2007 22:10:06.0	yes
A2	(10) GRB060313	ACS/WFC	2	20-Mar-2007 22:10:15.0	yes

36 Total Orbits Used

ABSTRACT

Discovery of the first afterglows of short-hard bursts (SHBs) has led to a revolution in our understanding of these events, strongly suggesting that they originate in the mergers of compact-object binaries. Capitalizing on this progress, we propose to pursue the next generation of SHB observations with HST, tracking the decay of all accessible SHB afterglows to late times and pinpointing the location of several more within the

context of their host galaxies. These observations will allow quantitative analysis of progenitor lifetimes and short burst environments, enable direct confrontation with population synthesis models, and provide updated event rate estimates for the LIGO and VIRGO gravitational-wave detectors that are now coming on-line.

OBSERVING DESCRIPTION

TOO Afterglow Photometry:

The afterglow search sequence consists of two or three visits with ACS/WFC, beginning as soon as possible consistent with HST scheduling constraints. This is a "Rapid TOO," so we expect the first visit to occur roughly 5 days after our request, or 6 days after the burst. Each visit in the sequence consists of three orbits of dithered exposures in the F814W filter.

If a second visit can be scheduled within the visibility window, 5 +/- 1 days after the first, then we will use the 3-visit sequence with the final visit at late times. Otherwise, in the case where we can only schedule one visit in a prompt fashion, we will schedule the second visit at late times. The late-time image provides a "pure host" image and enables precision photometry of the afterglow via image subtraction.

Environments of SHBS:

We will trigger the "environments of short-hard bursts" sequence when either (1) An optical afterglow is identified, but HST constraints do not permit rapid-response observations; or (2) An afterglow is localized to sub-arcsecond position, but no optical/NIR afterglow is detected. In either case, we require the prior identification of a likely host galaxy for the burst.

Observations will be scheduled for the next HST visibility window, two weeks or more from the time of triggering. The observational program is determined by the redshift of the host galaxy: at $z < 0.75$ we image in g and i for one orbit each, and at $z > 0.75$ we image in r and z for two orbits each. The exact filter sequence will be adjusted, if necessary, based on the known magnitudes of the host galaxy at the time of triggering.

REAL TIME JUSTIFICATION

Two of our observation sequences are designated as Rapid TOO's for HST, requiring a roughly 5-day turnaround. These are the "TOO Afterglow Photometry" sequences.

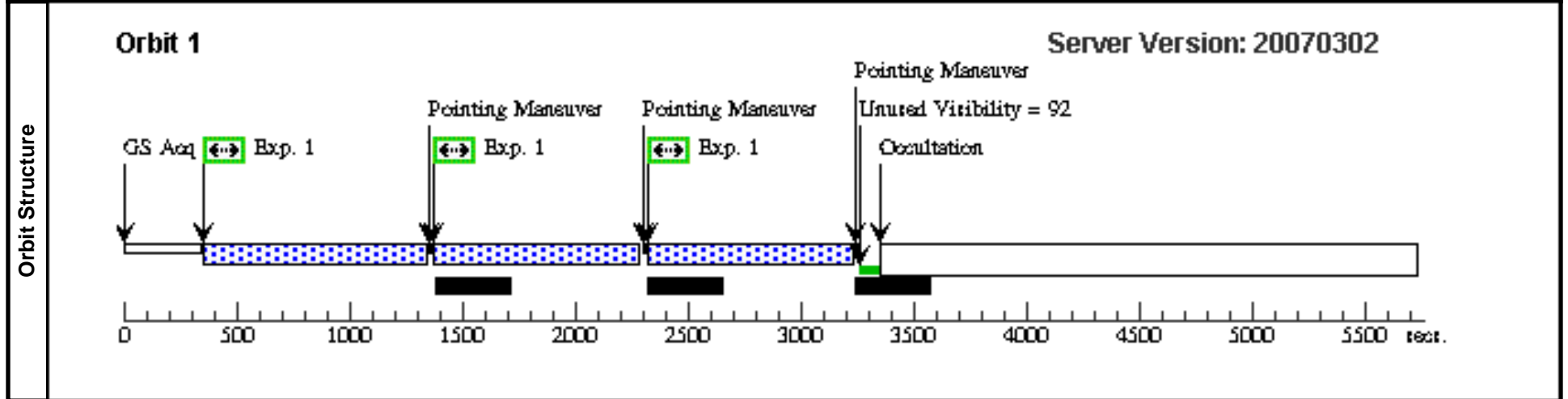
Proposal 10917 - Visit 11 - Afterglows and Environments of Short-Hard Gamma-Ray Bursts

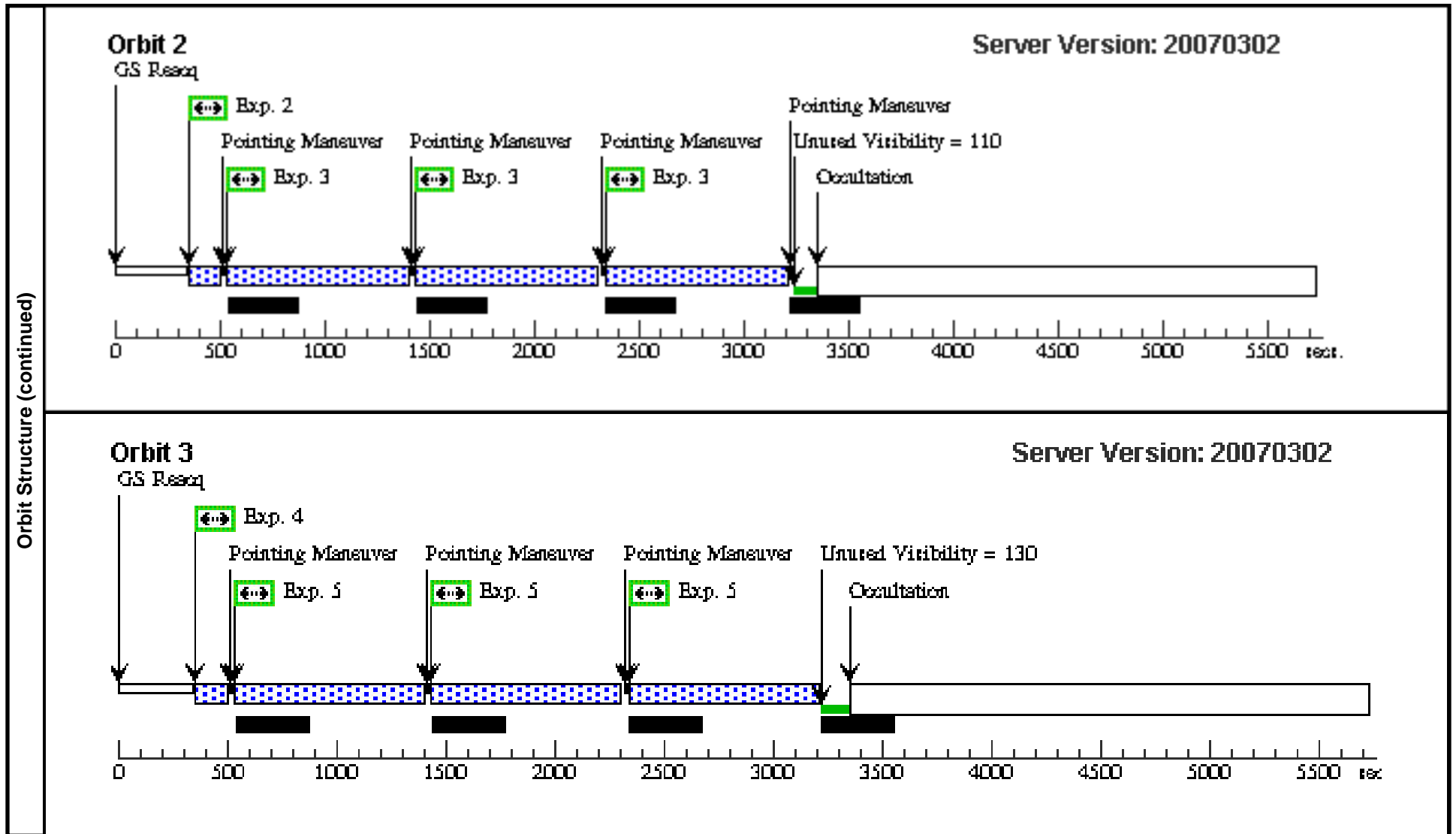
Wed Mar 21 02:10:19 GMT 2007

Visit	Proposal 10917, Visit 11, completed Diagnostic Status: Warning Scientific Instruments: ACS/WFC Special Requirements: PCS MODE FINE; ON HOLD <i>On Hold Comments: Target of Opportunity (Rapid Response)</i>									
	(Exposure 3 (Pattern 3-3) special requirements) Warning: Be very careful mixing POS TARG and Center_Pattern = Yes (Exposure 5 (Pattern 5-5) special requirements) Warning: Be very careful mixing POS TARG and Center_Pattern = Yes									
Diagnosics										
Patterns	#	Primary Pattern				Secondary Pattern			Exposures	
	(1)	Pattern Type=ACS-WFC-DITHER- LINE Purpose=DITHER Number Of Points=3 Point Spacing=0.138 Line Spacing=				Coordinate Frame=POS-TARG Pattern Orientation=33 Angle Between Sides= Center Pattern=true			(1), (3), (5)	
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes	Miscellaneous		
	(12)	GRB061006	RA: 07 24 7.6600 (111.0319167d) Dec: -79 11 55.10 (-79.19864d) Equinox: J2000				V=22.0+/-1.0	Reference Frame: ICRS		
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(12) GRB061006	ACS/WFC, ACCUM, WFC1	F814W	CR-SPLIT=NO		Sequence 1-1 Non-Int Pattern 1-1 (1)	786.0 Secs [==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]	[1]
	2		(12) GRB061006	ACS/WFC, ACCUM, WFC1	F814W	CR-SPLIT=NO	POS TARG -0.3306 67,0.173467	Sequence 2-3 Non-Int	21.0 Secs [==>]	[2]
	3		(12) GRB061006	ACS/WFC, ACCUM, WFC1	F814W	CR-SPLIT=NO	POS TARG -0.3306 67,0.173467	Sequence 2-3 Non-Int Pattern 3-3 (1)	747.0 Secs [==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]	[2]
	4		(12) GRB061006	ACS/WFC, ACCUM, WFC1	F814W	CR-SPLIT=NO	POS TARG 0.33066 7,-0.173467	Sequence 4-5 Non-Int	21.0 Secs [==>]	[3]

Proposal 10917 - Visit 11 - Afterglows and Environments of Short-Hard Gamma-Ray Bursts

Exposures (continued)	#	Label	Target	Config, Mode, Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	5	(12) GRB061006	ACS/WFC, ACCUM, WFC1	F814W	CR-SPLIT=NO	POS TARG 0.33066 7,-0.173467	Sequence 4-5 Non-Int Pattern 5-5 (1)	747.0 Secs [==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]	[3]	





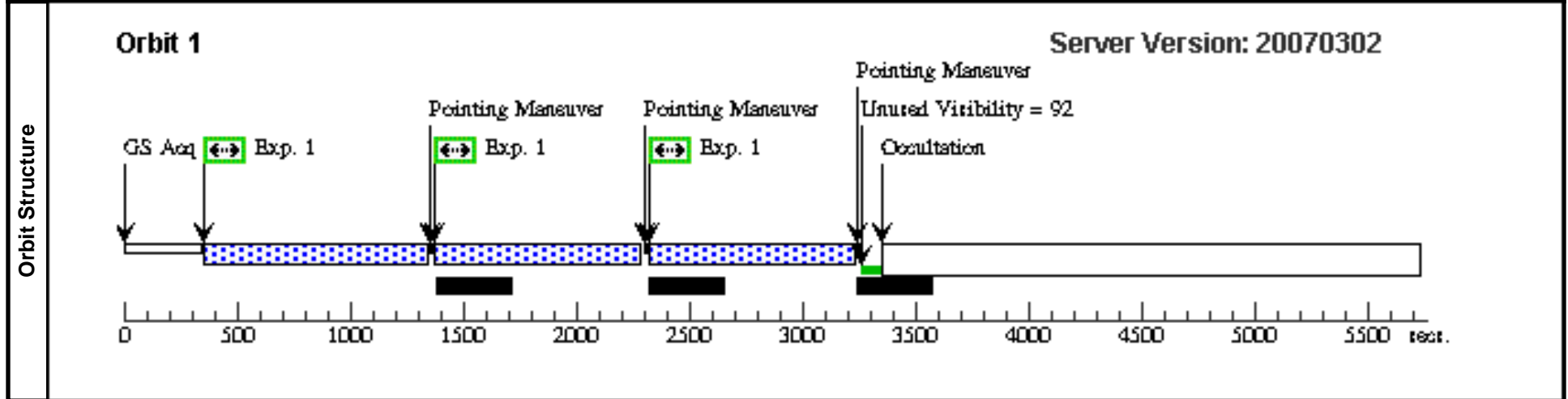
Proposal 10917 - Visit 12 - Afterglows and Environments of Short-Hard Gamma-Ray Bursts

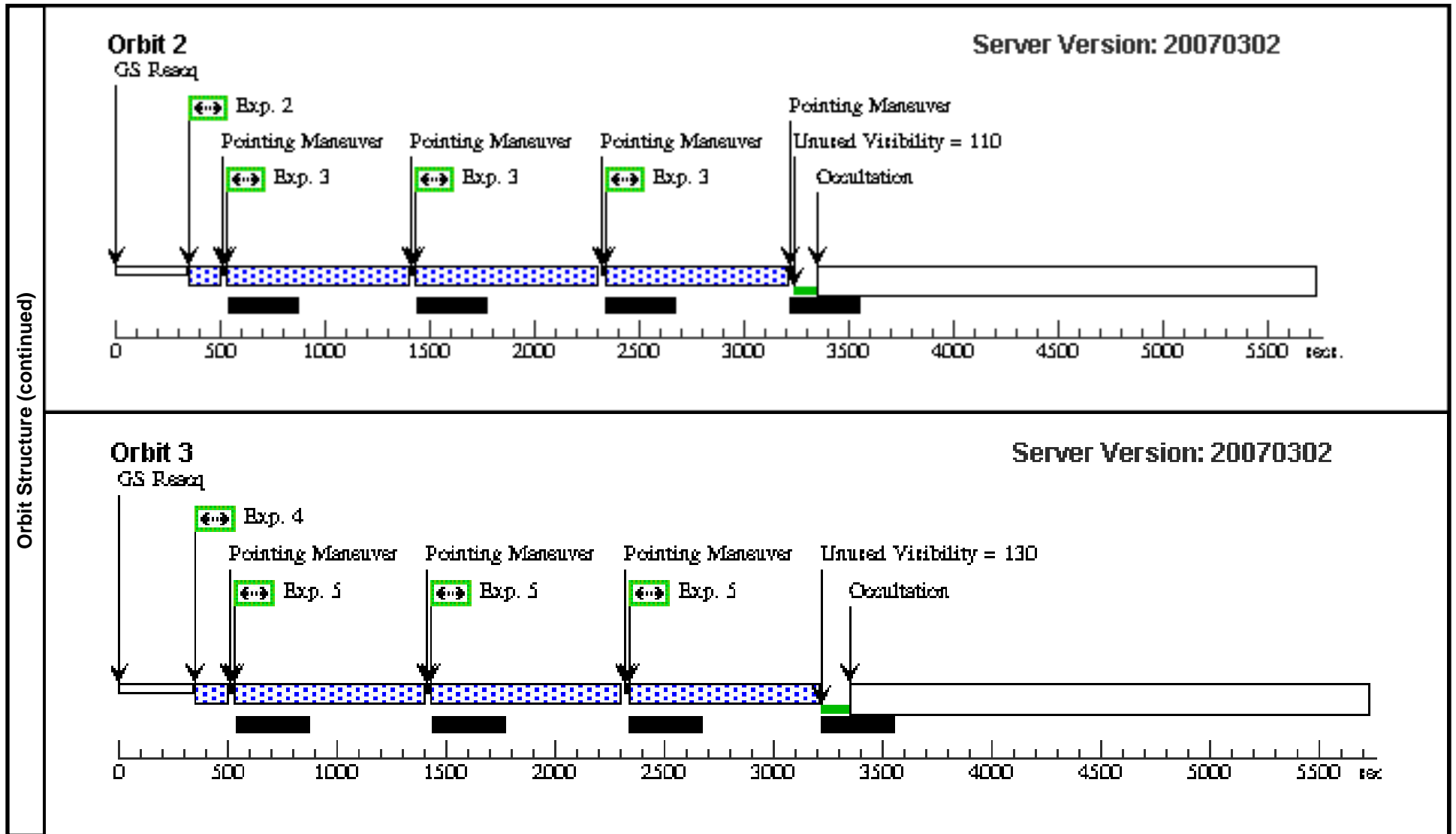
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Visit	Proposal 10917, Visit 12, completed Diagnostic Status: Warning Scientific Instruments: ACS/WFC Special Requirements: PCS MODE FINE; AFTER 11 BY 4 D TO 6 D; ON HOLD <i>On Hold Comments: First follow-up observation to the Visit 11 Rapid-Response TOO.</i>									
	(Exposure 3 (Pattern 3-3) special requirements) Warning: Be very careful mixing POS TARG and Center_Pattern = Yes (Exposure 5 (Pattern 5-5) special requirements) Warning: Be very careful mixing POS TARG and Center_Pattern = Yes									
Diagnosics										
Patterns	#	Primary Pattern				Secondary Pattern			Exposures	
	(1)	Pattern Type=ACS-WFC-DITHER- LINE Purpose=DITHER Number Of Points=3 Point Spacing=0.138 Line Spacing=				Coordinate Frame=POS-TARG Pattern Orientation=33 Angle Between Sides= Center Pattern=true			(1), (3), (5)	
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes	Miscellaneous		
	(12)	GRB061006	RA: 07 24 7.6600 (111.0319167d) Dec: -79 11 55.10 (-79.19864d) Equinox: J2000				V=22.0+/-1.0	Reference Frame: ICRS		
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(12) GRB061006	ACS/WFC, ACCUM, WFC1	F814W	CR-SPLIT=NO		Sequence 1-1 Non-Int Pattern 1-1 (1)	786.0 Secs [==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]	[1]
	2		(12) GRB061006	ACS/WFC, ACCUM, WFC1	F814W	CR-SPLIT=NO	POS TARG -0.3306 67,0.173467	Sequence 2-3 Non-Int	21.0 Secs [==>]	[2]
	3		(12) GRB061006	ACS/WFC, ACCUM, WFC1	F814W	CR-SPLIT=NO	POS TARG -0.3306 67,0.173467	Sequence 2-3 Non-Int Pattern 3-3 (1)	747.0 Secs [==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]	[2]
	4		(12) GRB061006	ACS/WFC, ACCUM, WFC1	F814W	CR-SPLIT=NO	POS TARG 0.33066 7,-0.173467	Sequence 4-5 Non-Int	21.0 Secs [==>]	[3]

Proposal 10917 - Visit 12 - Afterglows and Environments of Short-Hard Gamma-Ray Bursts

Exposures (continued)	#	Label	Target	Config, Mode, Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	5	(12) GRB061006	ACS/WFC, ACCUM, WFC1	F814W	CR-SPLIT=NO	POS TARG 0.33066 7,-0.173467	Sequence 4-5 Non-Int Pattern 5-5 (1)	747.0 Secs [==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]	[3]	





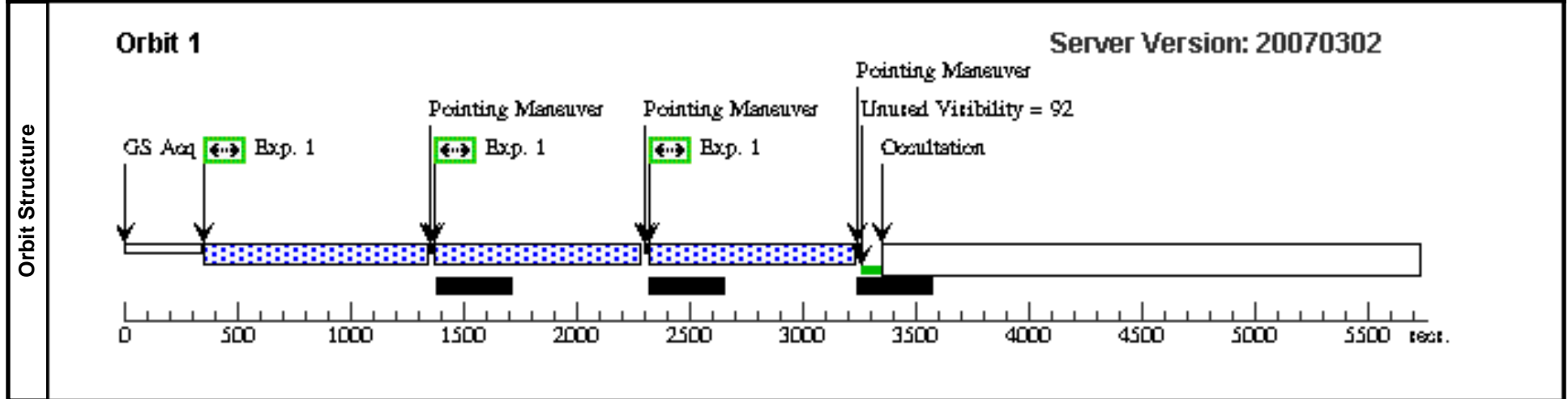
Proposal 10917 - Visit 13 - Afterglows and Environments of Short-Hard Gamma-Ray Bursts

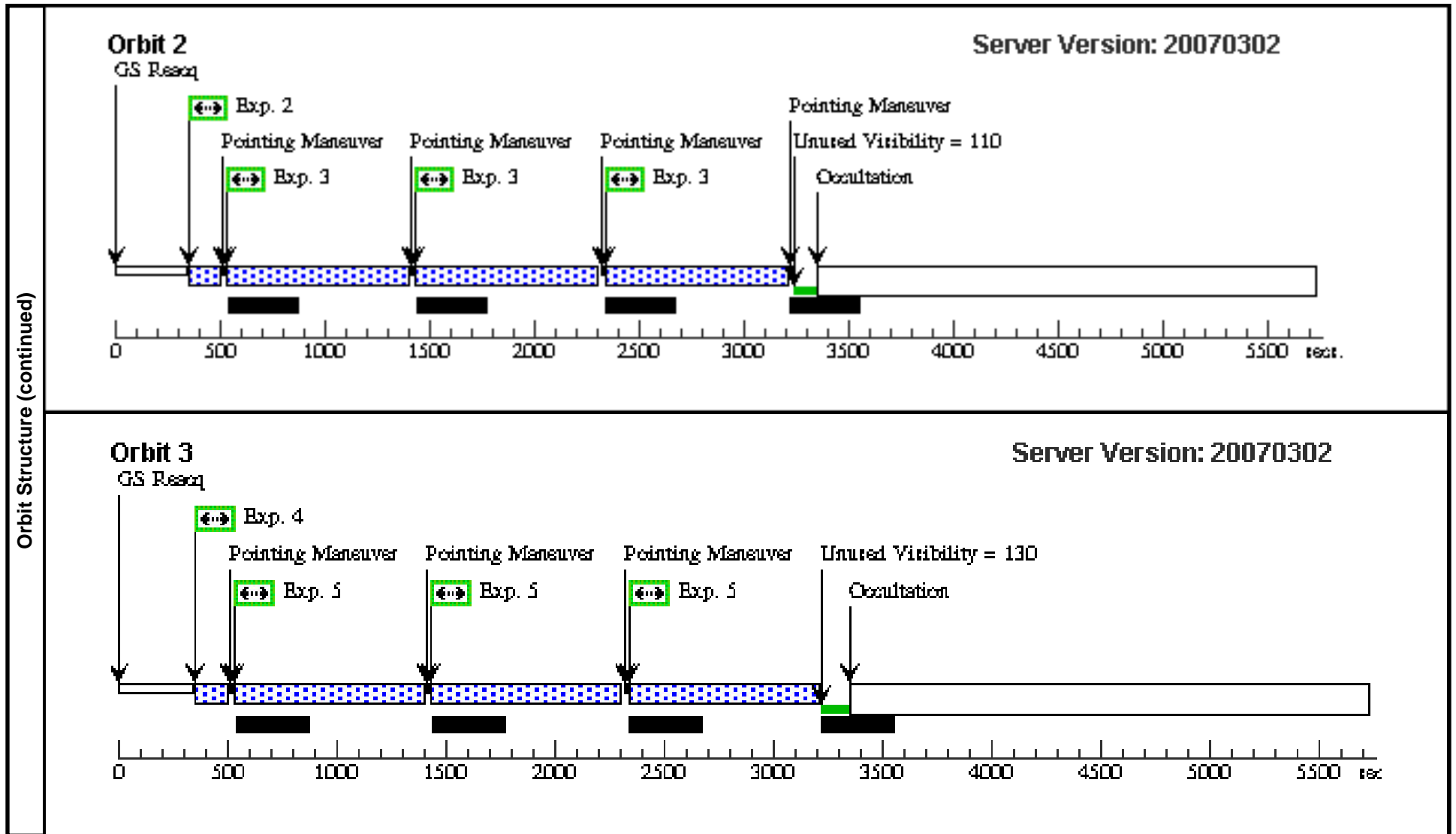
Wed Mar 21 02:10:23 GMT 2007

Visit	Proposal 10917, Visit 13, completed Diagnostic Status: Warning Scientific Instruments: ACS/WFC Special Requirements: PCS MODE FINE; AFTER 11 BY 50 D TO 100 D; ON HOLD <i>On Hold Comments: Second follow-up observation to the Visit 11 Rapid-Response TOO.</i>									
	(Exposure 3 (Pattern 3-3) special requirements) Warning: Be very careful mixing POS TARG and Center_Pattern = Yes (Exposure 5 (Pattern 5-5) special requirements) Warning: Be very careful mixing POS TARG and Center_Pattern = Yes									
Diagnosics										
Patterns	#	Primary Pattern				Secondary Pattern			Exposures	
	(1)	Pattern Type=ACS-WFC-DITHER- LINE Purpose=DITHER Number Of Points=3 Point Spacing=0.138 Line Spacing=				Coordinate Frame=POS-TARG Pattern Orientation=33 Angle Between Sides= Center Pattern=true			(1), (3), (5)	
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes	Miscellaneous		
	(12)	GRB061006	RA: 07 24 7.6600 (111.0319167d) Dec: -79 11 55.10 (-79.19864d) Equinox: J2000				V=22.0+/-1.0	Reference Frame: ICRS		
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(12) GRB061006	ACS/WFC, ACCUM, WFC1	F814W	CR-SPLIT=NO		Sequence 1-1 Non-Int Pattern 1-1 (1)	786.0 Secs [==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]	[1]
	2		(12) GRB061006	ACS/WFC, ACCUM, WFC1	F814W	CR-SPLIT=NO	POS TARG -0.3306 67,0.173467	Sequence 2-3 Non-Int	21.0 Secs [==>]	[2]
	3		(12) GRB061006	ACS/WFC, ACCUM, WFC1	F814W	CR-SPLIT=NO	POS TARG -0.3306 67,0.173467	Sequence 2-3 Non-Int Pattern 3-3 (1)	747.0 Secs [==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]	[2]
	4		(12) GRB061006	ACS/WFC, ACCUM, WFC1	F814W	CR-SPLIT=NO	POS TARG 0.33066 7,-0.173467	Sequence 4-5 Non-Int	21.0 Secs [==>]	[3]

Proposal 10917 - Visit 13 - Afterglows and Environments of Short-Hard Gamma-Ray Bursts

Exposures (continued)	#	Label	Target	Config, Mode, Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	5	(12) GRB061006	ACS/WFC, ACCUM, WFC1	F814W	CR-SPLIT=NO	POS TARG 0.33066 7,-0.173467	Sequence 4-5 Non-Int Pattern 5-5 (1)	747.0 Secs [==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]	[3]	





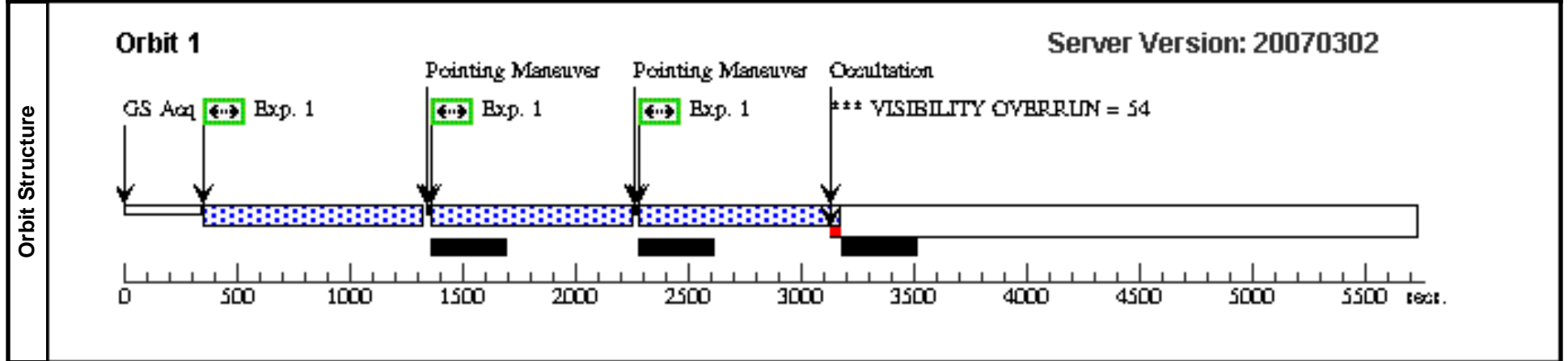
Proposal 10917 - Visit 21 - Afterglows and Environments of Short-Hard Gamma-Ray Bursts

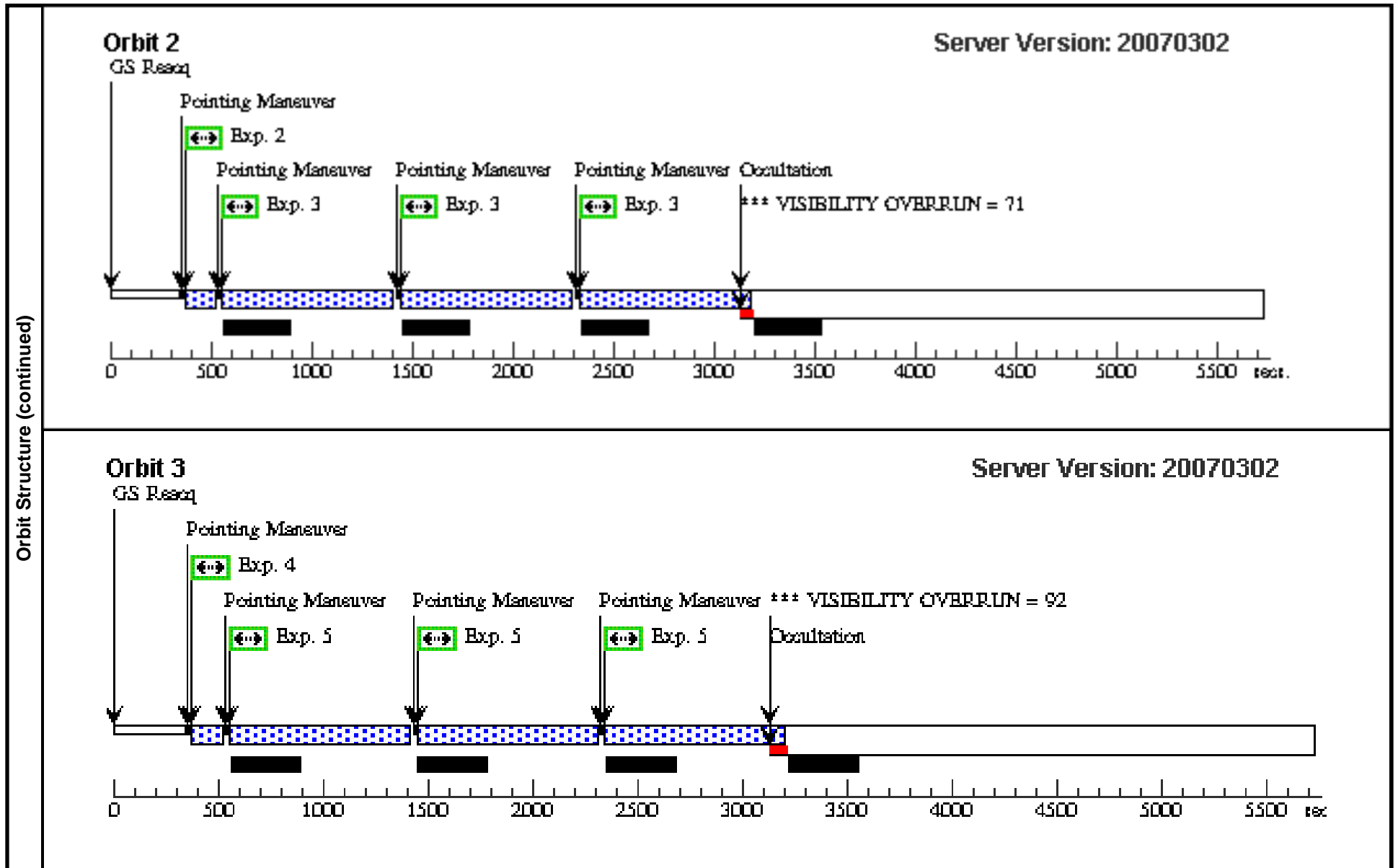
Wed Mar 21 02:10:25 GMT 2007

Visit	Proposal 10917, Visit 21, withdrawn Diagnostic Status: Warning Scientific Instruments: ACS/WFC Special Requirements: PCS MODE FINE; ON HOLD <i>On Hold Comments: Target of Opportunity (Rapid Response)</i>									
	Diagnostics	(Visit 21) Warning: VISIBILITY OVERRUN (Visit 21) Warning: VISIBILITY OVERRUN (Visit 21) Warning: VISIBILITY OVERRUN (Exposure 3 (Pattern 3-3) special requirements) Warning: Be very careful mixing POS TARG and Center_Pattern = Yes (Exposure 5 (Pattern 5-5) special requirements) Warning: Be very careful mixing POS TARG and Center_Pattern = Yes								
Patterns		#	Primary Pattern				Secondary Pattern			Exposures
	(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=3 Point Spacing=0.138 Line Spacing=				Coordinate Frame=POS-TARG Pattern Orientation=33 Angle Between Sides= Center Pattern=true			(1), (3), (5)	
Generic Targets	#	Name	Criteria			Description				
	(2)	SHBAFTERGLOW-2	Shor burst with optical afterglow, 1 epoch observability			GAMMA RAY BURSTER				
<i>Comments: This is one of two "Rapid TOO" targets in the proposal.</i>										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(2) SHBAFTERGLOW-2	ACS/WFC, ACCUM, WFC1	F814W	CR-SPLIT=NO		Sequence 1-1 Non-Int Pattern 1-1 (1)	767.0 Secs [==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]	[1]
	2		(2) SHBAFTERGLOW-2	ACS/WFC, ACCUM, WFC1	F814W	CR-SPLIT=NO	POS TARG -0.330667,0.173467	Sequence 2-3 Non-Int	21.0 Secs [==>]	[2]
	3		(2) SHBAFTERGLOW-2	ACS/WFC, ACCUM, WFC1	F814W	CR-SPLIT=NO	POS TARG -0.330667,0.173467	Sequence 2-3 Non-Int Pattern 3-3 (1)	733.0 Secs [==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]	[2]
	4		(2) SHBAFTERGLOW-2	ACS/WFC, ACCUM, WFC1	F814W	CR-SPLIT=NO	POS TARG 0.330667,-0.173467	Sequence 4-5 Non-Int	21.0 Secs [==>]	[3]

Proposal 10917 - Visit 21 - Afterglows and Environments of Short-Hard Gamma-Ray Bursts

Exposures (continued)	#	Label	Target	Config, Mode, Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	5		(2) SHBAFTERGLO W-2	ACS/WFC, ACCUM, WFC1	F814W	CR-SPLIT=NO	POS TARG 0.33066 7,-0.173467	Sequence 4-5 Non-Int Pattern 5-5 (1)	740.0 Secs [==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]	[3]





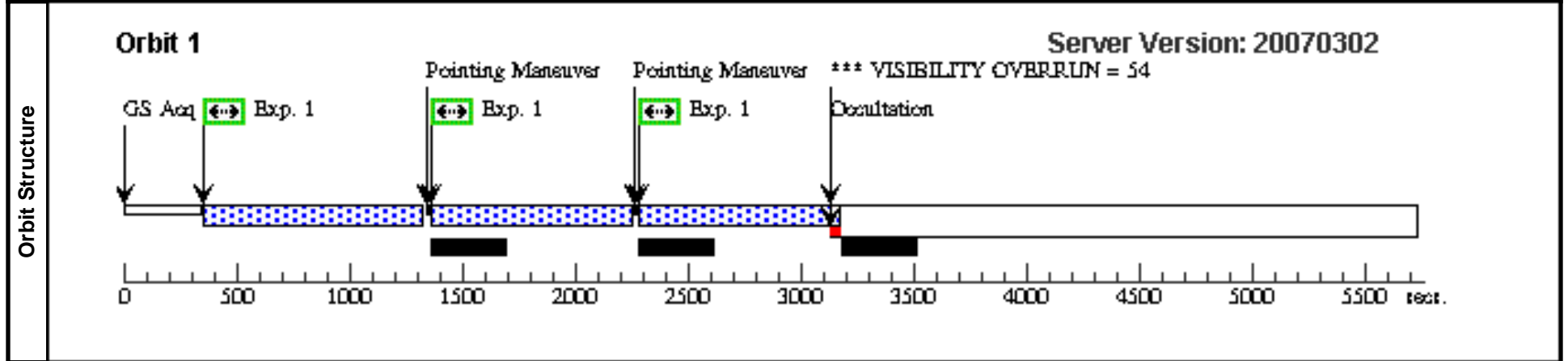
Proposal 10917 - Visit 22 - Afterglows and Environments of Short-Hard Gamma-Ray Bursts

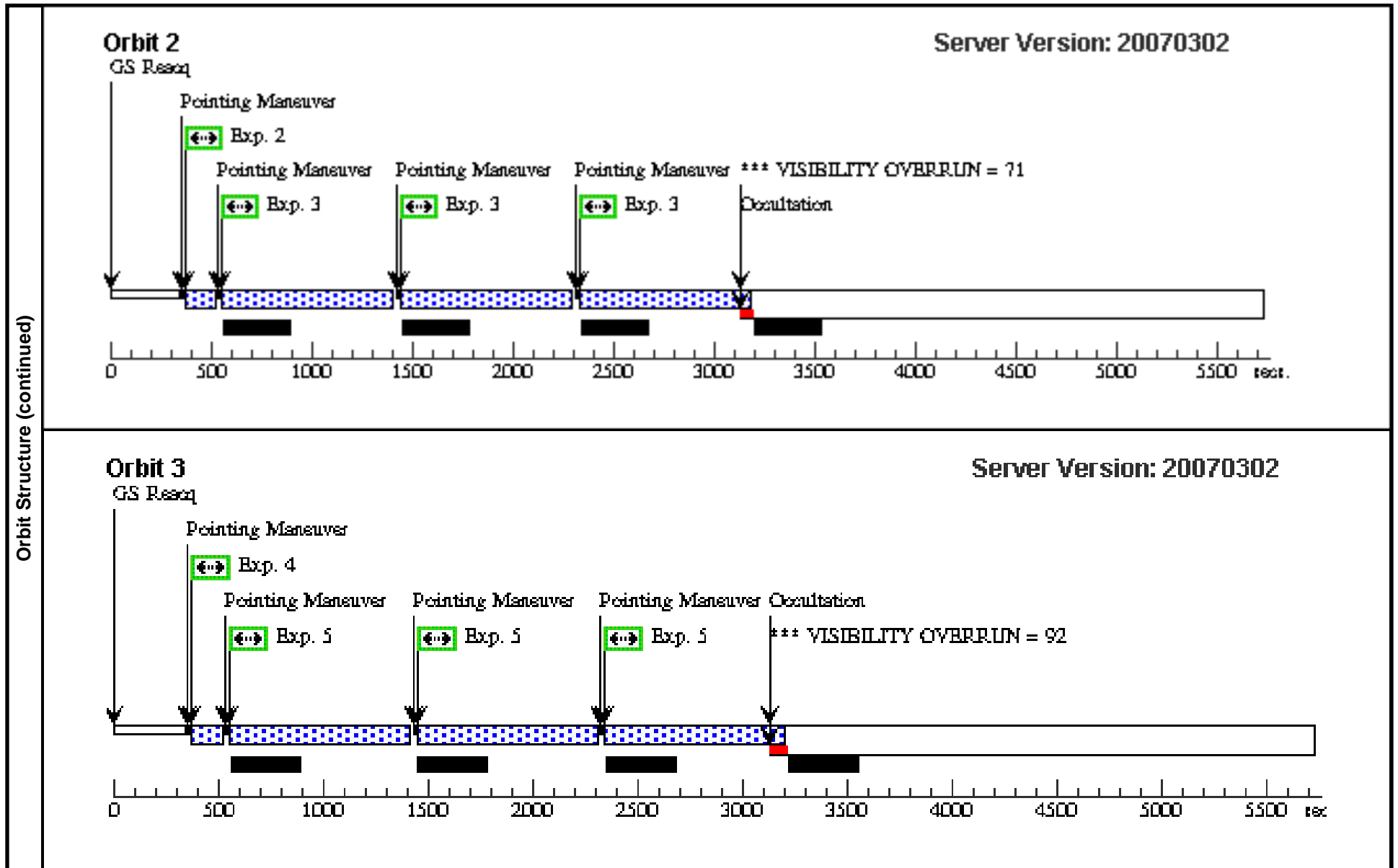
Wed Mar 21 02:10:26 GMT 2007

Visit	Proposal 10917, Visit 22, withdrawn Diagnostic Status: Warning Scientific Instruments: ACS/WFC Special Requirements: PCS MODE FINE; AFTER 21 BY 6 D TO 14 D; ON HOLD <i>On Hold Comments: First follow-up observation to the Visit 21 Rapid-Response TOO.</i>									
	Diagnostics	(Visit 22) Warning: VISIBILITY OVERRUN (Visit 22) Warning: VISIBILITY OVERRUN (Visit 22) Warning: VISIBILITY OVERRUN (Exposure 3 (Pattern 3-3) special requirements) Warning: Be very careful mixing POS TARG and Center_Pattern = Yes (Exposure 5 (Pattern 5-5) special requirements) Warning: Be very careful mixing POS TARG and Center_Pattern = Yes								
Patterns		#	Primary Pattern				Secondary Pattern			Exposures
	(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=3 Point Spacing=0.138 Line Spacing=				Coordinate Frame=POS-TARG Pattern Orientation=33 Angle Between Sides= Center Pattern=true			(1), (3), (5)	
Generic Targets	#	Name	Criteria			Description				
	(2)	SHBAFTERGLOW-2	Shor burst with optical afterglow, 1 epoch observability			GAMMA RAY BURSTER				
<i>Comments: This is one of two "Rapid TOO" targets in the proposal.</i>										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(2) SHBAFTERGLOW-2	ACS/WFC, ACCUM, WFC1	F814W	CR-SPLIT=NO		Sequence 1-1 Non-Int Pattern 1-1 (1)	767.0 Secs [==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]	[1]
	2		(2) SHBAFTERGLOW-2	ACS/WFC, ACCUM, WFC1	F814W	CR-SPLIT=NO	POS TARG -0.33067,0.173467	Sequence 2-3 Non-Int	21.0 Secs [==>]	[2]
	3		(2) SHBAFTERGLOW-2	ACS/WFC, ACCUM, WFC1	F814W	CR-SPLIT=NO	POS TARG -0.33067,0.173467	Sequence 2-3 Non-Int Pattern 3-3 (1)	733.0 Secs [==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]	[2]
	4		(2) SHBAFTERGLOW-2	ACS/WFC, ACCUM, WFC1	F814W	CR-SPLIT=NO	POS TARG 0.33067,-0.173467	Sequence 4-5 Non-Int	21.0 Secs [==>]	[3]

Proposal 10917 - Visit 22 - Afterglows and Environments of Short-Hard Gamma-Ray Bursts

Exposures (continued)	#	Label	Target	Config, Mode, Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	5		(2) SHBAFTERGLO W-2	ACS/WFC, ACCUM, WFC1	F814W	CR-SPLIT=NO	POS TARG 0.33066 7,-0.173467	Sequence 4-5 Non-Int Pattern 5-5 (1)	740.0 Secs [==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]	[3]





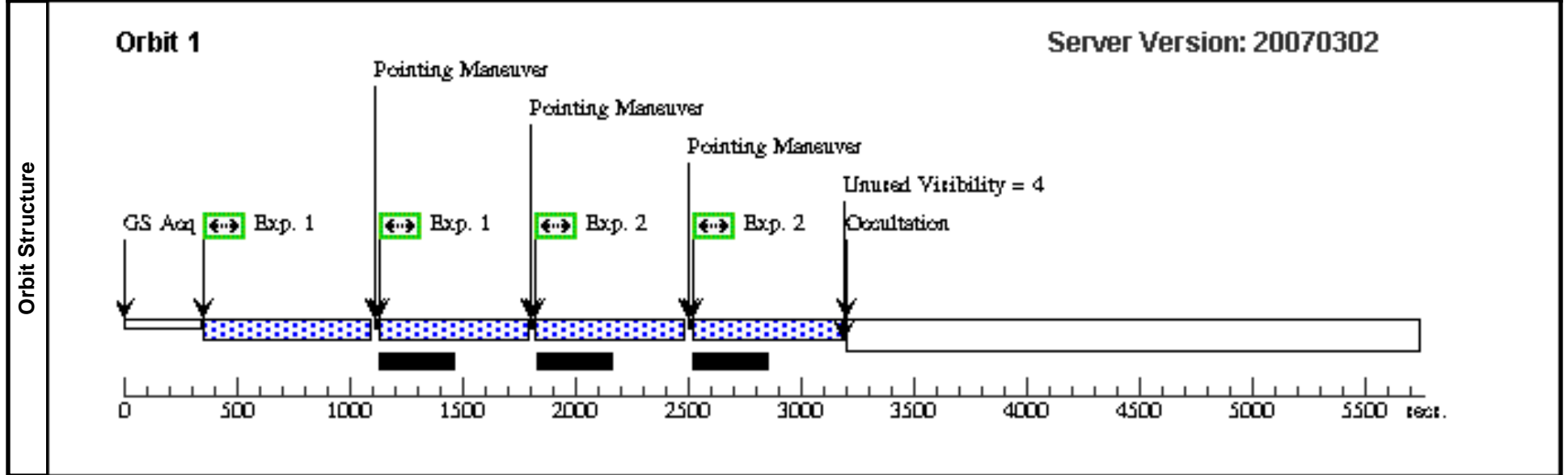
Proposal 10917 - Visit 31 - Afterglows and Environments of Short-Hard Gamma-Ray Bursts

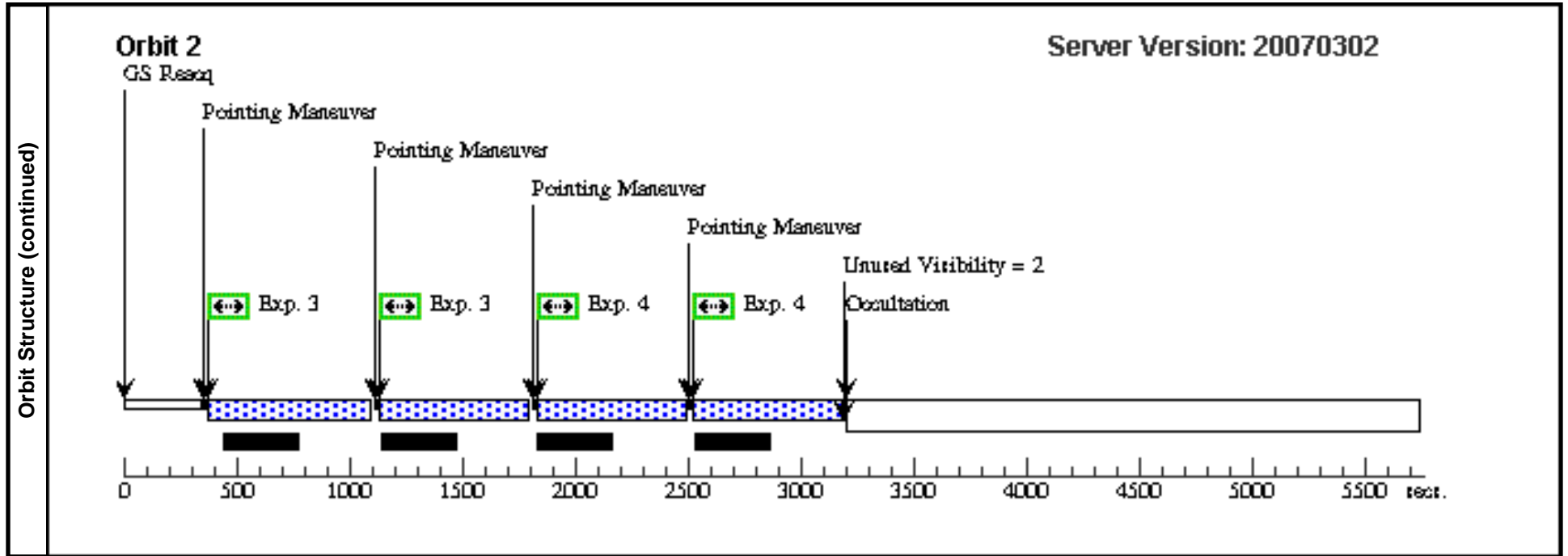
Wed Mar 21 02:10:28 GMT 2007

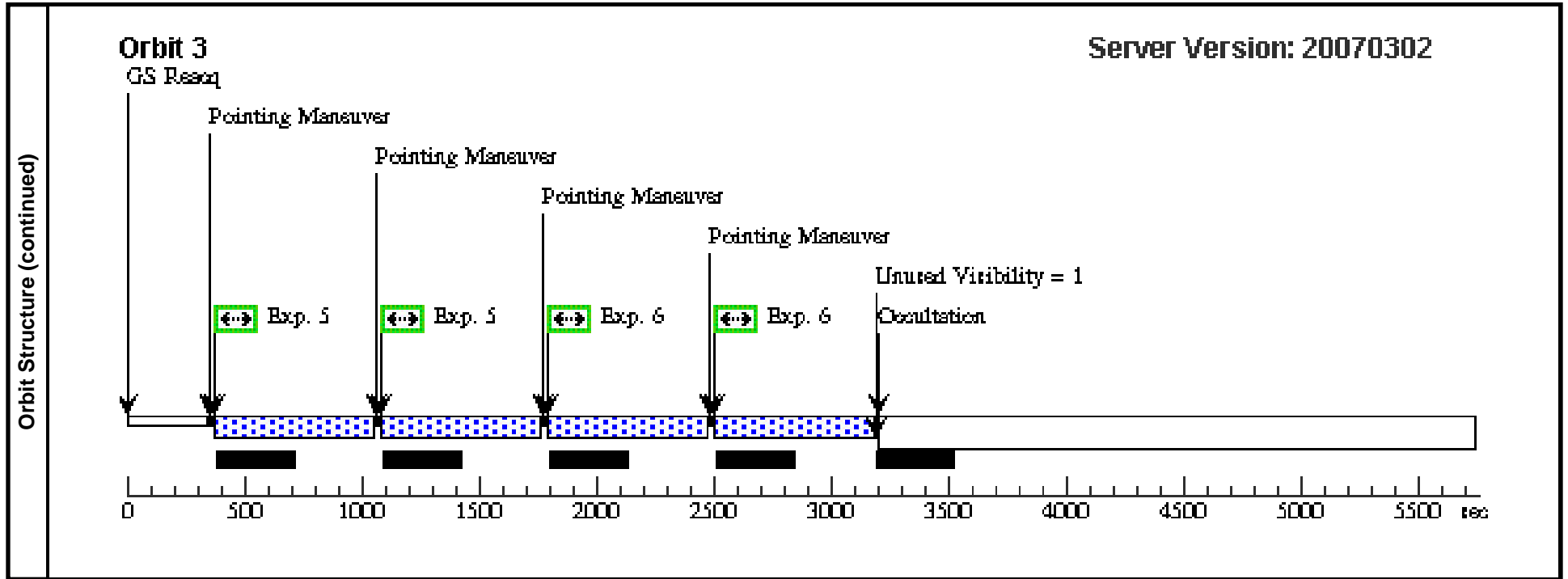
Visit	Proposal 10917, Visit 31, completed Diagnostic Status: Warning Scientific Instruments: ACS/WFC Special Requirements: PCS MODE FINE; ON HOLD <i>Comments: B+I host imaging for the host of GRB060614</i> <i>Formerly "SHBHOST-1" imaging (z<0.75)</i> <i>On Hold Comments: Target of Opportunity (late-time response)</i>										
Diagnostics	(Exp 2 (31.002) special requirements) Warning: Be very careful mixing POS TARG and Center_Pattern = Yes (Exp 4 (31.004) special requirements) Warning: Be very careful mixing POS TARG and Center_Pattern = Yes (Exp 5 (31.005) special requirements) Warning: Be very careful mixing POS TARG and Center_Pattern = Yes (Exp 6 (31.006) special requirements) Warning: Be very careful mixing POS TARG and Center_Pattern = Yes										
Patterns	#	Primary Pattern				Secondary Pattern			Exposures		
	(4)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.182 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=47.2 Angle Between Sides= Center Pattern=true				(1), (2)				
Patterns	(5)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.182 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=47.2 Angle Between Sides= Center Pattern=true				(3), (4), (5), (6)				
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
(11)	GRB060614	RA: 21 23 32.0800 (320.8836667d) Dec: -53 01 36.20 (-53.02672d) Equinox: J2000	Redshift: 0.13	V=22.0+/-0.1	Reference Frame: ICRS						
<i>Comments: Host galaxy of Swift-detected GRB060614</i>											
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit
	1	Exp 1	(11) GRB060614	ACS/WFC, ACCUM, WFC1	F435W	CR-SPLIT=NO		Pattern 1-1 (4)	538.0 Secs	[=>(Pattern 1)] [=>(Pattern 2)]	[1]
2	Exp 2	(11) GRB060614	ACS/WFC, ACCUM, WFC1	F435W	CR-SPLIT=NO	POS TARG 0.2232,2 .6015	Pattern 2-2 (4)	538.0 Secs	[=>(Pattern 1)] [=>(Pattern 2)]	[1]	

Proposal 10917 - Visit 31 - Afterglows and Environments of Short-Hard Gamma-Ray Bursts

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
3	Exp 3	(11) GRB060614	ACS/WFC, ACCUM, WFC1	F606W	CR-SPLIT=NO		Pattern 3-3 (5)	538.0 Secs	
								[==>(Pattern 1)]	[2]
4	Exp 4	(11) GRB060614	ACS/WFC, ACCUM, WFC1	F606W	CR-SPLIT=NO	POS TARG 0.2232,0 .0171	Pattern 4-4 (5)	538.0 Secs	
								[==>(Pattern 1)]	[2]
5	Exp 5	(11) GRB060614	ACS/WFC, ACCUM, WFC1	F606W	CR-SPLIT=NO	POS TARG 0.2232,0 .2232	Pattern 5-5 (5)	555.0 Secs	
								[==>(Pattern 1)]	[3]
6	Exp 6	(11) GRB060614	ACS/WFC, ACCUM, WFC1	F606W	CR-SPLIT=NO	POS TARG 0.0171,0 .2232	Pattern 6-6 (5)	555.0 Secs	
								[==>(Pattern 1)]	[3]



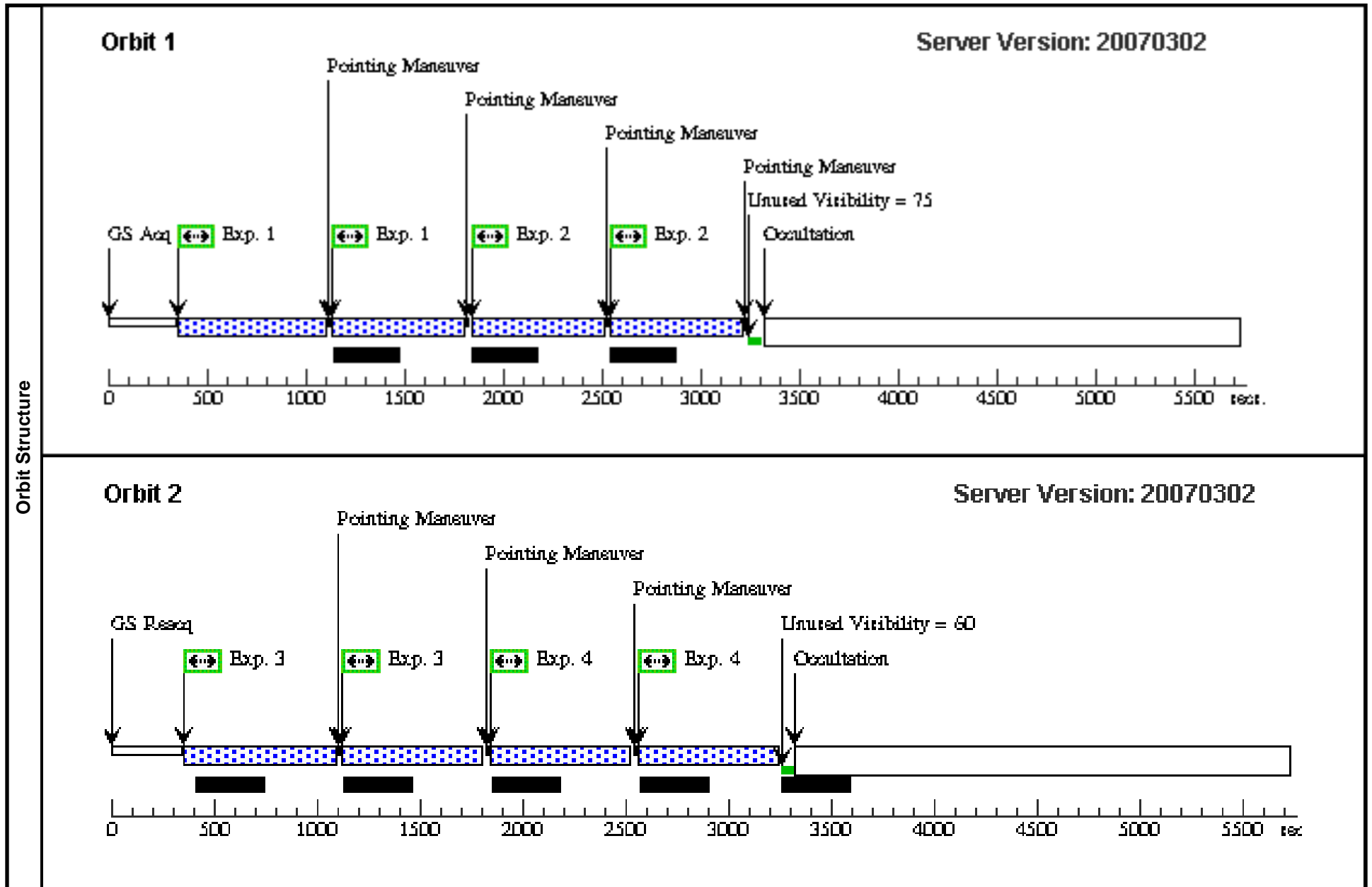




Proposal 10917 - Visit 41 - Afterglows and Environments of Short-Hard Gamma-Ray Bursts

Wed Mar 21 02:10:29 GMT 2007

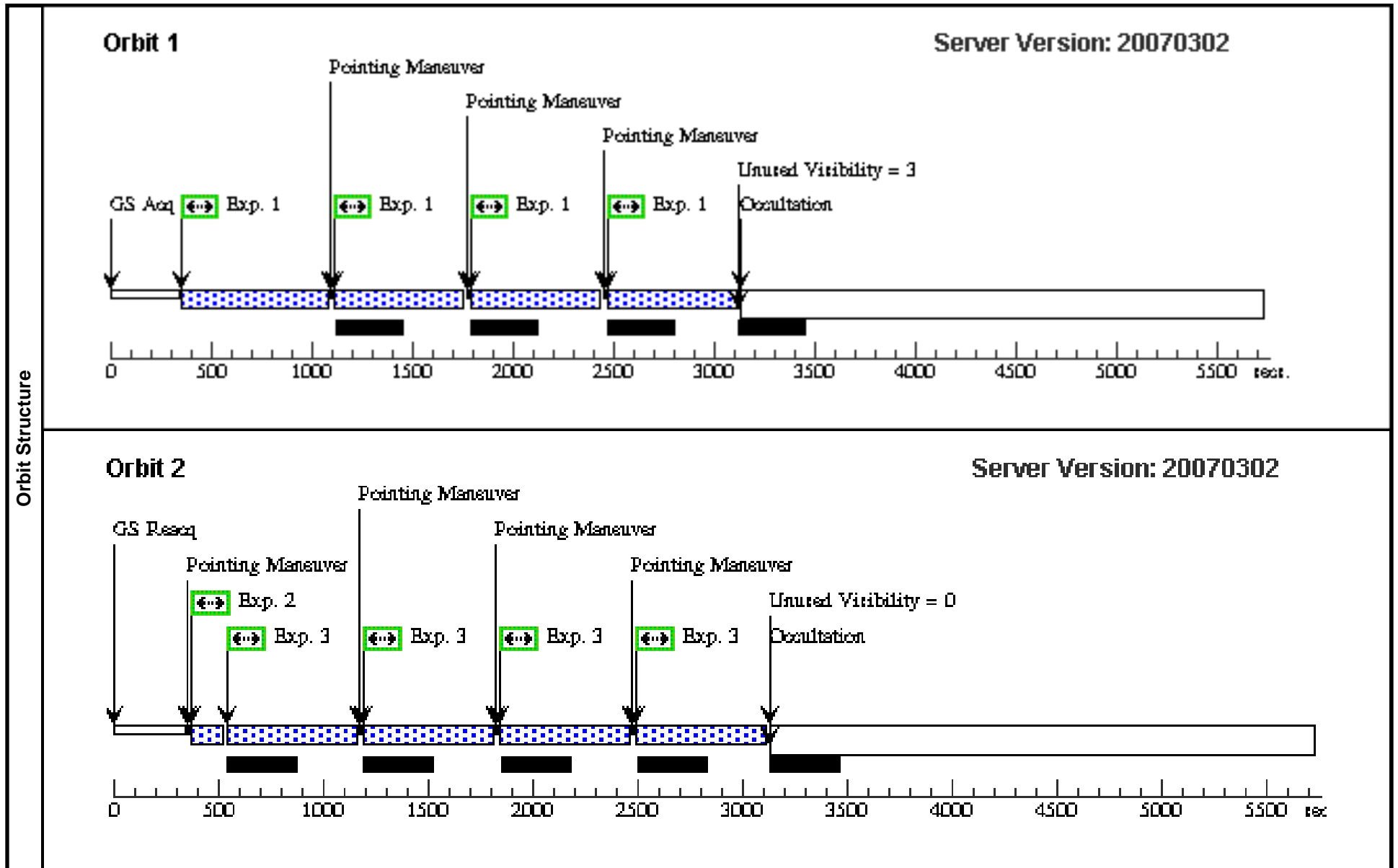
Visit	Proposal 10917, Visit 41, completed Diagnostic Status: Warning Scientific Instruments: ACS/WFC Special Requirements: PCS MODE FINE <i>Comments: V+I band host imaging for GRB061201</i>										
	(Exposure 2 (41.002) special requirements) Warning: Be very careful mixing POS TARG and Center_Pattern = Yes (Exposure 4 (41.004) special requirements) Warning: Be very careful mixing POS TARG and Center_Pattern = Yes										
Diagnosics											
Patterns	#	Primary Pattern				Secondary Pattern				Exposures	
	(4)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.182 Line Spacing=				Coordinate Frame=POS-TARG Pattern Orientation=47.2 Angle Between Sides= Center Pattern=true					
Fixed Targets	#	Name	Target Coordinates			Targ. Coord. Corrections		Fluxes	Miscellaneous		
	(13)	GRB061201	RA: 22 08 32.0900 (332.1337083d) Dec: -74 34 47.08 (-74.57974d) Equinox: J2000					V=22.0+/-1.0	Reference Frame: ICRS		
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit
	1	Exposure 1	(13) GRB061201	ACS/WFC, ACCUM, WFC	F606W	CR-SPLIT=NO		Pattern 1-1 (4)	545.0 Secs		
									[==>(Pattern 1)]		[1]
									[==>(Pattern 2)]		
	2	Exposure 2	(13) GRB061201	ACS/WFC, ACCUM, WFC	F606W	CR-SPLIT=NO	POS TARG 0.2232,2 .6015	Pattern 2-2 (4)	544.0 Secs		
									[==>(Pattern 1)]		[1]
								[==>(Pattern 2)]			
3	Exposure 3	(13) GRB061201	ACS/WFC, ACCUM, WFC	F814W	CR-SPLIT=NO		Pattern 3-3 (4)	561.0 Secs			
								[==>(Pattern 1)]		[2]	
								[==>(Pattern 2)]			
4	Exposure 4	(13) GRB061201	ACS/WFC, ACCUM, WFC	F814W	CR-SPLIT=NO	POS TARG 0.2232,2 .6015	Pattern 4-4 (4)	561.0 Secs			
								[==>(Pattern 1)]		[2]	
								[==>(Pattern 2)]			



Proposal 10917 - Visit 51 - Afterglows and Environments of Short-Hard Gamma-Ray Bursts

Wed Mar 21 02:10:30 GMT 2007

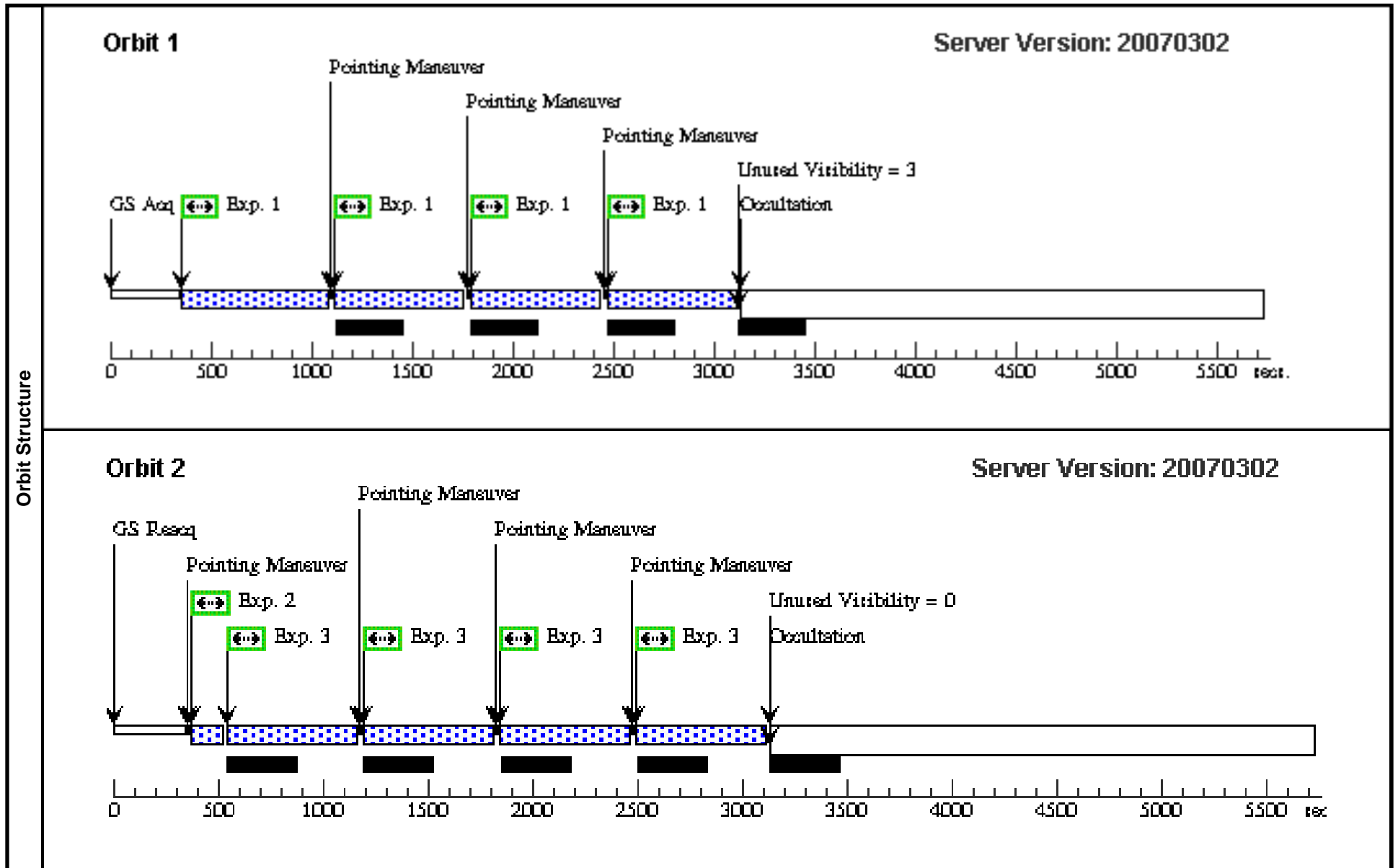
Visit	Proposal 10917, Visit 51, withdrawn Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: PCS MODE FINE; ON HOLD Comments: <i>r-band host imaging</i> On Hold Comments: <i>Target of Opportunity (delayed response)</i>									
	Patterns	#	Primary Pattern				Secondary Pattern			
(2)		Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=4 Point Spacing=0.164 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=47.2 Angle Between Sides= Center Pattern=false					(1)		
(3)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.304 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=137.2 Angle Between Sides= Center Pattern=false	Pattern Type=LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.164 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=47.2 Angle Between Sides= Center Pattern=false					(3)	
Generic Targets	#	Name	Criteria	Description						
	(5)	SHBHOST-3	Short burst with subarcsec localization and z>0.75 host	UNDESIGNATED						
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	Exposure 1	(5) SHBHOST-3	ACS/WFC, ACCUM, WFC	F625W	CR-SPLIT=NO		Pattern 1-1 (2)	522.0 Secs [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)] [=>(Pattern 4)]	[1]
	2	Exposure 2	(5) SHBHOST-3	ACS/WFC, ACCUM, WFC	F625W	CR-SPLIT=NO	POS TARG 0.279,2.61199		22.0 Secs [=>]	[2]
	3	Exposure 3	(5) SHBHOST-3	ACS/WFC, ACCUM, WFC	F625W	CR-SPLIT=NO	POS TARG 0.279,2.61199	Pattern 3-3 (3)	497.0 Secs [=>(Pattern 1,1)] [=>(Pattern 1,2)] [=>(Pattern 2,1)] [=>(Pattern 2,2)]	[2]



Proposal 10917 - Visit 52 - Afterglows and Environments of Short-Hard Gamma-Ray Bursts

Wed Mar 21 02:10:31 GMT 2007

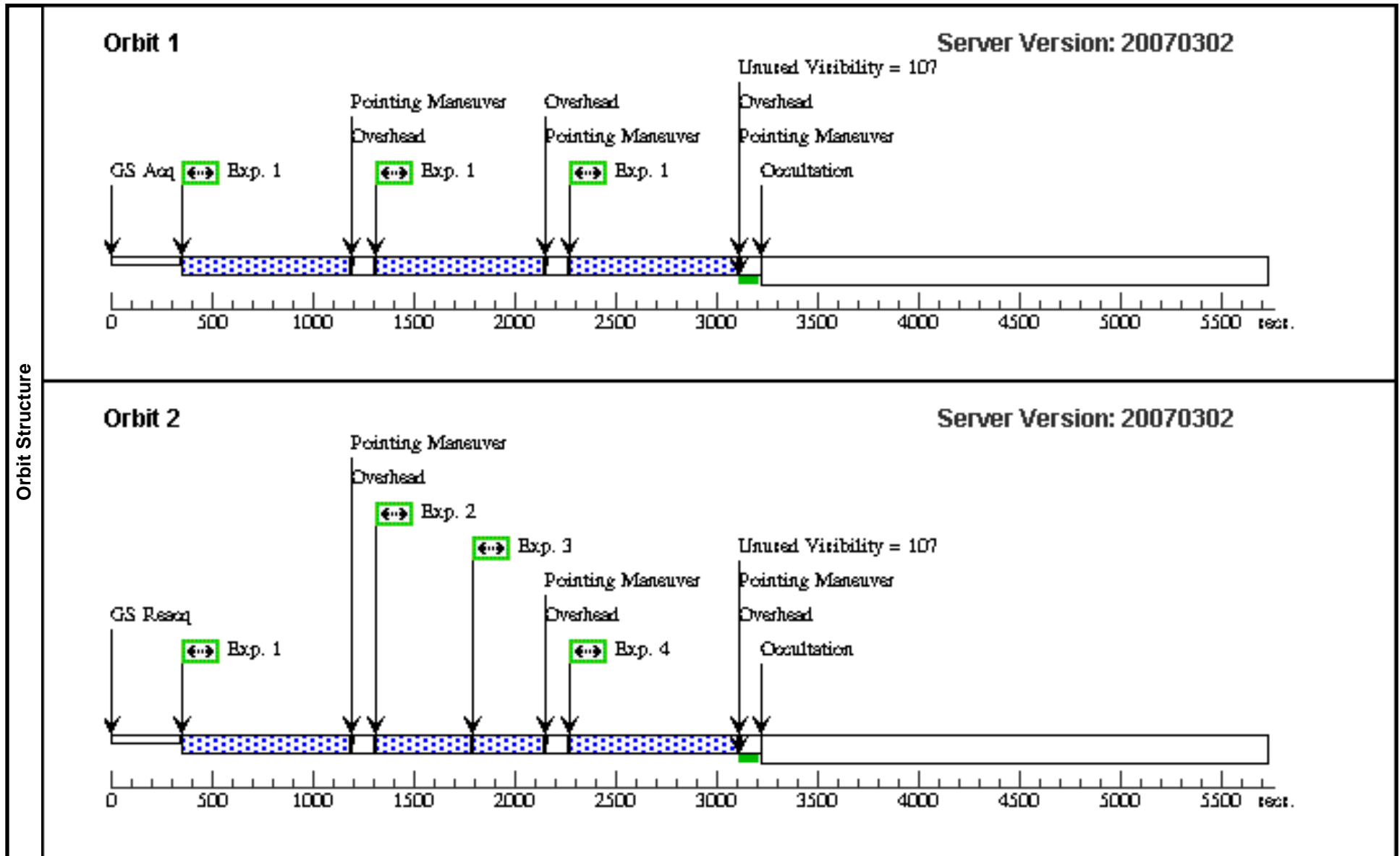
Visit	Proposal 10917, Visit 52, withdrawn Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: PCS MODE FINE; SEQ 51,52 WITHIN 5 D; ON HOLD Comments: z-band host imaging On Hold Comments: Target of Opportunity (delayed response), schedule with Visit 51									
	Patterns	#	Primary Pattern				Secondary Pattern			
(2)		Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=4 Point Spacing=0.164 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=47.2 Angle Between Sides= Center Pattern=false					(1)		
(3)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.304 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=137.2 Angle Between Sides= Center Pattern=false	Pattern Type=LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.164 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=47.2 Angle Between Sides= Center Pattern=false					(3)	
Generic Targets	#	Name	Criteria	Description						
	(5)	SHBHOST-3	Short burst with subarcsec localization and z>0.75 host	UNDESIGNATED						
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	Exposure 1	(5) SHBHOST-3	ACS/WFC, ACCUM, WFC	F850LP	CR-SPLIT=NO		Pattern 1-1 (2)	522.0 Secs [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)] [=>(Pattern 4)]	[1]
	2	Exposure 2	(5) SHBHOST-3	ACS/WFC, ACCUM, WFC	F850LP	CR-SPLIT=NO	POS TARG 0.279,2.61199		22.0 Secs [=>]	[2]
	3	Exposure 3	(5) SHBHOST-3	ACS/WFC, ACCUM, WFC	F850LP	CR-SPLIT=NO	POS TARG 0.279,2.61199	Pattern 3-3 (3)	497.0 Secs [=>(Pattern 1,1)] [=>(Pattern 1,2)] [=>(Pattern 2,1)] [=>(Pattern 2,2)]	[2]

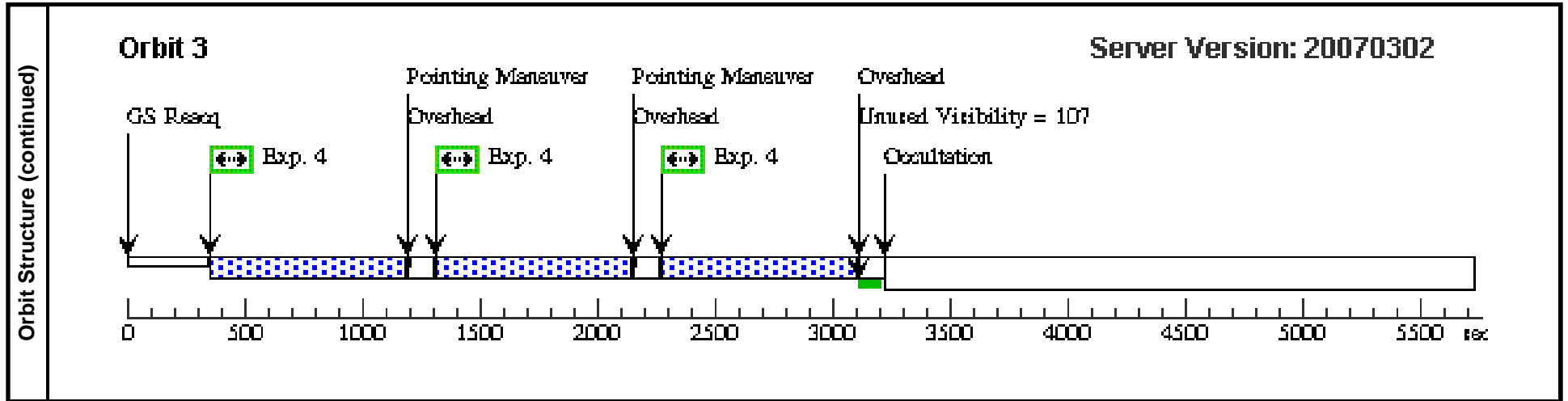


Proposal 10917 - Visit 61 - Afterglows and Environments of Short-Hard Gamma-Ray Bursts

Wed Mar 21 02:10:32 GMT 2007

Visit	Proposal 10917, Visit 61, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFPC2 Special Requirements: PCS MODE FINE <i>Comments: Reconfigured GRB051210 observation for WFPC2/WF3 aperture 3 orbits total, 439W + 675W</i>										
	Patterns	#	Primary Pattern				Secondary Pattern			Exposures	
		(6)	Pattern Type=WFPC2-BOX	Coordinate Frame=POS-TARG						(1), (4)	
		Purpose=DITHER	Pattern Orientation=26.6								
		Number Of Points=4	Angle Between Sides=143.1								
		Point Spacing=0.559	Center Pattern=false								
		Line Spacing=0.559									
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(6)	GRB051210	RA: 22 00 40.9300 (330.1705417d)	Dec: -57 36 47.10 (-57.61308d)			V=24.0+/-1.0	r=24 mag	Reference Frame: ICRS		
			Equinox: J2000								
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit
	1	Exposure 1	(6) GRB051210	WFPC2, IMAGE, WFALL	F439W	CLOCKS=YES		Pattern 1-1 (6)	600.0 Secs		
									[==>700.0 Secs (Pattern 1)]		
									[==>700.0 Secs (Pattern 2)]		[1]
									[==>700.0 Secs (Pattern 3)]		
									[==>700.0 Secs (Pattern 4)]		[2]
	2		(6) GRB051210	WFPC2, IMAGE, WFALL	F439W	CLOCKS=YES	POS TARG -0.373,-0.373		260.0 Secs		
									[==>]		[2]
	3		(6) GRB051210	WFPC2, IMAGE, WFALL	F675W	CLOCKS=YES	POS TARG -0.373,-0.373		260.0 Secs		
									[==>]		[2]
4	Exposure 4	(6) GRB051210	WFPC2, IMAGE, WFALL	F675W	CLOCKS=YES		Pattern 4-4 (6)	600.0 Secs			
								[==>700.0 Secs (Pattern 1)]		[2]	
								[==>700.0 Secs (Pattern 2)]			
								[==>700.0 Secs (Pattern 3)]		[3]	
								[==>700.0 Secs (Pattern 4)]			

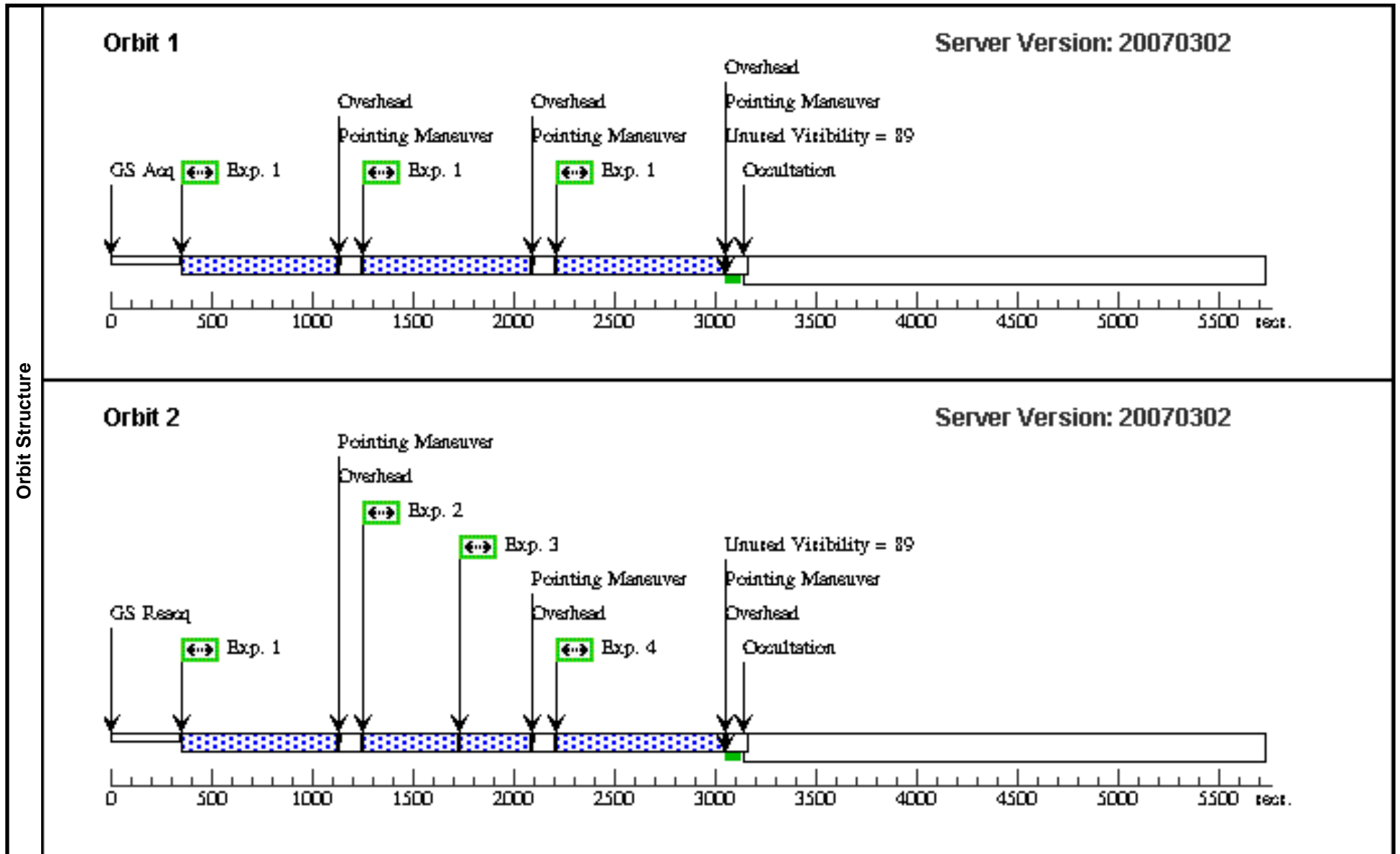


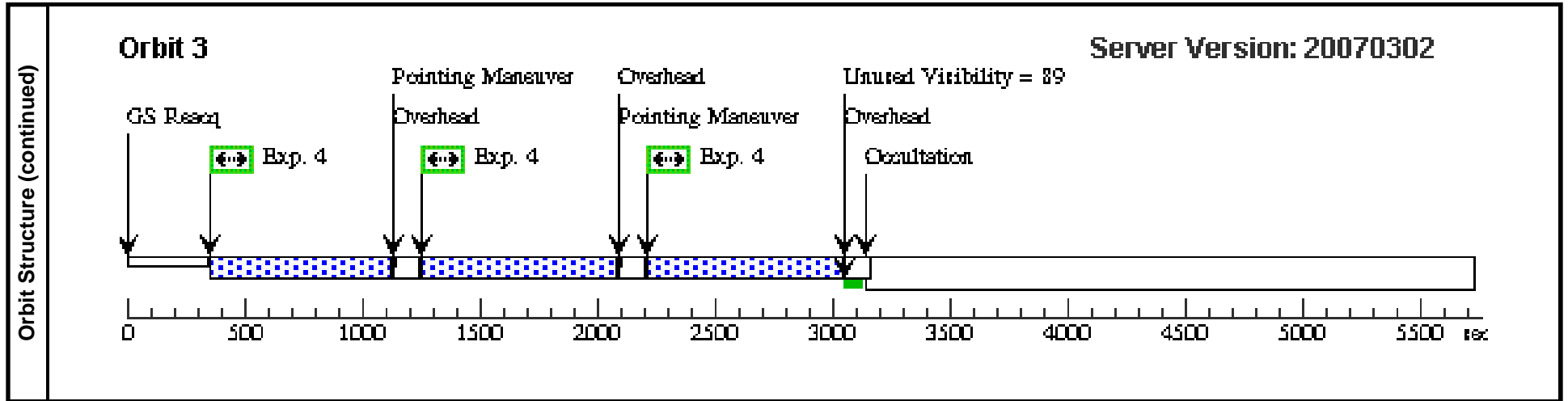


Proposal 10917 - Visit 71 - Afterglows and Environments of Short-Hard Gamma-Ray Bursts

Wed Mar 21 02:10:33 GMT 2007

Visit	Proposal 10917, Visit 71, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFPC2 Special Requirements: PCS MODE FINE <i>Comments: Reconfigured GRB051221 for WFPC2 imaging/PC1 aperture 3 orbits total, 555W + 814W</i>										
	Patterns	#	Primary Pattern				Secondary Pattern			Exposures	
		(6)	Pattern Type=WFPC2-BOX	Coordinate Frame=POS-TARG						(1), (4)	
		Purpose=DITHER	Pattern Orientation=26.6								
		Number Of Points=4	Angle Between Sides=143.1								
		Point Spacing=0.559	Center Pattern=false								
		Line Spacing=0.559									
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(7)	GRB051221	RA: 21 54 48.6300 (328.7026250d)	Dec: +16 53 27.40 (16.89094d)			V=22.0+/-1.0	r'=22.0 mag	Reference Frame: ICRS		
			Equinox: J2000								
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit
	1	Exposure 1	(7) GRB051221	WFPC2, IMAGE, PC1	F555W	CLOCKS=YES		Pattern 1-1 (6)	600.0 Secs		
								[==>(Pattern 1)]		[1]	
								[==>700.0 Secs (Pattern 2)]			
								[==>700.0 Secs (Pattern 3)]			
								[==>(Pattern 4)]		[2]	
	2	Exposure 2	(7) GRB051221	WFPC2, IMAGE, PC1	F555W	CLOCKS=YES	POS TARG -0.373,-0.373		260.0 Secs		
								[==>]		[2]	
	3	Exposure 3	(7) GRB051221	WFPC2, IMAGE, PC1	F814W	CLOCKS=YES	POS TARG -0.373,-0.373		260.0 Secs		
								[==>]		[2]	
	4	Exposure 4	(7) GRB051221	WFPC2, IMAGE, PC1	F814W	CLOCKS=YES		Pattern 4-4 (6)	600.0 Secs		
								[==>700.0 Secs (Pattern 1)]		[2]	
								[==>(Pattern 2)]			
								[==>700.0 Secs (Pattern 3)]		[3]	
								[==>700.0 Secs (Pattern 4)]			

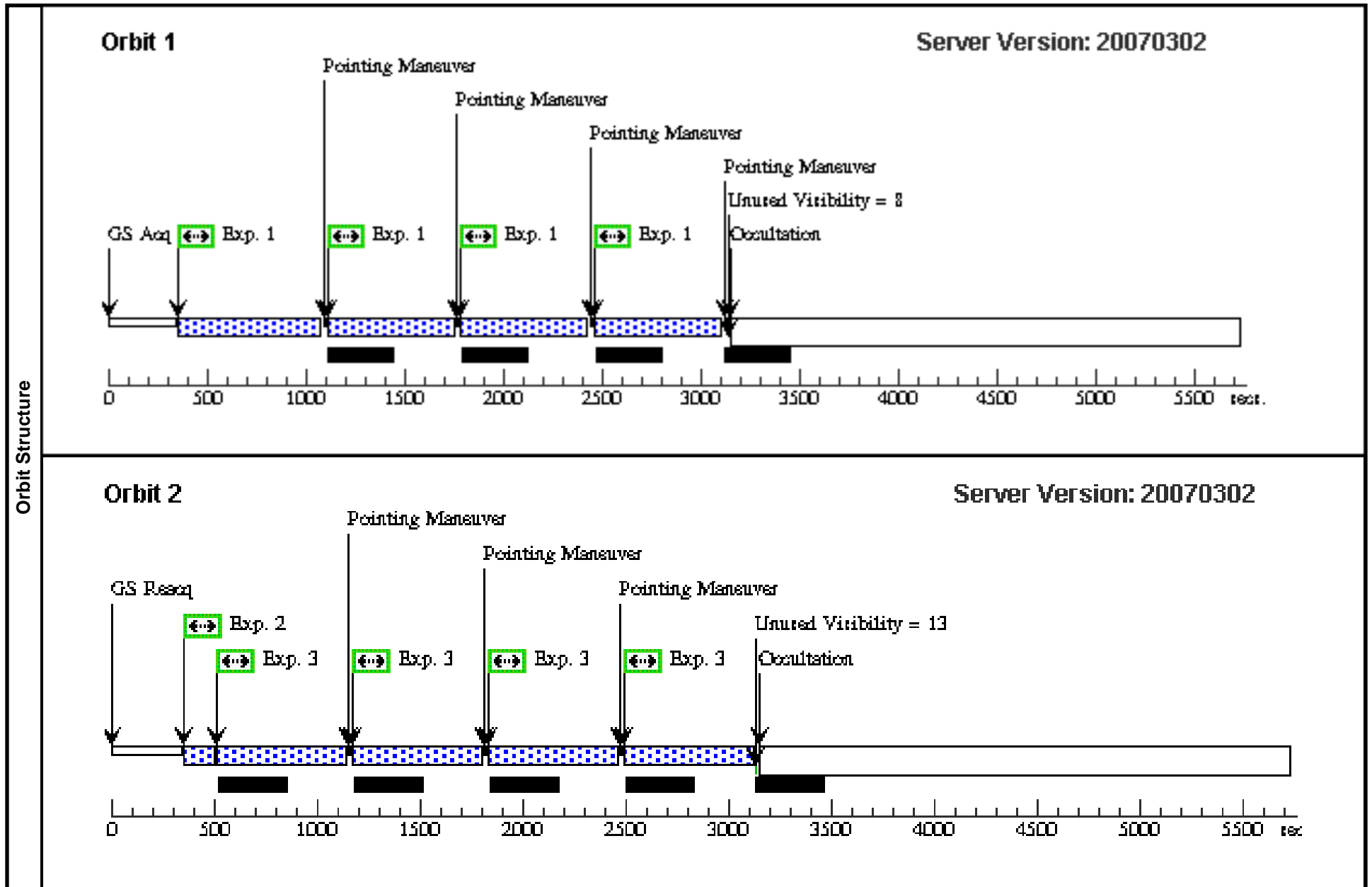




Proposal 10917 - Visit 81 - Afterglows and Environments of Short-Hard Gamma-Ray Bursts

Wed Mar 21 02:10:35 GMT 2007

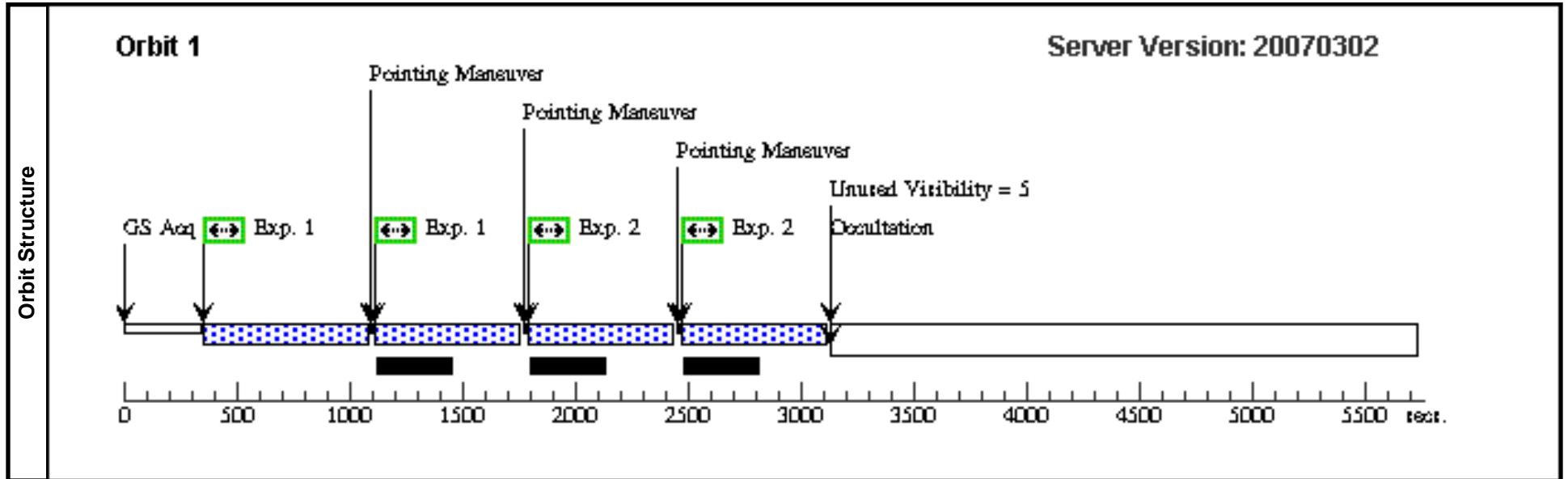
Visit	Proposal 10917, Visit 81, completed Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: PCS MODE FINE <i>Comments: I-band host imaging</i>									
Patterns	#	Primary Pattern	Secondary Pattern	Exposures						
	(2)	Pattern Type=ACS-WFC-DITHER-LINE Coordinate Frame=POS-TARG Pattern Orientation=47.2 Purpose=DITHER Angle Between Sides= Number Of Points=4 Center Pattern=false Point Spacing=0.164 Line Spacing=		(1)						
(3)	Pattern Type=ACS-WFC-DITHER-LINE Coordinate Frame=POS-TARG Pattern Orientation=137.2 Purpose=DITHER Angle Between Sides= Number Of Points=2 Center Pattern=false Point Spacing=0.304 Line Spacing=	Pattern Type=LINE Coordinate Frame=POS-TARG Pattern Orientation=47.2 Purpose=DITHER Angle Between Sides= Number Of Points=2 Center Pattern=false Point Spacing=0.164 Line Spacing=	(3)							
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(8)	GRB051227	RA: 08 20 57.9200 (125.2413333d) Dec: +31 55 30.43 (31.92512d) Equinox: J2000		V=26.0+/-1.0 r=25.8 mag	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	Exposure 1	(8) GRB051227	ACS/WFC, ACCUM, WFC	F814W	CR-SPLIT=NO		Pattern 1-1 (2)	520.0 Secs	
									[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)] [==>(Pattern 4)]	[1]
	2	Exposure 2	(8) GRB051227	ACS/WFC, ACCUM, WFC	F814W	CR-SPLIT=NO	POS TARG 0.279,2.61199			20.0 Secs
								[==>]	[2]	
3	Exposure 3	(8) GRB051227	ACS/WFC, ACCUM, WFC	F814W	CR-SPLIT=NO	POS TARG 0.279,2.61199		Pattern 3-3 (3)	505.0 Secs	
									[==>(Pattern 1,1)] [==>(Pattern 1,2)] [==>(Pattern 2,1)] [==>(Pattern 2,2)]	[2]

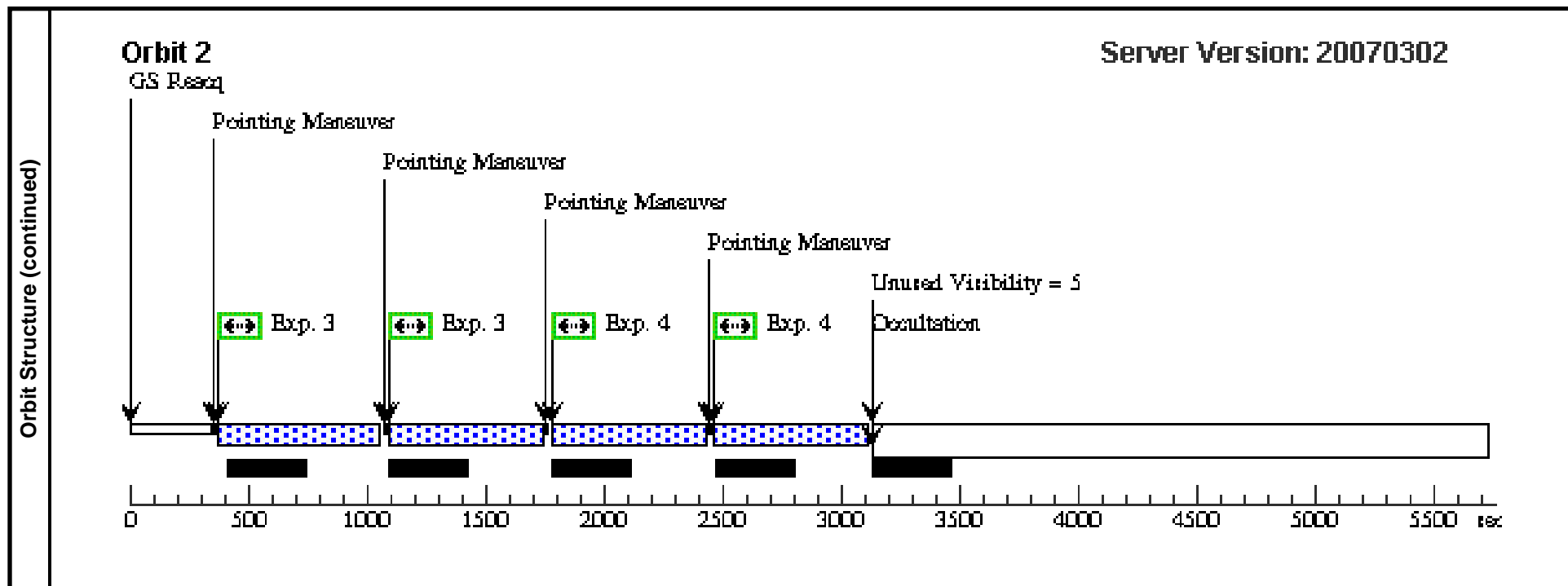


Proposal 10917 - Visit A1 - Afterglows and Environments of Short-Hard Gamma-Ray Bursts

Wed Mar 21 02:10:36 GMT 2007

Visit	Proposal 10917, Visit A1, failed Diagnostic Status: Warning Scientific Instruments: ACS/WFC Special Requirements: PCS MODE FINE <i>Comments: g+i band host imaging</i>											
	(Exposure 2 (A1.002) special requirements) Warning: Be very careful mixing POS TARG and Center_Pattern = Yes (Exposure 4 (A1.004) special requirements) Warning: Be very careful mixing POS TARG and Center_Pattern = Yes											
Diagnosics												
Patterns	#	Primary Pattern				Secondary Pattern				Exposures		
	(4)	Pattern Type=ACS-WFC-DITHER- LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.182 Line Spacing=				Coordinate Frame=POS-TARG Pattern Orientation=47.2 Angle Between Sides= Center Pattern=true				(1), (2), (3), (4)		
Fixed Targets	#	Name	Target Coordinates			Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(10)	GRB060313	RA: 04 26 28.4290 (66.6184542d) Dec: -10 50 39.91 (-10.84442d) Equinox: J2000					V=21.0+/-1.0 r'=21.0 mag		Reference Frame: ICRS		
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit	
	1	Exposure 1	(10) GRB060313	ACS/WFC, ACCUM, WFC	F475W	CR-SPLIT=NO		Pattern 1-1 (4)	522.0 Secs			
									[==>(Pattern 1)]		[1]	
									[==>(Pattern 2)]			
	2	Exposure 2	(10) GRB060313	ACS/WFC, ACCUM, WFC	F475W	CR-SPLIT=NO	POS TARG 0.2232,2 .6015		Pattern 2-2 (4)	522.0 Secs		
									[==>(Pattern 1)]		[1]	
								[==>(Pattern 2)]				
3	Exposure 3	(10) GRB060313	ACS/WFC, ACCUM, WFC	F775W	CR-SPLIT=NO			Pattern 3-3 (4)	530.0 Secs			
								[==>(Pattern 1)]		[2]		
								[==>(Pattern 2)]				
4	Exposure 4	(10) GRB060313	ACS/WFC, ACCUM, WFC	F775W	CR-SPLIT=NO	POS TARG 0.2232,2 .6015		Pattern 4-4 (4)	530.0 Secs			
								[==>(Pattern 1)]		[2]		
								[==>(Pattern 2)]				





Proposal 10917 - Visit A2 - Afterglows and Environments of Short-Hard Gamma-Ray Bursts

Wed Mar 21 02:10:37 GMT 2007

Visit	Proposal 10917, Visit A2, completed Diagnostic Status: Warning Scientific Instruments: ACS/WFC Special Requirements: PCS MODE FINE Comments: g+i band host imaging copy of AI lost to ACS suspend									
	(Exposure 2 (A2.002) special requirements) Warning: Be very careful mixing POS TARG and Center_Pattern = Yes (Exposure 4 (A2.004) special requirements) Warning: Be very careful mixing POS TARG and Center_Pattern = Yes									
Diagnosics										
Patterns	#	Primary Pattern				Secondary Pattern				Exposures
	(4)	Pattern Type=ACS-WFC-DITHER- LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.182 Line Spacing=				Coordinate Frame=POS-TARG Pattern Orientation=47.2 Angle Between Sides= Center Pattern=true				(1), (2), (3), (4)
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous	
	(10)	GRB060313	RA: 04 26 28.4290 (66.6184542d) Dec: -10 50 39.91 (-10.84442d) Equinox: J2000				V=21.0+/-1.0 r'=21.0 mag		Reference Frame: ICRS	
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	Exposure 1	(10) GRB060313	ACS/WFC, ACCUM, WFC	F475W	CR-SPLIT=NO		Pattern 1-1 (4)	522.0 Secs	
									[==>(Pattern 1)]	[1]
									[==>(Pattern 2)]	
	2	Exposure 2	(10) GRB060313	ACS/WFC, ACCUM, WFC	F475W	CR-SPLIT=NO	POS TARG 0.2232,2 .6015	Pattern 2-2 (4)	522.0 Secs	
								[==>(Pattern 1)]	[1]	
								[==>(Pattern 2)]		
3	Exposure 3	(10) GRB060313	ACS/WFC, ACCUM, WFC	F775W	CR-SPLIT=NO		Pattern 3-3 (4)	530.0 Secs		
								[==>(Pattern 1)]	[2]	
								[==>(Pattern 2)]		
4	Exposure 4	(10) GRB060313	ACS/WFC, ACCUM, WFC	F775W	CR-SPLIT=NO	POS TARG 0.2232,2 .6015	Pattern 4-4 (4)	530.0 Secs		
								[==>(Pattern 1)]	[2]	
								[==>(Pattern 2)]		

