11343 - Identifying the host galaxies for optically dark gamma-ray bursts

Cycle: 16, 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?*
G2	(1) GRB080207	WFPC2	2	27-Aug-2009 21:00:54.0	yes
G3	(1) GRB080207	WFPC2	2	27-Aug-2009 21:01:00.0	yes
A1	(1) GRB080207	NIC3	1	27-Aug-2009 21:01:04.0	yes
A2	(1) GRB080207	WFPC2	1	27-Aug-2009 21:01:06.0	yes
G4	(7) GRB051022-HOST-GALAXY	ACS/WFC	1	27-Aug-2009 21:01:09.0	yes
G5	(7) GRB051022-HOST-GALAXY	WFC3/IR	1	27-Aug-2009 21:01:12.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
G6	(1) GRB080207	WFC3/IR	1	27-Aug-2009 21:01:15.0	yes

9 Total Orbits Used

ABSTRACT

We propose to use the high spatial resolution capabilities of Chandra to obtain precise positions for a sample of Gamma-ray bursts (GRBs) with no optical afterglows, where the optical light is supresssed relative to the X-ray flux. These bursts are likely to be highly obscured and may have different environments from the optically bright GRBs. Our Chandra observations will (unlike Swift-XRT positions) allow for the unique identification of a host galaxy. To locate these host galaxies we will follow up our Chandra positions with deep optical and IR observations with HST. The ultimate aim is to understand any differences between the host galaxies of optically dark and bright GRBs, and how these affect the use of GRBs as tracers of starformation and galaxy evolution at high redshift.

OBSERVING DESCRIPTION

We propose to observe a sample of dark GRB host galaxies for bursts discovered by Swift, and subsequently located to sub-arcsecond accuracy via Chandra observations. In each case we will map the SED to provide constraints on photometric redshift and stellar population, as well as morphological information.

We utillize both 4 and 6 point dithers (4 for one orbit WFPC2 observations and 6 for two orbits).

Visit

Proposal 11343, Visit G2, completed Fri Aug 28 01:01:18 GMT 2009

Diagnostic Status: No Diagnostics

Scientific Instruments: WFPC2

Special Requirements: (none)

Fixed Targets

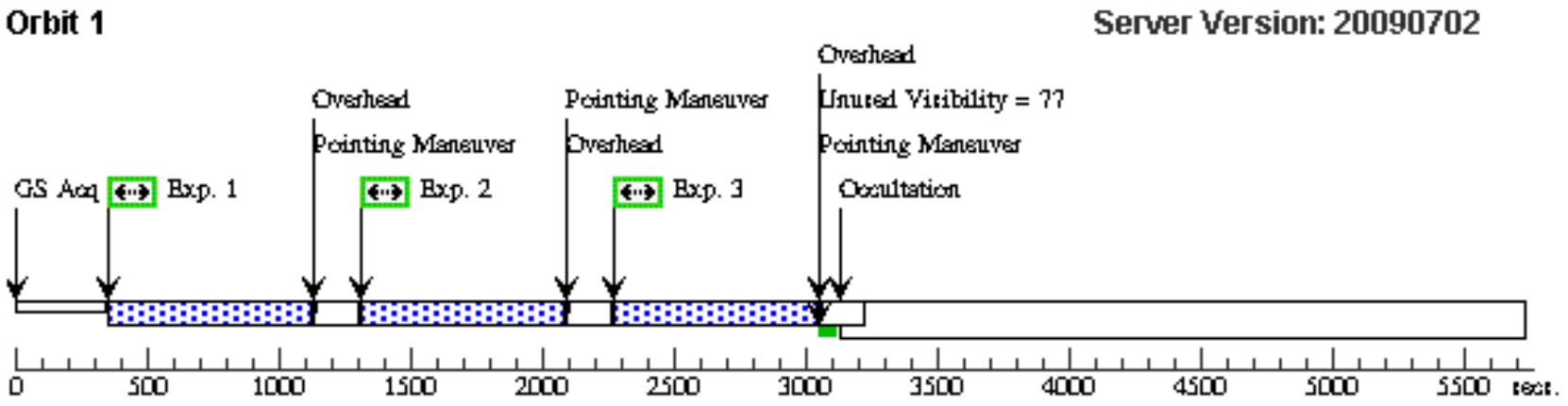
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	GRB080207	RA: 13 50 2.9700 (207.5123750d) Dec: +07 30 7.70 (7.50214d) Equinox: J2000		V=25+/-1	Reference Frame: Chandra/Swift

Comments: This is a new position, now available from Chandra observations

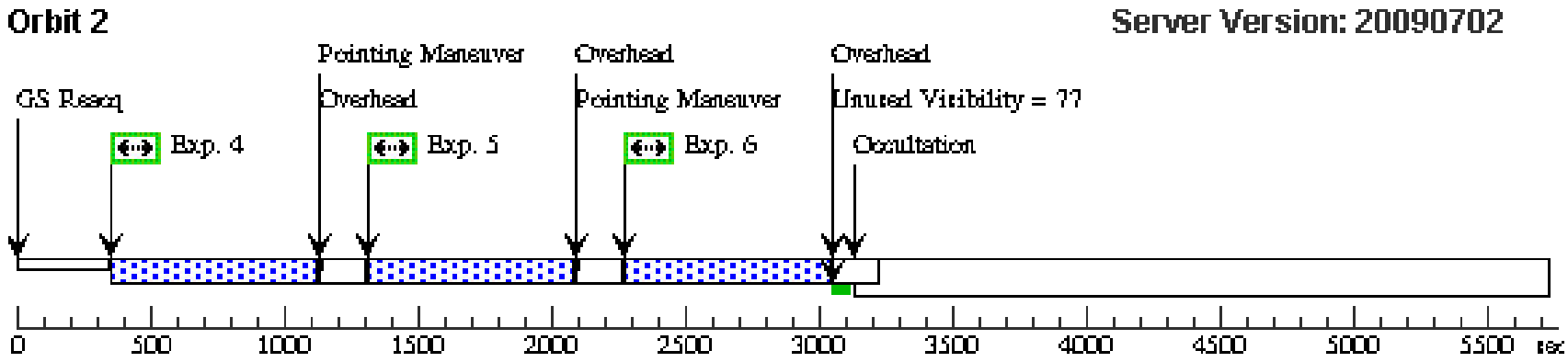
Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(1) GRB080207	WFPC2, IMAGE, WFALL-FIX	F702W	CR-SPLIT=NO	POS TARG 0,0		600 Secs *[==>600.0 Secs]*	 ***[1]***
2		(1) GRB080207	WFPC2, IMAGE, WFALL-FIX	F702W	CR-SPLIT=NO	POS TARG 0.232,0.232		500 Secs *[==>600.0 Secs]*	 ***[1]***
3		(1) GRB080207	WFPC2, IMAGE, WFALL-FIX	F702W	CR-SPLIT=NO	POS TARG 0.464,0.464		500 Secs *[==>600.0 Secs]*	 ***[1]***
4		(1) GRB080207	WFPC2, IMAGE, WFALL-FIX	F702W	CR-SPLIT=NO	POS TARG 0,0.249		600 Secs *[==>600.0 Secs]*	 ***[2]***
5		(1) GRB080207	WFPC2, IMAGE, WFALL-FIX	F702W	CR-SPLIT=NO	POS TARG 0.232,0.481		500 Secs *[==>600.0 Secs]*	 ***[2]***
6		(1) GRB080207	WFPC2, IMAGE, WFALL-FIX	F702W	CR-SPLIT=NO	POS TARG 0.464,0.713		600 Secs *[==>600.0 Secs]*	 ***[2]***

Orbit Structure



Orbit Structure (continued)



Visit

Proposal 11343, Visit G3, completed Fri Aug 28 01:01:19 GMT 2009

Diagnostic Status: No Diagnostics

Scientific Instruments: WFPC2

Special Requirements: (none)

Fixed Targets

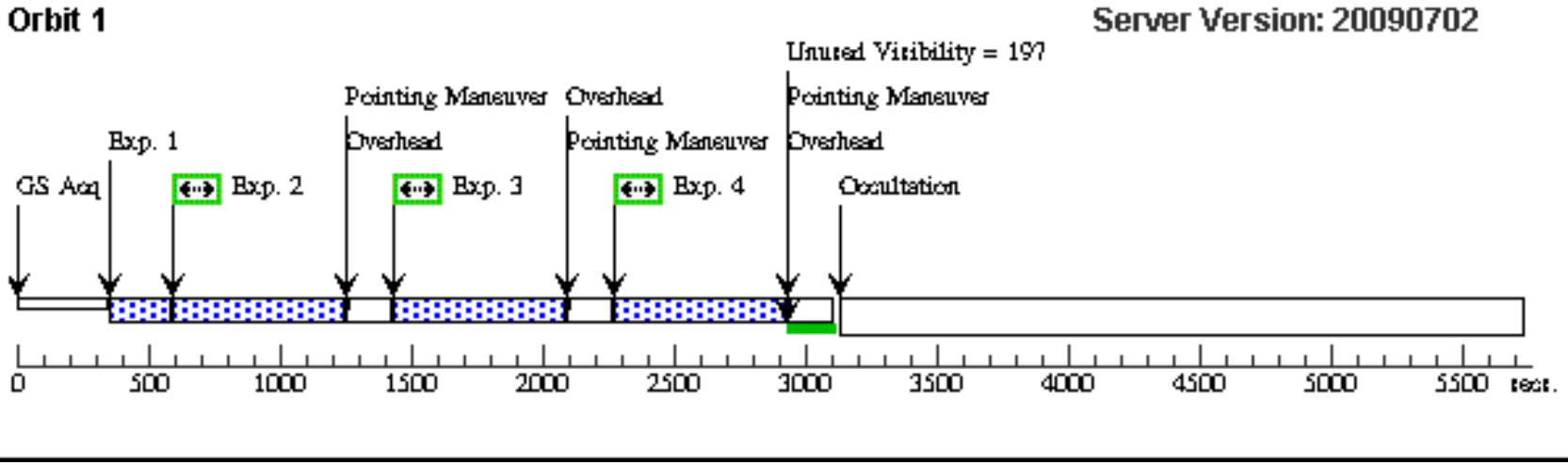
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	GRB080207	RA: 13 50 2.9700 (207.5123750d) Dec: +07 30 7.70 (7.50214d) Equinox: J2000		V=25+/-1	Reference Frame: Chandra/Swift

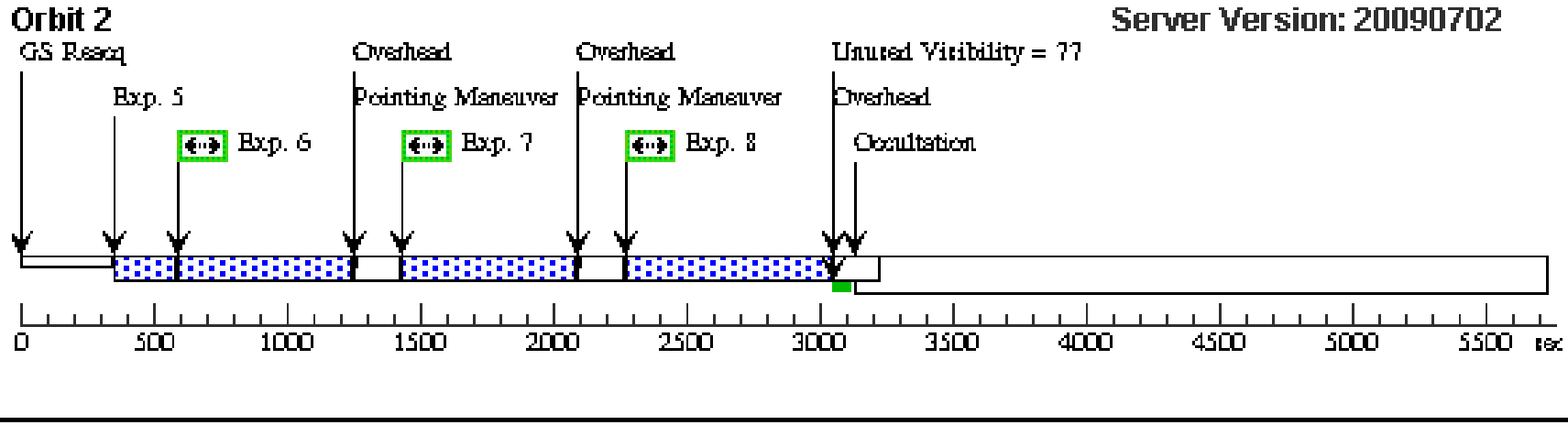
Comments: This is a new position, now available from Chandra observations

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(1) GRB080207	WFPC2, IMAGE, WFALL-FIX	F814W	CR-SPLIT=NO	POS TARG 0,0		10 Secs	
								[==>]	***[1]***
2		(1) GRB080207	WFPC2, IMAGE, WFALL-FIX	F814W	CR-SPLIT=NO	POS TARG 0,0		600 Secs	
								[==>]	***[1]***
3		(1) GRB080207	WFPC2, IMAGE, WFALL-FIX	F814W	CR-SPLIT=NO	POS TARG 0.232,0.232		500 Secs	
								[==>]	***[1]***
4		(1) GRB080207	WFPC2, IMAGE, WFALL-FIX	F814W	CR-SPLIT=NO	POS TARG 0.464,0.464		500 Secs	
								[==>]	***[1]***
5		(1) GRB080207	WFPC2, IMAGE, WFALL-FIX	F814W	CR-SPLIT=NO	POS TARG 0,0.249		10 Secs	
								[==>]	***[2]***
6		(1) GRB080207	WFPC2, IMAGE, WFALL-FIX	F814W	CR-SPLIT=NO	POS TARG 0,0.249		600 Secs	
								[==>]	***[2]***
7		(1) GRB080207	WFPC2, IMAGE, WFALL-FIX	F814W	CR-SPLIT=NO	POS TARG 0.232,0.481		500 Secs	
								[==>]	***[2]***
8		(1) GRB080207	WFPC2, IMAGE, WFALL-FIX	F814W	CR-SPLIT=NO	POS TARG 0.464,0.713		600 Secs	
								[==>]	***[2]***

Orbit Structure





Visit

Proposal 11343, Visit A1, completed Fri Aug 28 01:01:19 GMT 2009

Diagnostic Status: No Diagnostics

Scientific Instruments: NIC3

Special Requirements: (none)

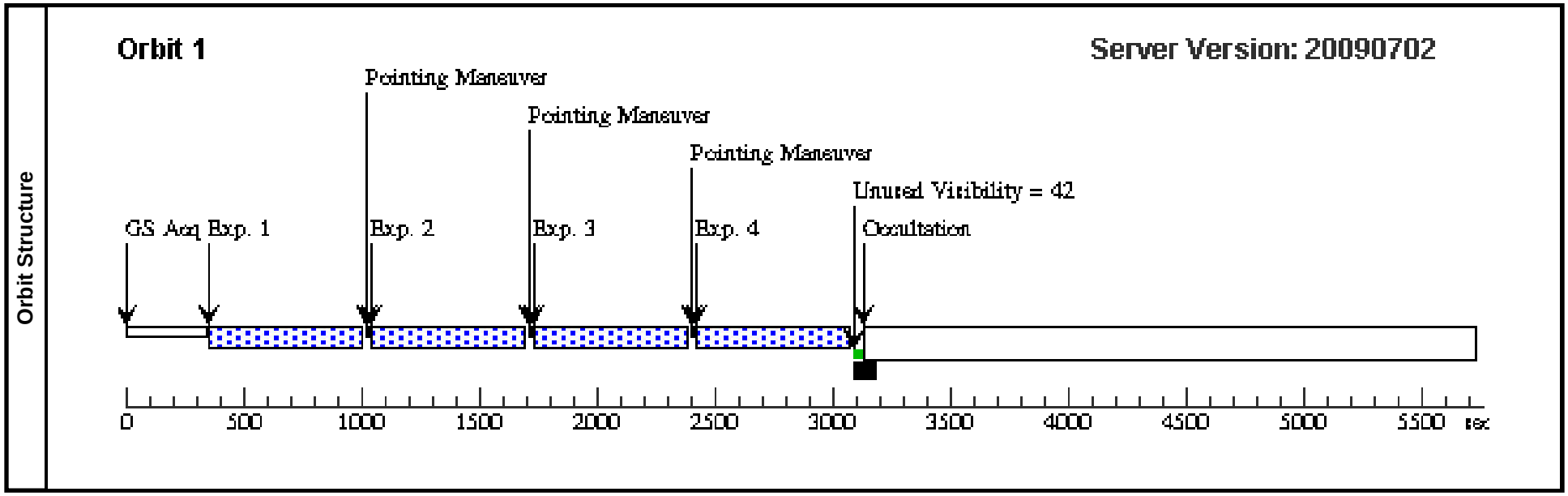
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	GRB080207	RA: 13 50 2.9700 (207.5123750d) Dec: +07 30 7.70 (7.50214d) Equinox: J2000		V=25+/-1	Reference Frame: Chandra/Swift

Comments: This is a new position, now available from Chandra observations

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(1) GRB080207	NIC3, MULTIACCUM, NIC3	F160W	NSAMP=12; SAMP-SEQ=SPARS64	POS TARG -1.426,-1.421		*[==>]*	***[1]***
2		(1) GRB080207	NIC3, MULTIACCUM, NIC3	F160W	NSAMP=12; SAMP-SEQ=SPARS64	POS TARG -1.426,1.523		*[==>]*	***[1]***
3		(1) GRB080207	NIC3, MULTIACCUM, NIC3	F160W	NSAMP=12; SAMP-SEQ=SPARS64	POS TARG 1.528,-1.421		*[==>]*	***[1]***
4		(1) GRB080207	NIC3, MULTIACCUM, NIC3	F160W	NSAMP=12; SAMP-SEQ=SPARS64	POS TARG 1.528,1.523		*[==>]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20090702
Pointing Maneuver
Pointing Maneuver
Pointing Maneuver
Unused Visibility = 42
GS Acq
Exp. 1
Exp. 2
Exp. 3
Exp. 4
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11343, Visit A2, completed Fri Aug 28 01:01:20 GMT 2009

Diagnostic Status: No Diagnostics

Scientific Instruments: WFPC2

Special Requirements: (none)

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFPC2-BOX	Coordinate Frame=POS-TARG		(1)
	Purpose=DITHER	Pattern Orientation=26.56505		
	Number Of Points=4	Angle Between Sides=143.1301		
	Point Spacing=0.559017	Center Pattern=false		
	Line Spacing=0.559017			

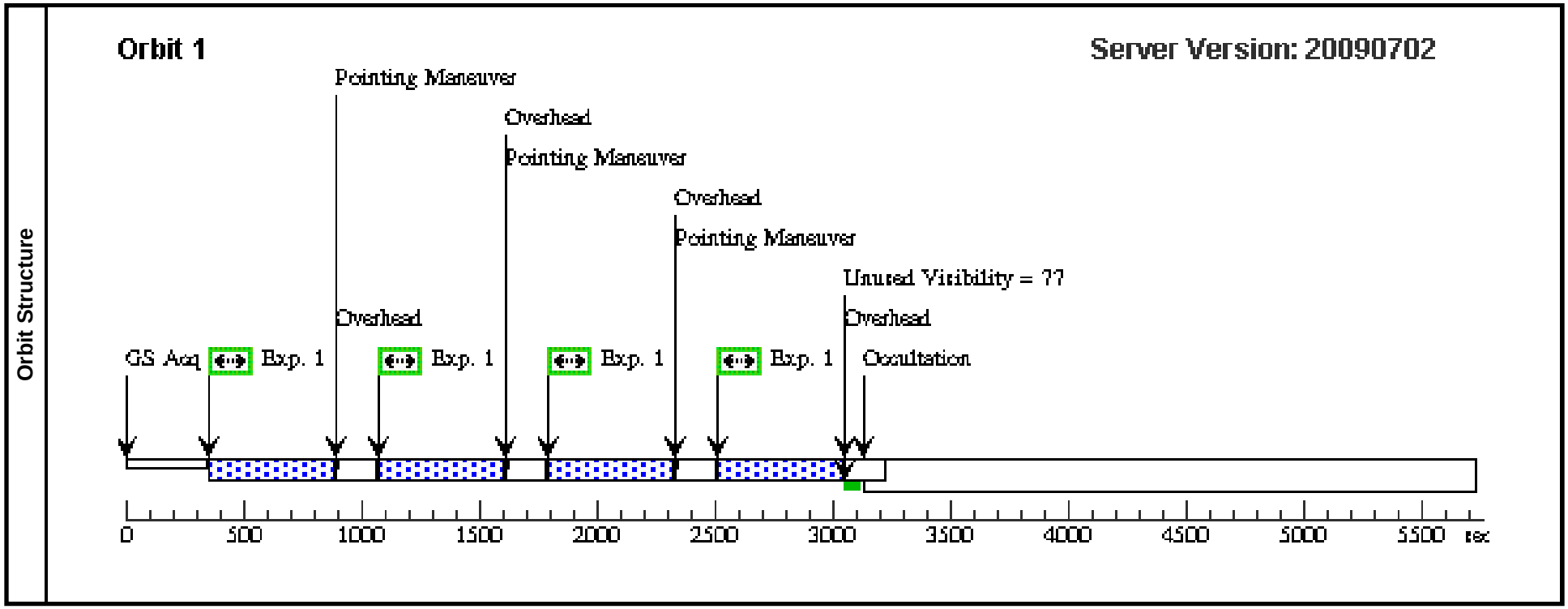
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	GRB080207	RA: 13 50 2.9700 (207.5123750d)		V=25+/-1	Reference Frame: Chandra/Swift
		Dec: +07 30 7.70 (7.50214d)			
		Equinox: J2000			

Comments: This is a new position, now available from Chandra observations

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(1) GRB080207	WFPC2, IMAGE, WF3	F606W	CR-SPLIT=NO		Pattern 1, Exps 1-1 (1)	400 Secs	
								[==>(Pattern 1)]	***[1]***
								[==>(Pattern 2)]	
								[==>(Pattern 3)]	
								[==>(Pattern 4)]	


Orbit Structure
Orbit 1
Server Version: 20090702
Pointing Maneuver
Overhead
Pointing Maneuver
Overhead
Pointing Maneuver
Unused Visibility = ??
Overhead
Overhead
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 11343, Visit G4, completed Fri Aug 28 01:01:20 GMT 2009

Diagnostic Status: Warning

Scientific Instruments: ACS/WFC

Special Requirements: GYRO MODE 3GOBAD

Diagnostics

(Visit G4) Warning (Form): Gyro Mode overrides default value of 2G.

Patterns

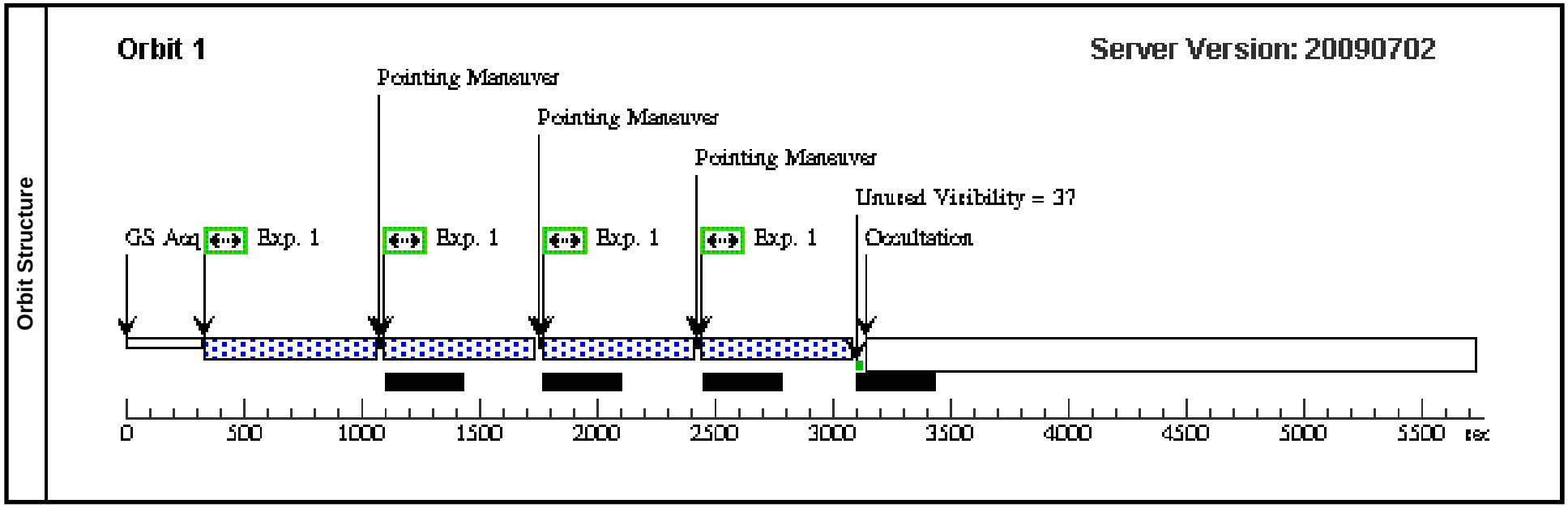
#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=ACS-WFC-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.265 Line Spacing=0.187	Coordinate Frame=POS-TARG Pattern Orientation=20.67 Angle Between Sides=69.05 Center Pattern=false		(1)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(7)	GRB051022-HOST-GALAXY	RA: 23 56 4.1000 (359.0170833d) Dec: +19 36 24.10 (19.60669d) Equinox: J2000		V=(?) R-Magnitude: 22.0 +/- 1	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(7) GRB051022-HOST-GALAXY	ACS/WFC, ACCUM, WFC1	F606W			Pattern 2, Exps 1-1 (2)	520 Secs	
								[==>(Pattern 1)] *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20090702
Pointing Maneuver
Pointing Maneuver
Pointing Maneuver
Unused Visibility = 37
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 11343, Visit G5, scheduling Fri Aug 28 01:01:21 GMT 2009

Diagnostic Status: Warning

Scientific Instruments: WFC3/IR

Special Requirements: GYRO MODE 3GOBAD

Diagnostics

(Visit G5) Warning (Form): Gyro Mode overrides default value of 2G.

Patterns

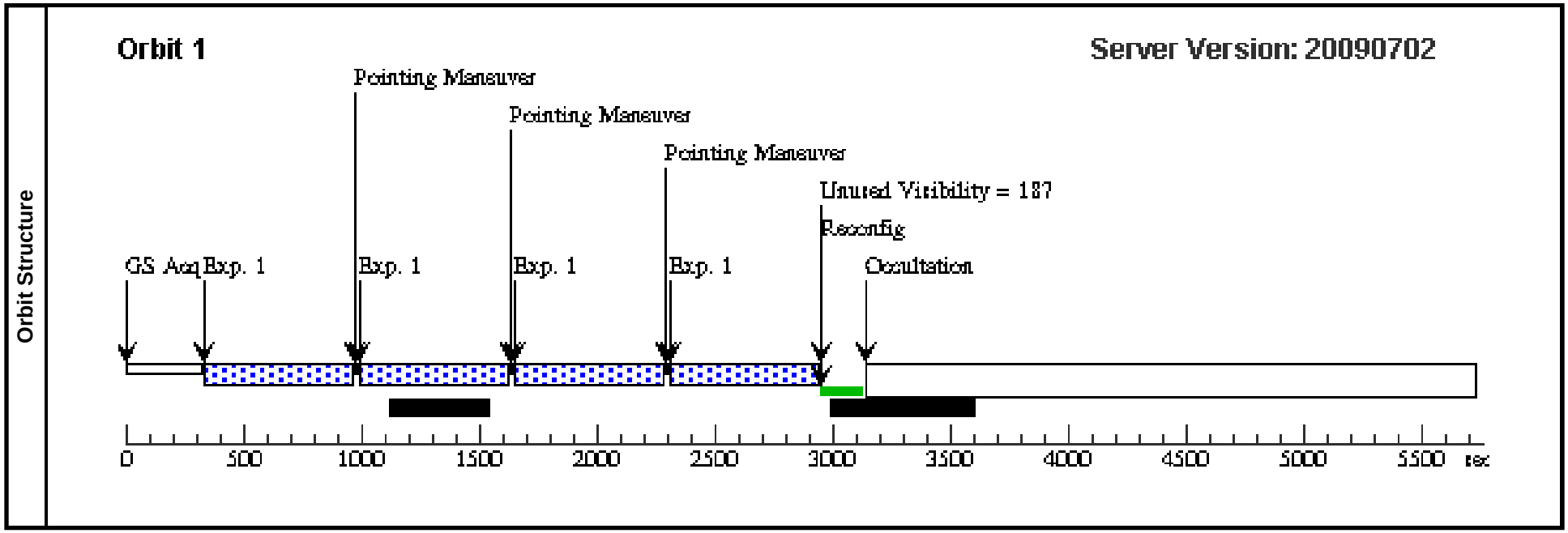
#	Primary Pattern		Secondary Pattern	Exposures
(3)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=0.572 Line Spacing=0.365	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(1)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(7)	GRB051022-HOST-GALAXY	RA: 23 56 4.1000 (359.0170833d) Dec: +19 36 24.10 (19.60669d) Equinox: J2000		V=(?) R-Magnitude: 22.0 +/- 1	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(7) GRB051022-HOST-GALAXY	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=12; SAMP-SEQ=STEP100		Pattern 3, Exps 1-1 (3)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20090702
Pointing Maneuver
Pointing Maneuver
Pointing Maneuver
Unused Visibility = 187
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 11343, Visit G6, scheduling Fri Aug 28 01:01:21 GMT 2009

Diagnostic Status: Warning

Scientific Instruments: WFC3/IR

Special Requirements: GYRO MODE 3GOBAD

Diagnostics

(Visit G6) Warning (Form): Gyro Mode overrides default value of 2G.

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(3)	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)

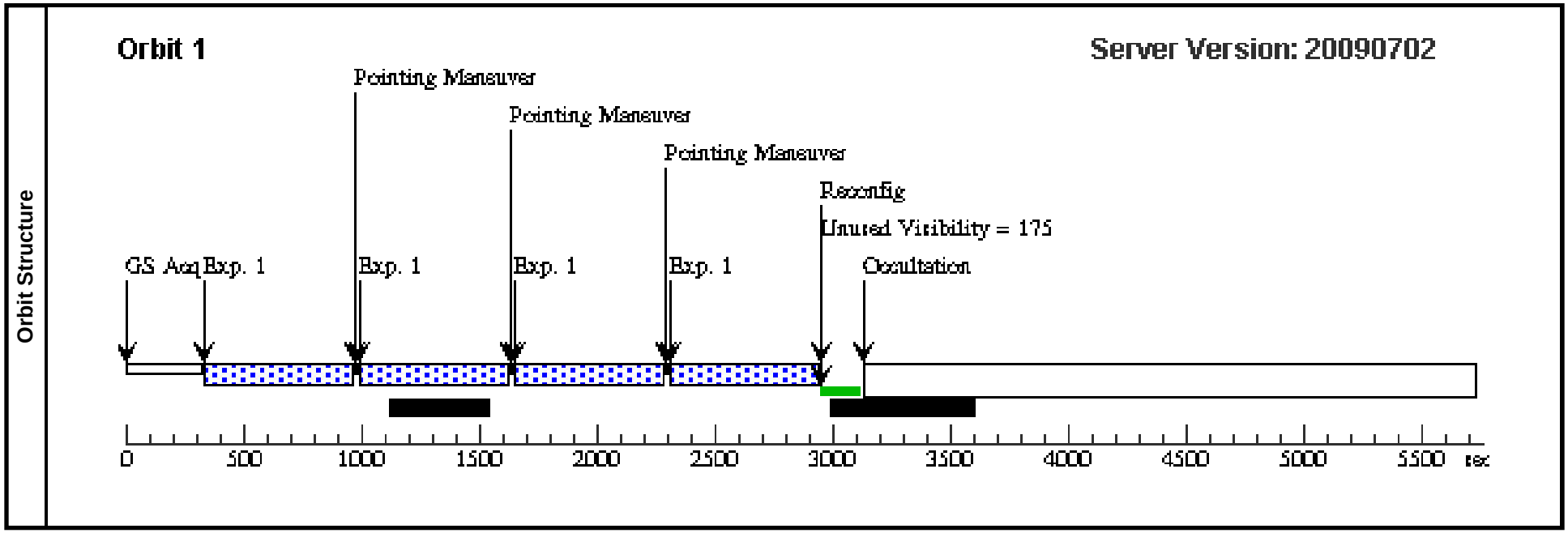
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	GRB080207	RA: 13 50 2.9700 (207.5123750d) Dec: +07 30 7.70 (7.50214d) Equinox: J2000		V=25+/-1	Reference Frame: Chandra/Swift

Comments: This is a new position, now available from Chandra observations

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(1) GRB080207	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=12; SAMP-SEQ=STEP100		Pattern 3, Exps 1-1 (3)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20090702
Pointing Maneuver
Pointing Maneuver
Pointing Maneuver
Reconfig
Unused Visibility = 175
GS Acq
Exp. 1
Exp. 1
Exp. 1
Exp. 1
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec