11989 - The Integral Sign Galaxy

Cycle: 16, Proposal Category: GO/DD

(Availability Mode: SUPPORTED)

INVESTIGATORS

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VISITS

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
01	(1) UGC-03697	WFPC2	4	27-Jan-2009 21:32:33.0	yes
02	(1) UGC-03697	WFPC2	4	27-Jan-2009 21:32:39.0	yes
03	(1) UGC-03697	WFPC2	4	27-Jan-2009 21:32:45.0	yes

12 Total Orbits Used

ABSTRACT

We will observe the unusual warped disk galaxy known as the Integral Sign Galaxy, UGC 3697, with a small two-position WFPC2 mosaic. Observations will be obtained in three broad band filters and the resulting image will be released on the 19th anniversary of the launch of the Hubble Space Telescope on ~April 24, 2009. Multidrizzled mosaics will be made available through the archive.

OBSERVING DESCRIPTION

We will utilize a well-tested extragalactic observing sequence for our observations that is designed for maximum efficiency. The main goal of this sequence is to go as deep as possible by using wide filters available in WFPC2. We will use the F450W, F606W and F814W filters to achieve this goal. The redshift of this object precludes the use of a separate H-alpha filter. At each pointing we will observe a 2-orbit sequence in the F450W, F606W, and F814W filters. Each filter will be dithered in a four-position sub-pixel dither pattern with two dither positions per orbit. We can obtain a total of 5600s exposure per filter at each of the two mosaic positions. In the heavily shaded region of Fig.2 the total integration time per pixel will be doubled. The proposed sequence requires a total of 12 orbits. The full galaxy will be observed with a 2-position mosaic (Fig.2). The mosaic is constructed by stepping one WF chip width (with allowance for overlap) between each pointing. During February we are able to observe this galaxy at an orient that produces a slightly diagonal layout (Fig.2) that is the preferred orientation for creating a sense of motion and dynamism in an image. Observations are possible in March as well, if necessary, but we need to have the data in hand by the third week of March at the latest to allow sufficient time for data processing and the standard news
approval process.

ADDITIONAL COMMENTS

We request the use of sched 30 which allows 2800s of integration per orbit for this high dec target. We have checked in APT and there is no change in available windows in Jan-Feb 2009 when going from sched 70 to sched 30. This change allows us to avoid needlessly wasting observing time and S/N with no impact to schedulability. The observations must be made by ~March 21, 2009 to allow sufficient time to process the images before the April launch anniversary. We prefer observations in late January or February if possible. We will divide the observing into at least three independent visits to minimize scheduling complications, though we will require all observations to be made at (nearly) the same orient.

Visit

Proposal 11989, Visit 01, implementation Wed Jan 28 02:32:50 GMT 2009

Diagnostic Status: No Diagnostics

Scientific Instruments: WFPC2

Special Requirements: SCHED 100%; ORIENT 140D TO 150 D

Patterns

#	Primary Pattern		Secondary Pattern		Exposures
(1)	Pattern Type=LINE	Coordinate Frame=POS-TARG	Pattern Type=WFPC2-BOX	Coordinate Frame=POS-TARG	(1)
	Purpose=MOSAIC	Pattern Orientation=0	Purpose=DITHER	Pattern Orientation=26.56505	
	Number Of Points=2	Angle Between Sides=	Number Of Points=4	Angle Between Sides=143.130102	
	Point Spacing=74	Center Pattern=false	Point Spacing=0.559017	Center Pattern=false	
	Line Spacing=		Line Spacing=0.559017		

Fixed Targets

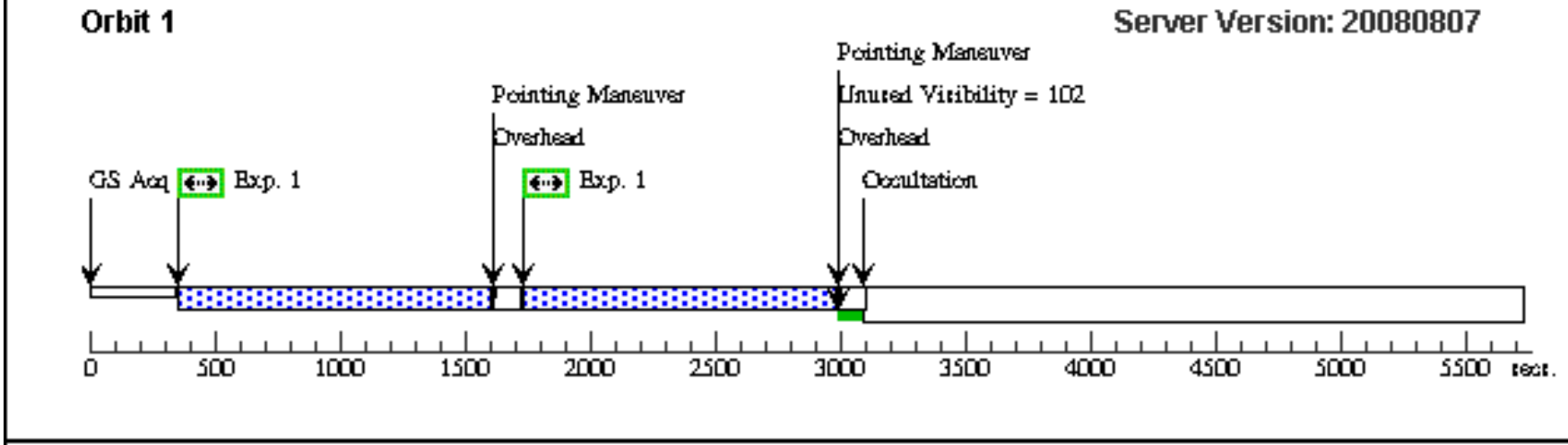
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	UGC-03697	RA: 07 11 23.1067 (107.8462779d)		V=13.3+/-0.2	Reference Frame: ICRS
		Dec: +71 50 31.04 (71.84196d)			
		Equinox: J2000			

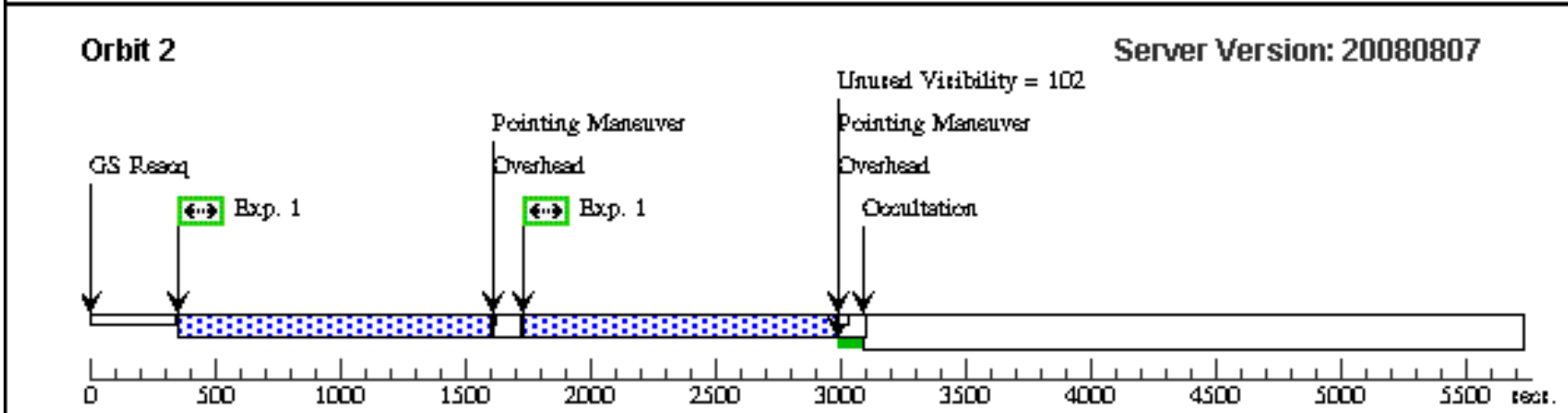
Comments: This object was generated by the targetselector and retrieved from the NED database.

Exposures

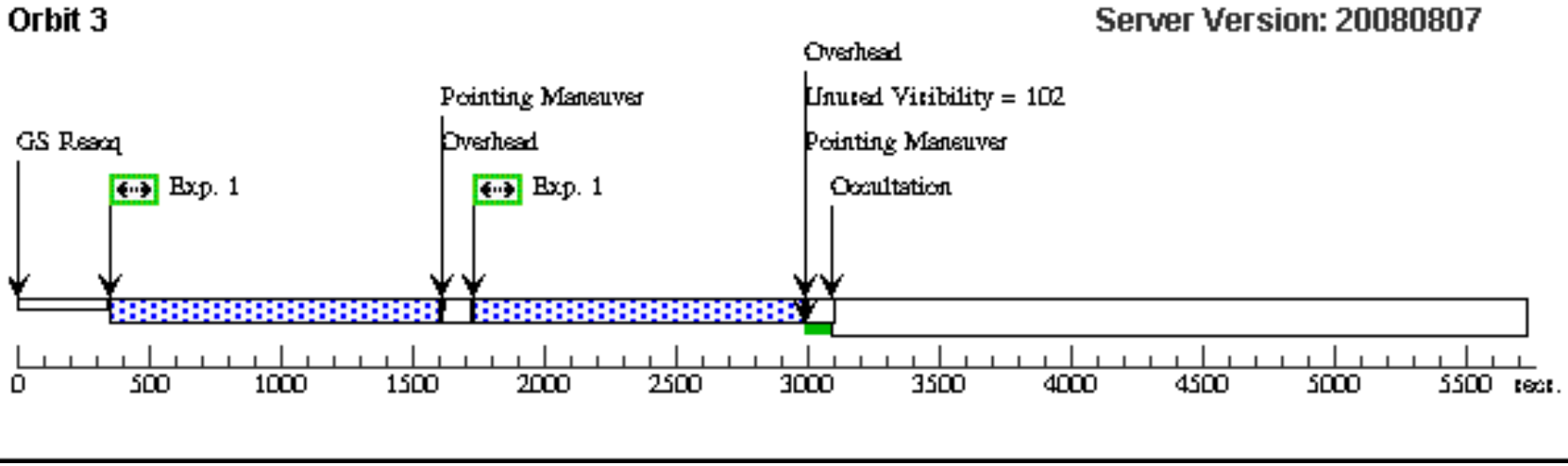
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(1) UGC-03697	WFPC2, IMAGE, WF3-FIX	F450W	CR-SPLIT=NO; CLOCKS=YES	GS ACQ SCENARIO BASE1T3	Pattern 1-1 (1)	1100 Secs	
								[==>(Pattern 1,1)] *[==>(Pattern 1,2)]*	***[1]***
								[==>(Pattern 1,3)] *[==>(Pattern 1,4)]*	***[2]***
								[==>(Pattern 2,1)] *[==>(Pattern 2,2)]*	***[3]***
								[==>(Pattern 2,3)] *[==>(Pattern 2,4)]*	***[4]***

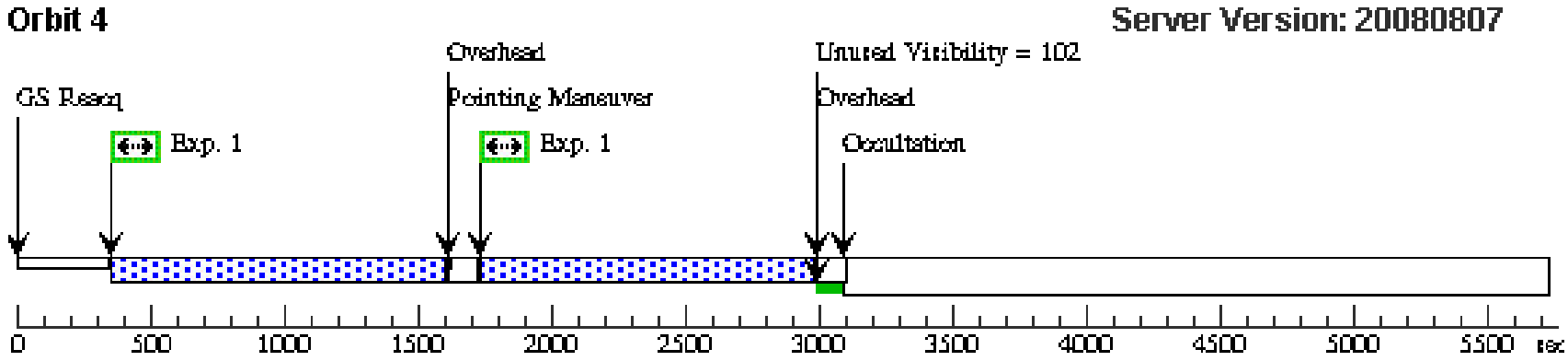
Orbit Structure





Orbit Structure (continued)





Visit

Proposal 11989, Visit 02, implementation Wed Jan 28 02:32:51 GMT 2009

Diagnostic Status: No Diagnostics

Scientific Instruments: WFPC2

Special Requirements: SCHED 100%; SAME ORIENT AS 01

Patterns

#	Primary Pattern		Secondary Pattern		Exposures
(1)	Pattern Type=LINE	Coordinate Frame=POS-TARG	Pattern Type=WFPC2-BOX	Coordinate Frame=POS-TARG	(1)
	Purpose=MOSAIC	Pattern Orientation=0	Purpose=DITHER	Pattern Orientation=26.56505	
	Number Of Points=2	Angle Between Sides=	Number Of Points=4	Angle Between Sides=143.130102	
	Point Spacing=74	Center Pattern=false	Point Spacing=0.559017	Center Pattern=false	
	Line Spacing=		Line Spacing=0.559017		

Fixed Targets

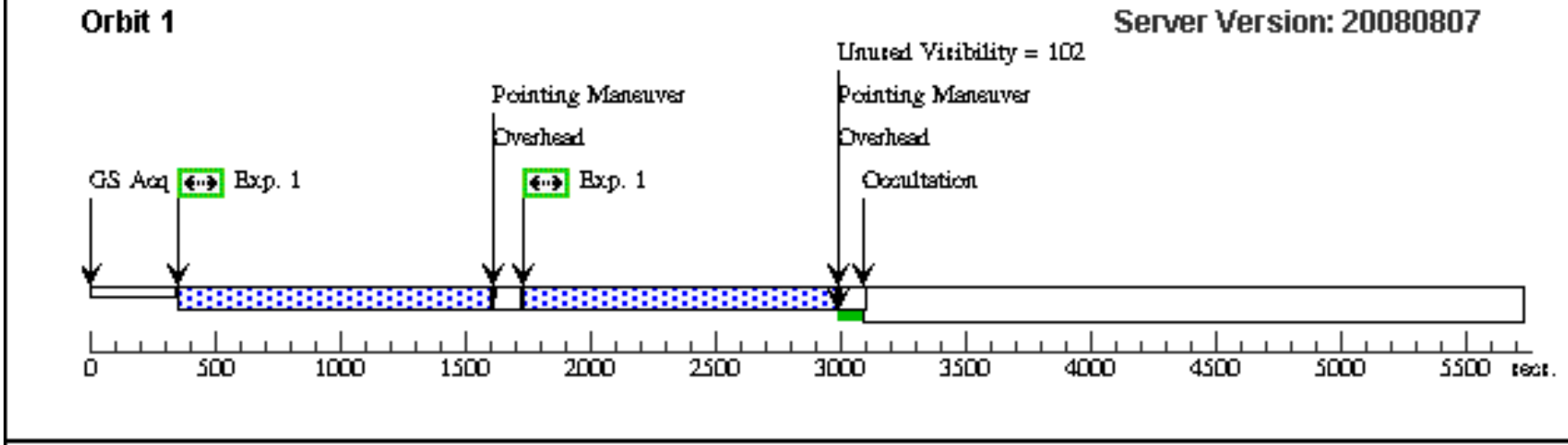
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	UGC-03697	RA: 07 11 23.1067 (107.8462779d)		V=13.3+/-0.2	Reference Frame: ICRS
		Dec: +71 50 31.04 (71.84196d)			
		Equinox: J2000			

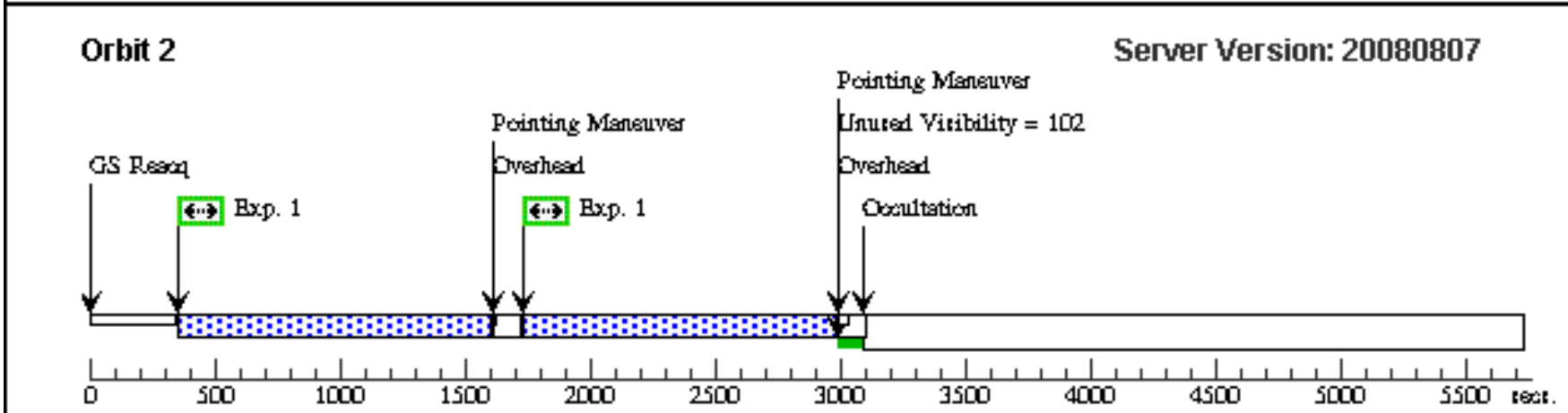
Comments: This object was generated by the targetselector and retrieved from the NED database.

Exposures

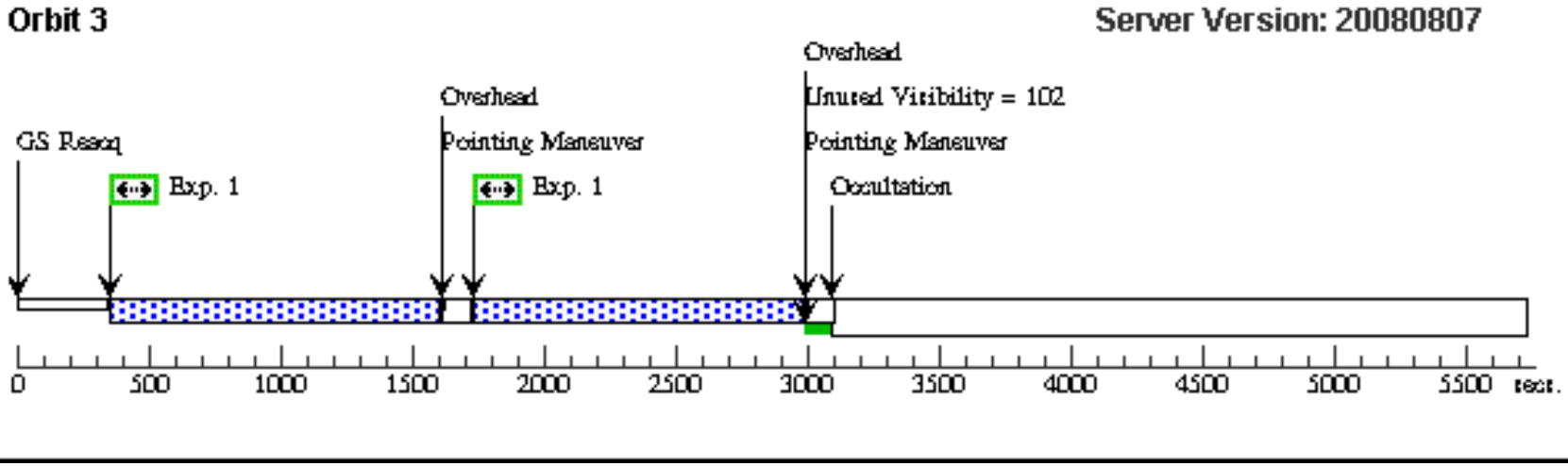
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(1) UGC-03697	WFPC2, IMAGE, WF3-FIX	F606W	CR-SPLIT=NO; CLOCKS=YES	GS ACQ SCENARIO BASE1T3	Pattern 1-1 (1)	1100 Secs	
								[==>(Pattern 1,1)] *[==>(Pattern 1,2)]*	***[1]***
								[==>(Pattern 1,3)] *[==>(Pattern 1,4)]*	***[2]***
								[==>(Pattern 2,1)] *[==>(Pattern 2,2)]*	***[3]***
								[==>(Pattern 2,3)] *[==>(Pattern 2,4)]*	***[4]***

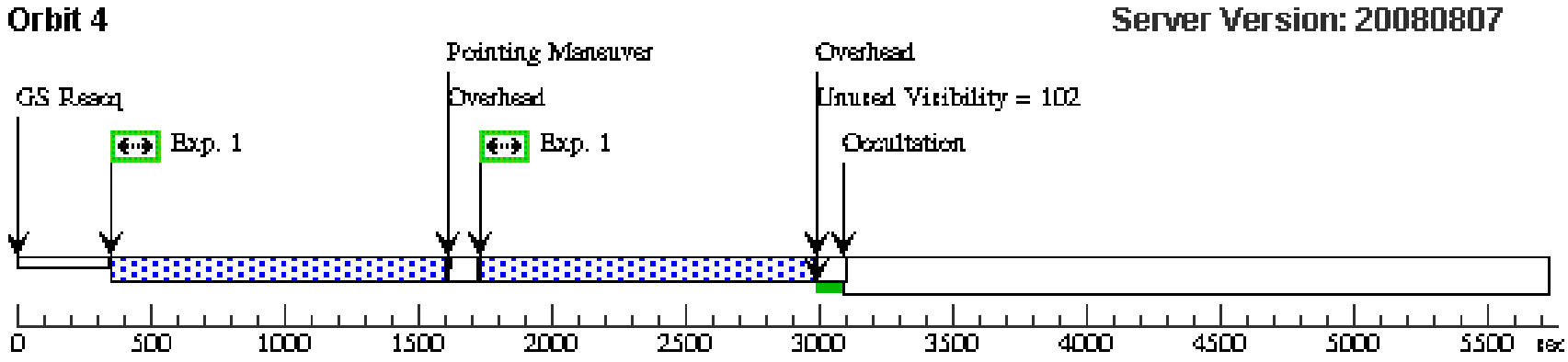
Orbit Structure





Orbit Structure (continued)





Visit

Proposal 11989, Visit 03, implementation Wed Jan 28 02:32:52 GMT 2009

Diagnostic Status: No Diagnostics

Scientific Instruments: WFPC2

Special Requirements: SCHED 100%; SAME ORIENT AS 01

Patterns

#	Primary Pattern		Secondary Pattern		Exposures
(1)	Pattern Type=LINE	Coordinate Frame=POS-TARG	Pattern Type=WFPC2-BOX	Coordinate Frame=POS-TARG	(1)
	Purpose=MOSAIC	Pattern Orientation=0	Purpose=DITHER	Pattern Orientation=26.56505	
	Number Of Points=2	Angle Between Sides=	Number Of Points=4	Angle Between Sides=143.130102	
	Point Spacing=74	Center Pattern=false	Point Spacing=0.559017	Center Pattern=false	
	Line Spacing=		Line Spacing=0.559017		

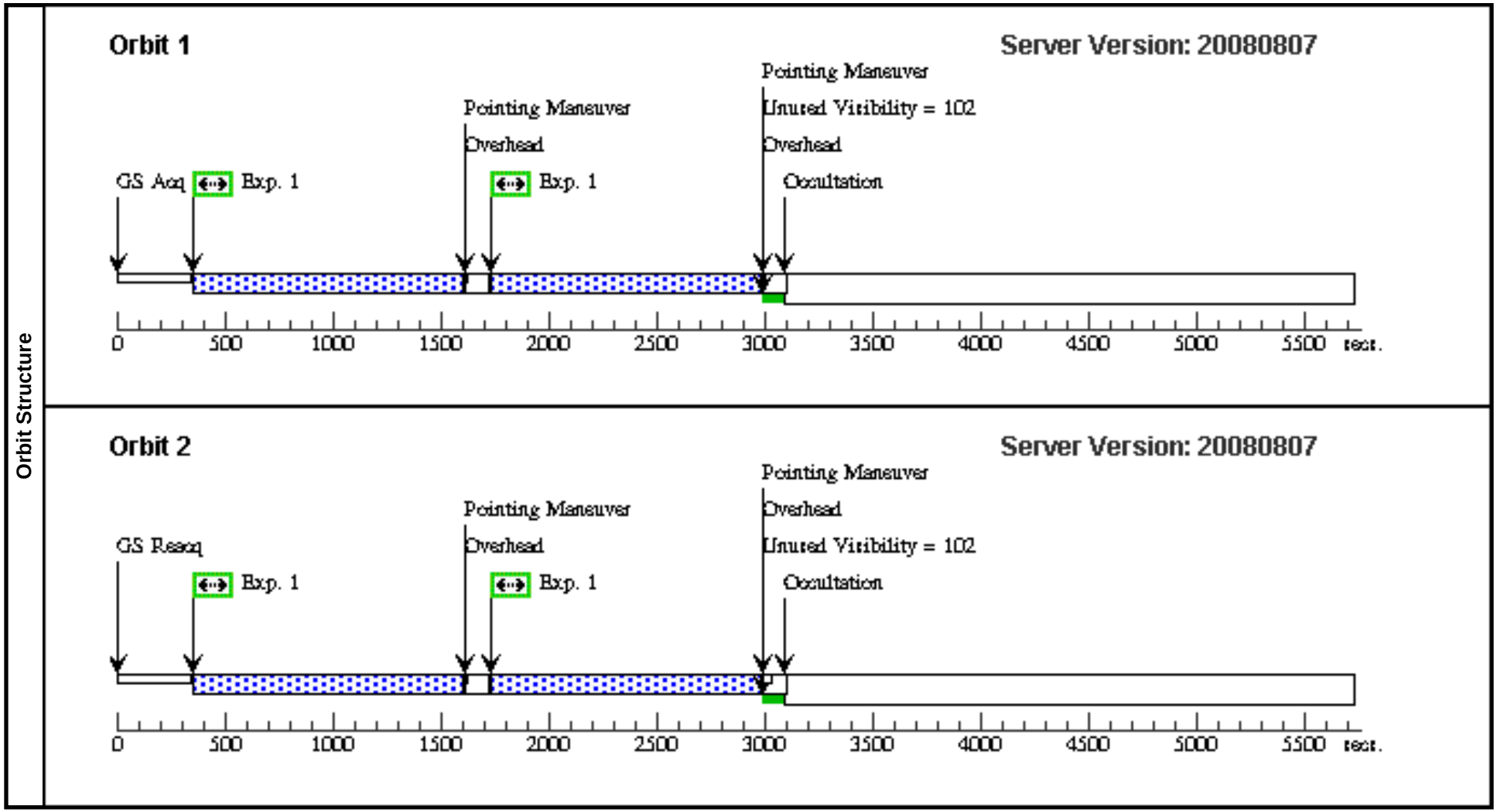
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	UGC-03697	RA: 07 11 23.1067 (107.8462779d) Dec: +71 50 31.04 (71.84196d) Equinox: J2000		V=13.3+/-0.2	Reference Frame: ICRS

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

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(1) UGC-03697	WFPC2, IMAGE, WF3-FIX	F814W	CR-SPLIT=NO; CLOCKS=YES	GS ACQ SCENARIO BASE1T3	Pattern 1-1 (1)	1100 Secs	
								[==>(Pattern 1,1)] *[==>(Pattern 1,2)]*	***[1]***
								[==>(Pattern 1,3)] *[==>(Pattern 1,4)]*	***[2]***
								[==>(Pattern 2,1)] *[==>(Pattern 2,2)]*	***[3]***
								[==>(Pattern 2,3)] *[==>(Pattern 2,4)]*	***[4]***


Orbit Structure
Orbit 1
Server Version: 20080807
Pointing Maneuver
Unused Visibility = 102
Overhead
Occultation
Pointing Maneuver
Overhead
GS Acq
Exp. 1
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec.
Orbit 2
Server Version: 20080807
Pointing Maneuver
Overhead
Unused Visibility = 102
Occultation
Pointing Maneuver
Overhead
GS Reacq
Exp. 1
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec.

Orbit Structure (continued)