11973 - SAINTS - Supernova 1987A INTensive Survey

Cycle: 16, Proposal Category: GO/DD

(Availability Mode: SUPPORTED)

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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) SN-1987A	WFPC2	2	15-Jan-2009 21:03:37.0	yes
02	(1) SN-1987A	WFPC2	3	15-Jan-2009 21:03:45.0	yes

5 Total Orbits Used

ABSTRACT

SAINTS is a program to observe SN 1987A, the brightest supernova since 1604, as it matures into the youngest supernova remnant at age 21. HST is the essential tool for resolving SN1987A's many physical components. A violent encounter is underway between the fastest-moving debris and the circumstellar ring: shocks excite "hotspots." Radio, optical, infrared and X-ray fluxes have been rising rapidly: we have organized Australia Telescope, HST, VLT, Spitzer, and Chandra observations to understand the several emission mechanisms at work. Photons from the shocked ring will excite previously invisible gas outside the ring, revealing the true extent of the mass loss that preceded the explosion of Sanduleak -69 202. This will help test ideas for the progenitor of SN 1987A. The inner debris, excited by

radioactive isotopes from the explosion, is now resolved and seen to be aspherical, providing direct evidence on the shape of the explosion itself. Questions about SN 1987A remain unanswered. A rich and unbroken data set from SAINTS will help answer these central questions and will build an archive for the future to help answer questions we have not yet thought to ask.

OBSERVING DESCRIPTION

hi,
you can schedule these observations whenever.

Visit

Proposal 11973, Visit 01, scheduling Fri Jan 16 02:03:49 GMT 2009

Diagnostic Status: No Diagnostics

Scientific Instruments: WFPC2

Special Requirements: ORIENT 35D TO 55 D; ORIENT 125D TO 145 D; ORIENT 215D TO 235 D; ORIENT 305D TO 325 D; BEFORE 01-MAY-2009:00:00:00

Comments: the optimal orientation desired is 40, 130,220, or 310
any orientation below is fine.
If you have to remove the orientation requirement to schedule thats fine.

Patterns

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

Fixed Targets

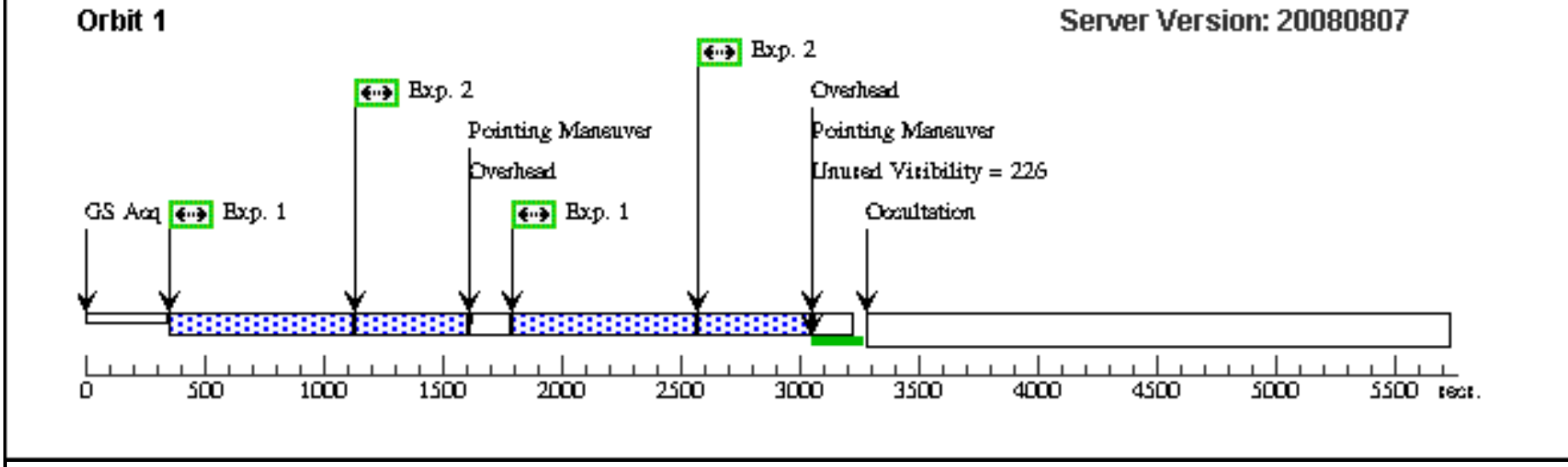
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	SN-1987A	RA: 05 35 28.1100 (83.8671250d)		V=23	Reference Frame: ICRS
		Dec: -69 16 10.85 (-69.26968d)			
		Equinox: J2000			

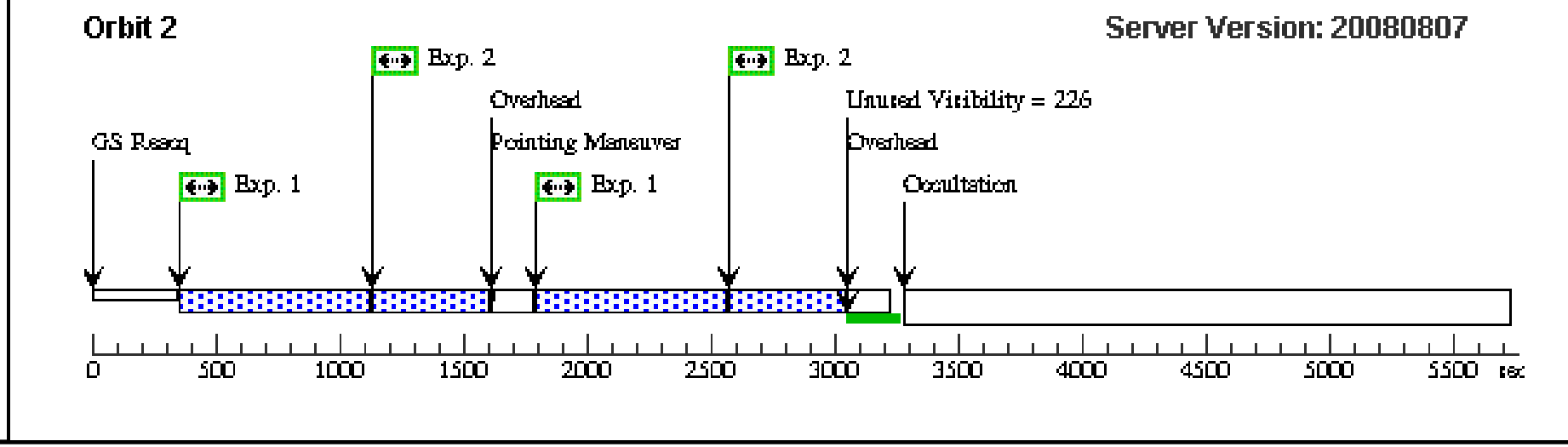
Comments: This object was generated by the targetselector and retrieved from the NED database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(1) SN-1987A	WFPC2, IMAGE, PC1	F439W	CR-SPLIT=NO		Pattern 1-2 (1)	500 Secs	
								[==>(Pattern 1)] *[==>(Pattern 2)]*	***[1]***
								[==>(Pattern 3)] *[==>(Pattern 4)]*	***[2]***
2		(1) SN-1987A	WFPC2, IMAGE, PC1	F675W	CR-SPLIT=NO		Pattern 1-2 (1)	400 Secs	
								[==>(Pattern 1)] *[==>(Pattern 2)]*	***[1]***
								[==>(Pattern 3)] *[==>(Pattern 4)]*	***[2]***

Orbit Structure





Visit

Proposal 11973, Visit 02, scheduling Fri Jan 16 02:03:51 GMT 2009

Diagnostic Status: No Diagnostics

Scientific Instruments: WFPC2

Special Requirements: ORIENT 35D TO 55 D; ORIENT 125D TO 145 D; ORIENT 215D TO 235 D; ORIENT 305D TO 325 D; BEFORE 01-MAY-2009:00:00:00

Comments: the optimal orientation desired is 40, 130,220, or 310
any orientation below is acceptable.
If you have to remove the orientation requirement to schedule thats fine.

Fixed Targets

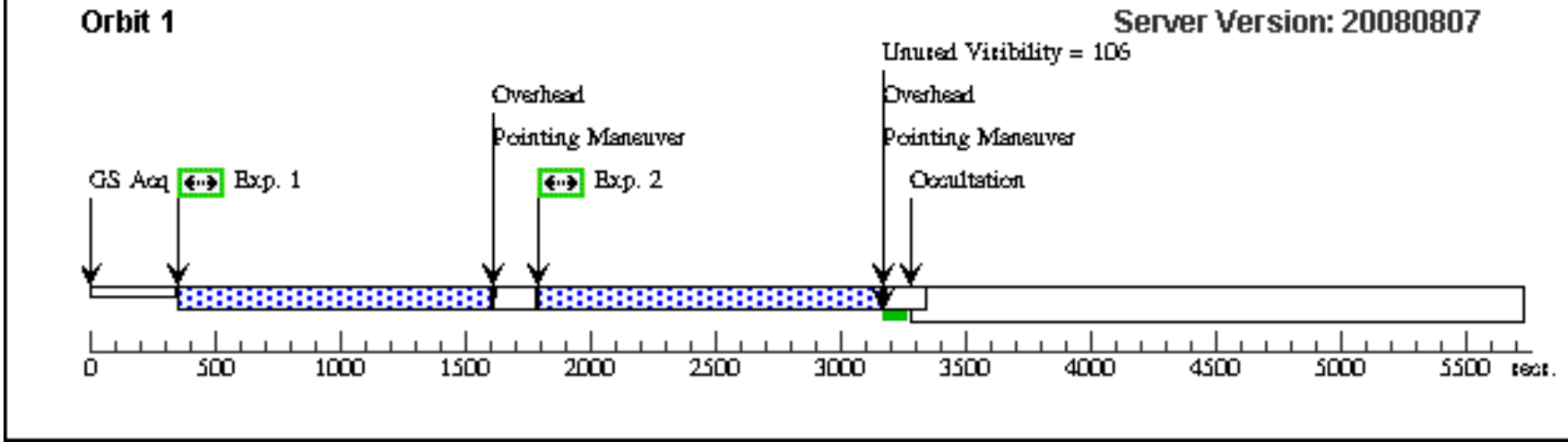
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	SN-1987A	RA: 05 35 28.1100 (83.8671250d) Dec: -69 16 10.85 (-69.26968d) Equinox: J2000		V=23	Reference Frame: ICRS

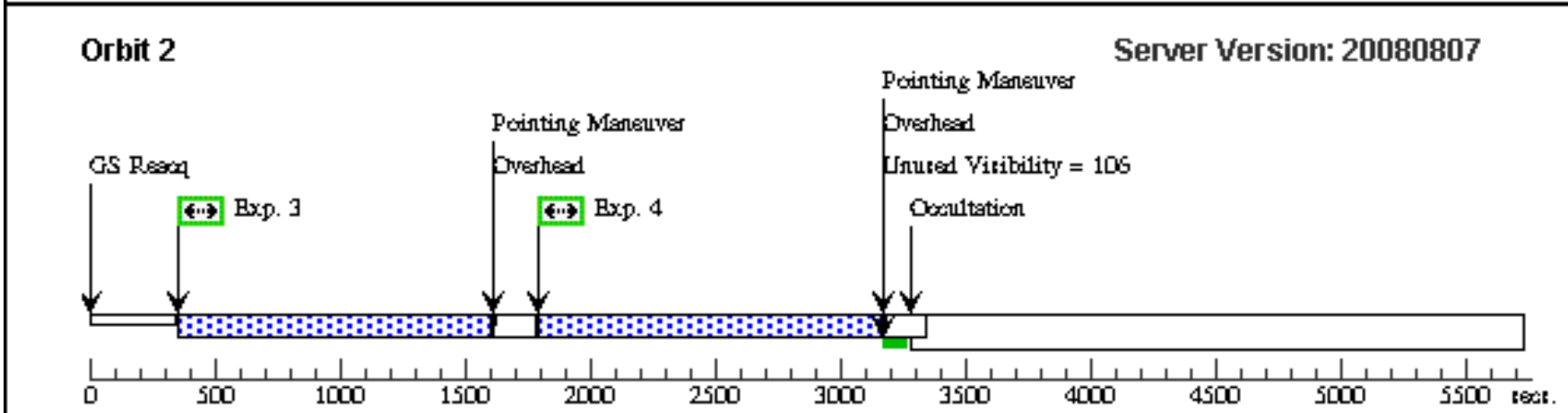
Comments: This object was generated by the targetselector and retrieved from the NED database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(1) SN-1987A	WFPC2, IMAGE, PC1	F502N	CR-SPLIT=NO			1100 Secs	
								[==>]	***[1]***
2		(1) SN-1987A	WFPC2, IMAGE, PC1	F502N	CR-SPLIT=NO	POS TARG 0.498,0.249		1200 Secs	
								[==>]	***[1]***
3		(1) SN-1987A	WFPC2, IMAGE, PC1	F502N	CR-SPLIT=NO	POS TARG 0.747,0.747		1100 Secs	
								[==>]	***[2]***
4		(1) SN-1987A	WFPC2, IMAGE, PC1	F502N	CR-SPLIT=NO	POS TARG 0.249,0.498		1200 Secs	
								[==>]	***[2]***
5		(1) SN-1987A	WFPC2, IMAGE, PC1	F502N	CR-SPLIT=NO	POS TARG -0.498,-0.249		1100 Secs	
								[==>]	***[3]***
6		(1) SN-1987A	WFPC2, IMAGE, PC1	F502N	CR-SPLIT=NO	POS TARG -0.747,-0.747		1200 Secs	
								[==>]	***[3]***

Orbit Structure





Orbit Structure (continued)