13181 - SN 1987A-- Bridging the Gap for HST's Legacy

Cycle: 20, 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	WFC3/UVIS	1	22-Jan-2013 22:14:01.0	yes

1 Total Orbits Used

ABSTRACT

We request 1 orbit of Directors Discretion Time to avoid a serious gap in the HST observations of a unique event of our (and HSTs) lifetime, SN 1987A. We request this small amount of DD time to continue the very productive imaging portion of the SAINTS SN 1987A program. The last observation of this type was made in January of 2011. If no action is taken, the earliest possible observation will be in 2014. An unbroken string of observations is the essential tool for detecting change and establishing a uniform legacy archive. A gap of a year is not so terrible, a gap of two years is regrettable, but a gap of three years would be a tragedy. As we have demonstrated, these observations are valuable on their own, revealing a new energy source is at work to power the emission from the debris. The HST observations have a unique blend of photometric fidelity and angular resolution that makes them the essential partner to ongoing X-ray, radio, and far-IR observations from the ground and from space. A new element is the advent of ALMA, which has the potential, when used with HST observations, to reveal new aspects of dust formation and the kinematics of the explosion. We need more-or-less simultaneous HST images to extract the maximum understanding from these extensive and

sustained efforts at other wavelengths.

OBSERVING DESCRIPTION

TBD

Visit

Proposal 13181, Visit 01, implementation Wed Jan 23 03:14:10 GMT 2013

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: BETWEEN 01-JAN-2013:00:00:00 AND 31-MAR-2013:00:00:00

Comments: The Visit planner indicates a visibility window from Jan 29, 2013 - Feb 20,2013 an observation during that time would be perfect.

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.173 Line Spacing=0.112	Coordinate Frame=POS-TARG Pattern Orientation=23.884 Angle Between Sides=81.785 Center Pattern=false		(1-2)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	SN-1987A	RA: 05 35 28.0200 (83.8667500d) Dec: -69 16 11.07 (-69.26974d) Equinox: J2000		V=22	Reference Frame: SIMBAD

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

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(1) SN-1987A	WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB	F438W	CR-SPLIT=NO; FLASH=12		Pattern 1, Exps 1-2 in Visit 01 (1)	300 Secs *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
2		(1) SN-1987A	WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB	F625W	CR-SPLIT=NO		Pattern 1, Exps 1-2 in Visit 01 (1)	300 Secs *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***

Orbit Structure