



12469 - High-Precision Proper Motion Measurements of the Stars in the Field of SN 1572 with WFC3/UVIS

Cycle: 19, Proposal Category: GO
(Availability Mode: SUPPORTED)

INVESTIGATORS

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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>
01	(1) NAME-TYCHO-SNSHIFTED	WFC3/UVIS	1	21-Jun-2011 21:02:50.0	yes

1 Total Orbits Used

ABSTRACT

We propose to refine the space-velocity measurements of the stars in the central region of SNR 1572, one of the historical Galactic Type Ia supernova remnants.

A single-orbit visit with the WFC3/UVIS would allow, in combination with the previous ACS/WFC images obtained in 2003-2005, an astrometric

precision of less than 0.05 mas, almost one order of magnitude better than our previous result. Precise knowledge of the kinematics of all of the stars in the region is crucial for determining which one might be the surviving binary companion of the supernova. A precise reconstruction of the parameters of the binary system that gave rise to the supernova would then be possible, complementing the existing observations both from the ground and with the HST, which span the last fourteen years.

OBSERVING DESCRIPTION

This proposal collect images for a subsequent epoch of the field previously observed by ACS/WFC in 2003-2005. We maximized the number of images, and have large dither pattern for internal check of the geometric distortion solution. Parallel observations of ACS/WFC proved to be useless, and weak the primary science. We will not collect parallel ACS/WFC observations.

Proposal 12469 - Visit 01 - High-Precision Proper Motion Measurements of the Stars in the Field of SN 1572 with WFC3/UVIS

Wed Jun 22 01:02:55 GMT 2011

Fixed Targets	Visit									
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(1)	NAME-TYCHO-SNSHIFTED	RA: 00 25 21.0000 (6.3375000d) Dec: +64 08 10.00 (64.13611d) Equinox: J2000		V=-4.0	Reference Frame: ICRS				
	<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i>									
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(1) NAME-TYCHO-SNSHIFTED	WFC3/UVIS, ACCUM, UVIS-CENTER	F555W		POS TARG -36,36		21 Secs [==>]	[1]
	2		(1) NAME-TYCHO-SNSHIFTED	WFC3/UVIS, ACCUM, UVIS-CENTER	F555W		POS TARG -36,36		372 Secs [==>]	[1]
	3		(1) NAME-TYCHO-SNSHIFTED	WFC3/UVIS, ACCUM, UVIS-CENTER	F555W		POS TARG -18,-54		372 Secs [==>]	[1]
	4		(1) NAME-TYCHO-SNSHIFTED	WFC3/UVIS, ACCUM, UVIS-CENTER	F555W		POS TARG 0,null		372 Secs [==>]	[1]
	5		(1) NAME-TYCHO-SNSHIFTED	WFC3/UVIS, ACCUM, UVIS-CENTER	F555W		POS TARG 18,54		372 Secs [==>]	[1]
	6		(1) NAME-TYCHO-SNSHIFTED	WFC3/UVIS, ACCUM, UVIS-CENTER	F555W		POS TARG 36,-36		372 Secs [==>]	[1]
	7		(1) NAME-TYCHO-SNSHIFTED	WFC3/UVIS, ACCUM, UVIS-CENTER	F555W		POS TARG 54,18		373 Secs [==>]	[1]
	8		(1) NAME-TYCHO-SNSHIFTED	WFC3/UVIS, ACCUM, UVIS-CENTER	F555W		POS TARG 54,18		21 Secs [==>]	[1]

