10765 - The Discrete X-ray Source Population in NGC~5253, our nearest post-starburst

Cycle: 14, Proposal Category: GO

(Availability Mode: SUPPORTED)

INVESTIGATORS

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VISITS

Visit	*Targets*	*Configurations*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
01	(1) NGC5253-FIELD1 (2) NGC5253-FIELD2	ACS/WFC	3	12-Oct-2005 21:08:34.0	yes

3 Total Orbits Used

ABSTRACT

We propose a 140ksec ACIS-S and HST-ACS observations of NGC5253, our nearest post-starburst galaxy. This observation, together with archival data, will yield a sensitivity limit of 5x10^35 erg\s allowing us to detect for the first time in an evolved star-burst galaxy, the vast majority of active HMXBs. Our major goal is to compare the various X-ray source populations (distinguished from their X-ray and optical properties) and associate

them with the evolutionary stage of the starburst. By combining these data with observations of other nearby star-forming galaxies which with NGC~5253 form a starburst age sequence, we will investigate the variations of the XRB populations (and their XLF) as a function of the starburst age. This way we will test XRB population synthesis models.

OBSERVING DESCRIPTION

We will observe NGC5253 in three filters (F435W, F555W, F814W) with exposures of 880sec, 1200sec and 1150sec respectively. We use a 2-point dither patern in order to remove cosmic rays and obtain some exposure over the chip gap. We observe two fields offset from the galaxy nucleus in order to cover the whole galaxy. The two fields overlap in the central part of the galaxy to provide deeper coverage. Each exposure has been adjusted in order for the observations to fit in the three orbits.

Visit

Proposal 10765, Visit 01 Thu Oct 13 01:08:38 GMT 2005

Diagnostic Status: No Diagnostics

Scientific Instruments: ACS/WFC

Special Requirements: (none)

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=3.011 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.3 Angle Between Sides= Center Pattern=false		(1-3), (4-6)

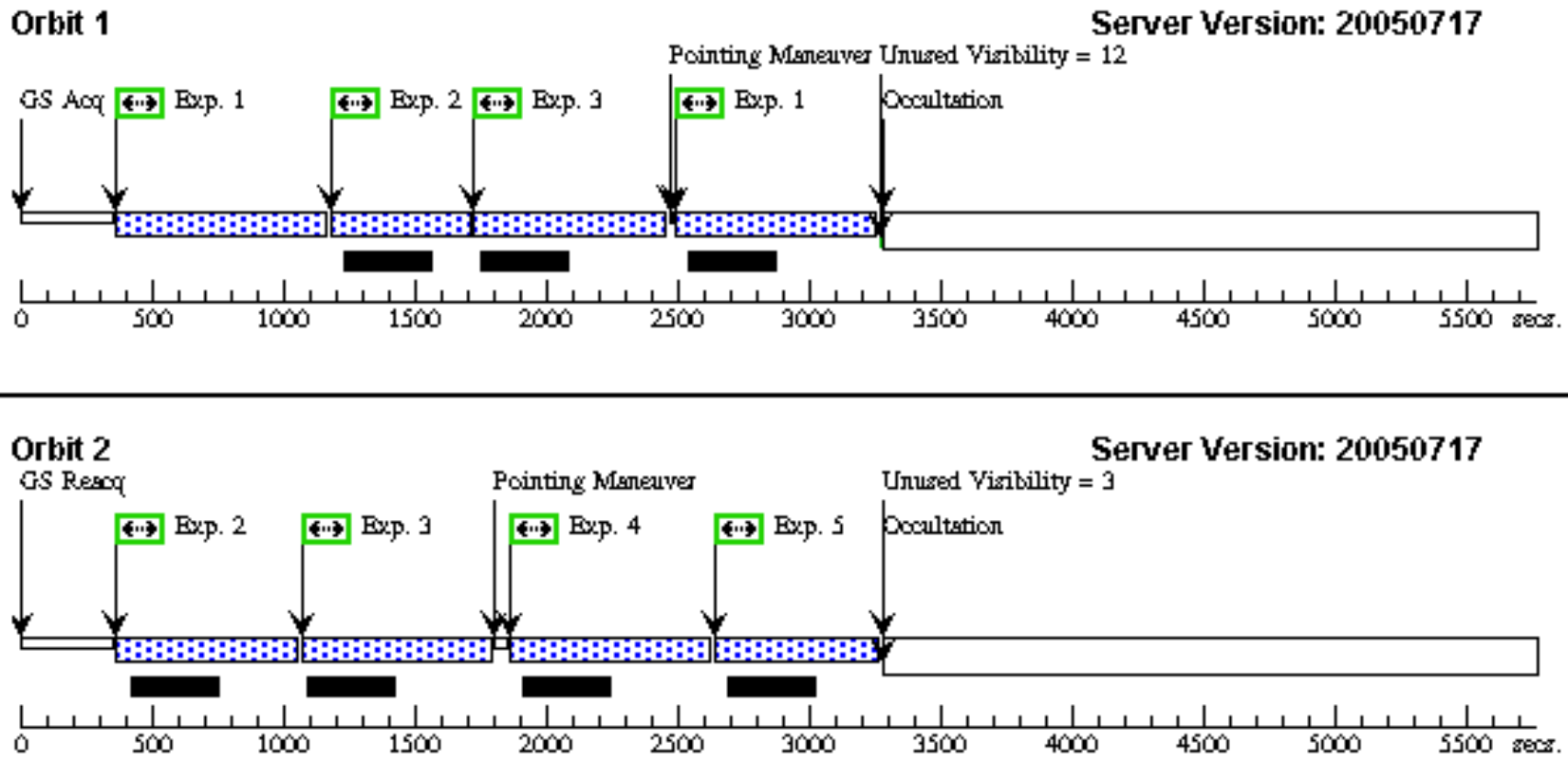
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	NGC5253-FIELD1	RA: 13 39 59.0000 (204.9958333d) Dec: -31 37 40.50 (-31.62792d) Equinox: J2000 Plate Id: (?)		V=10.99	Coordinate Source: GSC_SURVEY_PLATE
(2)	NGC5253-FIELD2	RA: 13 39 52.0000 (204.9666667d) Dec: -31 39 8.00 (-31.65222d) Equinox: J2000 Plate Id: (?)		V=10.99	Coordinate Source: GSC_SURVEY_PLATE

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(1) NGC5253-FIELD1	ACS/WFC, ACCUM, WFCENTER	F555W	CR-SPLIT=NO		Pattern 1-3 (1)	600.0 Secs	
								[==>(Pattern 1)] *[==>(Pattern 2)]*	***[1]***
2		(1) NGC5253-FIELD1	ACS/WFC, ACCUM, WFCENTER	F435W	CR-SPLIT=NO		Pattern 1-3 (1)	360.0 Secs	
								[==>(Pattern 1)]	***[1]***
								[==>520.0 Secs (Pattern 2)]	***[2]***
3		(1) NGC5253-FIELD1	ACS/WFC, ACCUM, WFCENTER	F814W	CR-SPLIT=NO		Pattern 1-3 (1)	500.0 Secs	
								[==>585.0 Secs (Pattern 1)]	***[1]***
								[==>575.0 Secs (Pattern 2)]	***[2]***
4		(2) NGC5253-FIELD2	ACS/WFC, ACCUM, WFCENTER	F555W	CR-SPLIT=NO		Pattern 4-6 (1)	600.0 Secs	
								[==>600.0 Secs (Pattern 1)]	***[2]***
								[==>600.0 Secs (Pattern 2)]	***[3]***
5		(2) NGC5253-FIELD2	ACS/WFC, ACCUM, WFCENTER	F814W	CR-SPLIT=NO		Pattern 4-6 (1)	500.0 Secs	
								[==>460.0 Secs (Pattern 1)]	***[2]***
								[==>740.0 Secs (Pattern 2)]	***[3]***
6		(2) NGC5253-FIELD2	ACS/WFC, ACCUM, WFCENTER	F435W	CR-SPLIT=NO		Pattern 4-6 (1)	360.0 Secs	
								[==>(Pattern 1)] *[==>519.0 Secs (Pattern 2)]*	***[3]***

Orbit Structure



Orbit Structure (continued)