14852 - A Statistically Robust Constraint on the Evolution of Field LMXBs

Cycle: 24, Proposal Category: GO

(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?*
03	(1) NGC3585-A	ACS/WFC	1	09-Nov-2016 12:31:36.0	yes
04	(2) NGC3585-B	ACS/WFC	1	09-Nov-2016 12:31:37.0	yes

2 Total Orbits Used

ABSTRACT

We will survey with Chandra and HST 11 nearby elliptical galaxies to make first-ever robust empirical measurements of how field LMXBs evolve as their parent stellar populations age. Our observations will robustly test (to the 96.5-99.4% confidence level) theoretical population synthesis models, which predict a decline in field LMXBs with increasing age. Our survey will also contain detections for ~800 globular cluster (GC) LMXBs, dramatically improving constraints on whether GC LMXBs seed field LMXBs by being kicked out of their host GCs. To perform this experiment, we will leverage >4 Ms of Chandra exposures and >35 HST orbits for 9 galaxies that exist in the archive, and will add 255 ks of new Chandra time and two new HST orbits for two young early-type galaxies.

OBSERVING DESCRIPTION

In this set of observations, we will be observing NGC 3585 in two unique observational fields with ACS in two bands: F475W and F850LP. These two observations will supplement existing archival data (in the same ACS bands) that cover the center of the galaxy. Our intention is to combine the two new fields with the existing archival field to create a mosaic of the galaxy. Therefore, our field choices are based on covering to the largest extent possible the entire D25 area of NCGC 3585 when considering the already covered archival area.

Visit

Proposal 14852, Visit 03, implementation Wed Nov 09 17:31:38 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: ACS/WFC

Special Requirements: ORIENT 110D TO 115 D

Fixed Targets

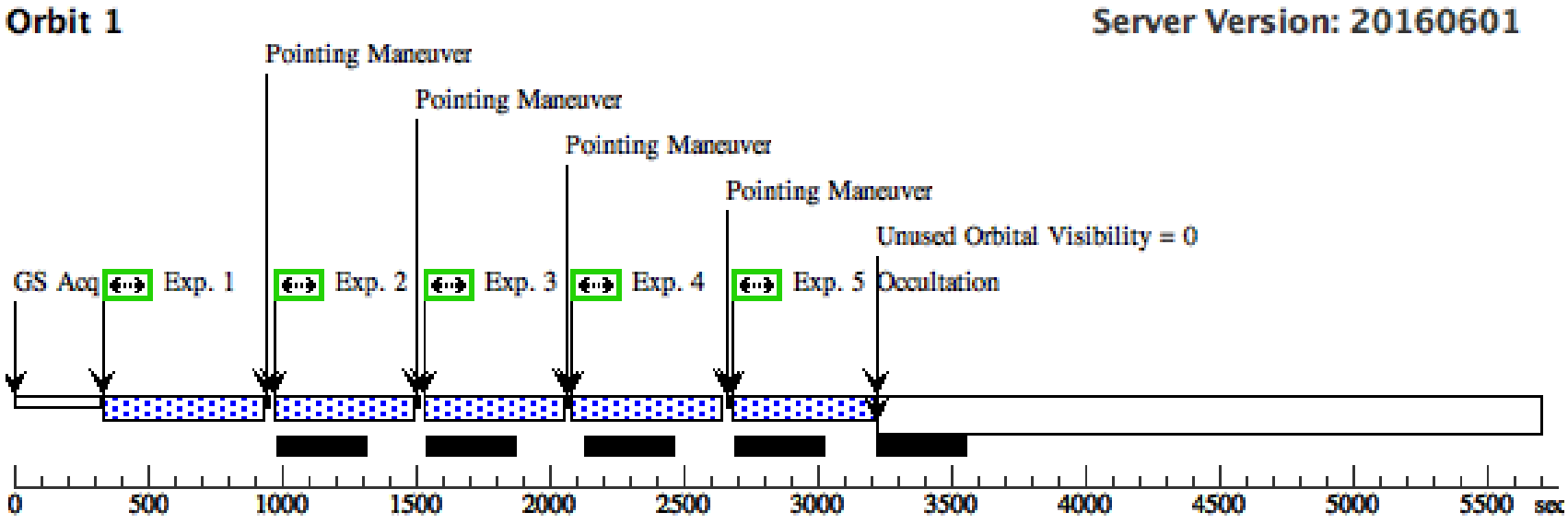
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	NGC3585-A	RA: 11 13 21.2638 (168.3385992d) Dec: -26 45 39.04 (-26.76084d) Equinox: J2000		V=11.0+/-1.0	Reference Frame: ICRS

Comments: Coordinate location assumes center of the ACS field
Extended=YES

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) NGC3585-A	ACS/WFC, ACCUM, WFC	F850LP		POS TARG 0,0; GS ACQ SCENARIO BASE1B3		394 Secs (395 Secs) *[==>395.0 Secs]*	 ***[1]***
2		(1) NGC3585-A	ACS/WFC, ACCUM, WFC	F850LP		POS TARG -0.9354, 2.832		394 Secs (395 Secs) *[==>395.0 Secs]*	 ***[1]***
3		(1) NGC3585-A	ACS/WFC, ACCUM, WFC	F850LP		POS TARG 0.9354,-2.832		394 Secs (395 Secs) *[==>395.0 Secs]*	 ***[1]***
4		(1) NGC3585-A	ACS/WFC, ACCUM, WFC	F475W		POS TARG 0.4677,-1.416		402 Secs (403 Secs) *[==>403.0 Secs]*	 ***[1]***
5		(1) NGC3585-A	ACS/WFC, ACCUM, WFC	F475W		POS TARG -0.4677, 1.416		402 Secs (403 Secs) *[==>403.0 Secs]*	 ***[1]***

Orbit Structure



Visit

Proposal 14852, Visit 04, implementation Wed Nov 09 17:31:38 GMT 2016

Diagnostic Status: No Diagnostics

Scientific Instruments: ACS/WFC

Special Requirements: ORIENT 110D TO 115 D

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	NGC3585-B	RA: 11 13 14.3027 (168.3095946d) Dec: -26 45 5.58 (-26.75155d) Equinox: J2000		V=11.0+/-1.0	Reference Frame: ICRS

Comments: Coordinate location assumes center of the ACS field
Extended=YES

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(2) NGC3585-B	ACS/WFC, ACCUM, WFC	F850LP		POS TARG 0,0; GS ACQ SCENARIO BASE1B3		394 Secs (395 Secs) *[==>395.0 Secs]*	 ***[1]***
2		(2) NGC3585-B	ACS/WFC, ACCUM, WFC	F850LP		POS TARG -0.9354, 2.832		394 Secs (395 Secs) *[==>395.0 Secs]*	 ***[1]***
3		(2) NGC3585-B	ACS/WFC, ACCUM, WFC	F850LP		POS TARG 0.9354,-2.832		394 Secs (395 Secs) *[==>395.0 Secs]*	 ***[1]***
4		(2) NGC3585-B	ACS/WFC, ACCUM, WFC	F475W		POS TARG 0.4677,-1.416		402 Secs (403 Secs) *[==>403.0 Secs]*	 ***[1]***
5		(2) NGC3585-B	ACS/WFC, ACCUM, WFC	F475W		POS TARG -0.4677, 1.416		402 Secs (403 Secs) *[==>403.0 Secs]*	 ***[1]***

Orbit Structure