



10768 - Locating the Ultraluminous X-Ray Source in IC 342

Cycle: 14, Proposal Category: GO

(Availability Mode: SUPPORTED)

INVESTIGATORS

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VISITS

<i>Visit</i>	<i>Targets</i>	<i>Configurations</i>	<i>Orbits Used</i>	<i>Last Orbit Planner Run</i>	<i>OP Current with Visit?</i>
01	(1) IC342X1	ACS/WFC	2	14-Oct-2005 21:25:35.0	yes
02	(1) IC342X1	ACS/WFC	3	14-Oct-2005 21:25:47.0	yes

5 Total Orbits Used

ABSTRACT

Identification of unique optical counterparts of ultraluminous X-ray sources will help us understand the evolutionary state of the ULX binaries and may enable direct mass measurements. The search for counterparts has been hampered by the limitations of the absolute astrometry of Chandra. Using wider optical fields, made possible with the HST/ACS, we demonstrate that we should detect multiple X-ray sources with optical counterparts which will enable us to achieve 0.1-0.2 arcsecond relative astrometry between HST and Chandra. This should enable a unique counterpart identification for the ULX in IC 342.

OBSERVING DESCRIPTION

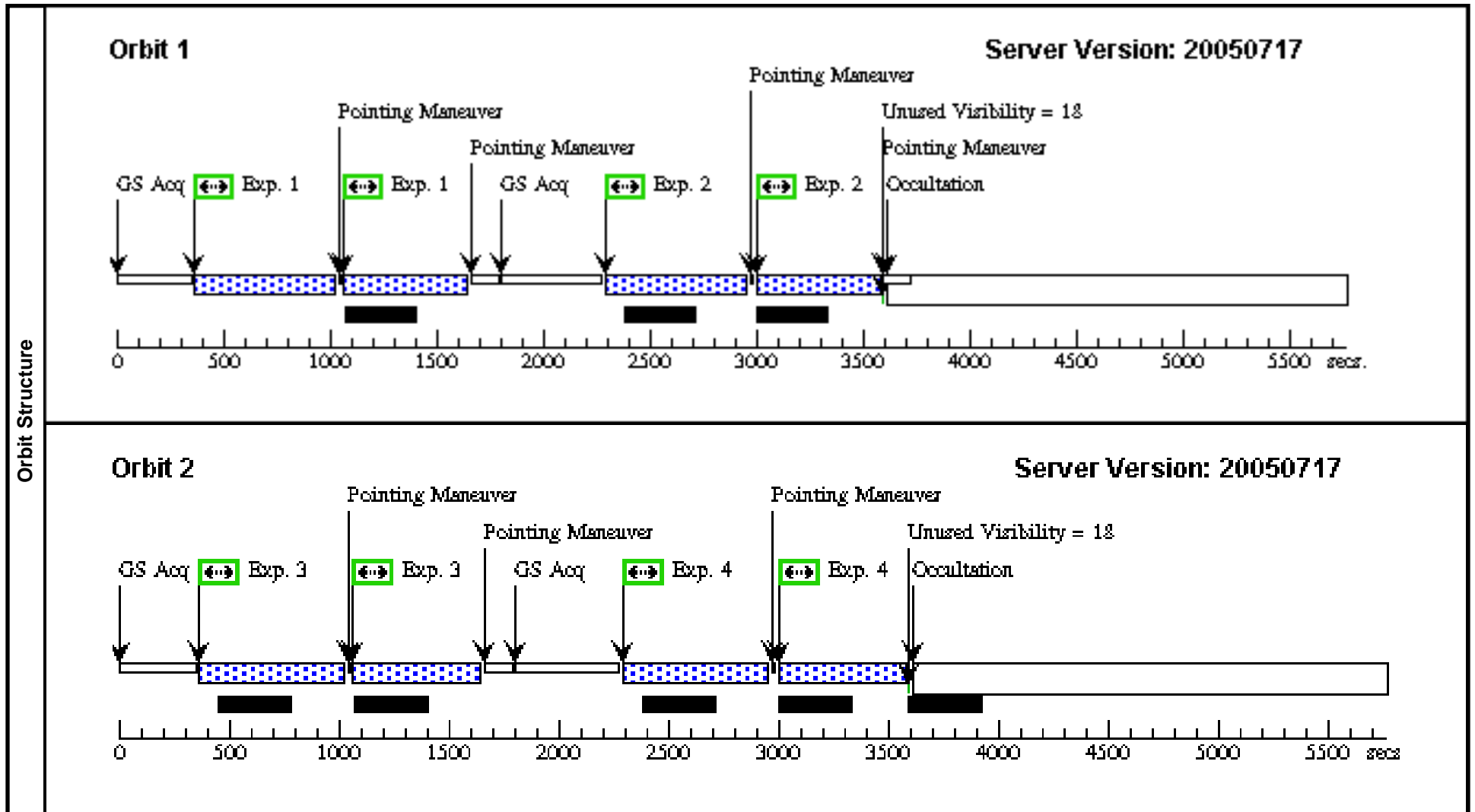
Visit 1 - We will obtain a mosaic image of the field around IX 342 X-1 using the ACS/WFC and the F625W filter (SDSS r). We perform a 950 s integration at each of four positions using the ACS/WFC with the F625W (SDSS r) filter. This can be done in two orbits.

Visit 2 - We will obtain HST images in B, V, I, and H-alpha. This will require three orbits. The first orbit will be used to obtain F555W and F814W exposures of 1080 seconds each. The other two will be used to obtain F435W and F658N exposures of 2400 seconds each.

Proposal 10768 - Visit 01 - Locating the Ultraluminous X-Ray Source in IC 342

Sat Oct 15 01:25:53 GMT 2005

Visit	Proposal 10768, Visit 01 Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: (none)									
	Patterns	#	Primary Pattern			Secondary Pattern			Exposures	
		(3)	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), (2), (3), (4)	
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections		Fluxes	Miscellaneous			
	(1)	IC342X1	RA: 03 45 55.7000 (56.4820833d) Dec: +68 04 54.90 (68.08192d) Equinox: J2000 Plate Id: (?)			V=21.0+/-1.0	Coordinate Source: X-ray source			
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	(1) IC342X1	(1) IC342X1	ACS/WFC, ACCUM, WFC	F625W	CR-SPLIT=NO	POS TARG -94,69	Pattern 1-1 (3)	460.0 Secs	
									[=>(Pattern 1)]	[1]
									[=>(Pattern 2)]	
	2	(1) IC342X1	(1) IC342X1	ACS/WFC, ACCUM, WFC	F625W	CR-SPLIT=NO	POS TARG 94,86	Pattern 2-2 (3)	460.0 Secs	
								[=>(Pattern 1)]	[1]	
								[=>(Pattern 2)]		
3	(1) IC342X1	(1) IC342X1	ACS/WFC, ACCUM, WFC	F625W	CR-SPLIT=NO	POS TARG 95,-98	Pattern 3-3 (3)	460.0 Secs		
								[=>(Pattern 1)]	[2]	
								[=>(Pattern 2)]		
4	(1) IC342X1	(1) IC342X1	ACS/WFC, ACCUM, WFC	F625W	CR-SPLIT=NO	POS TARG -96,-112	Pattern 4-4 (3)	460.0 Secs		
								[=>(Pattern 1)]	[2]	
								[=>(Pattern 2)]		



Proposal 10768 - Visit 02 - Locating the Ultraluminous X-Ray Source in IC 342

Sat Oct 15 01:25:54 GMT 2005

Visit	Proposal 10768, Visit 02 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=3 Point Spacing=3.011 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.3 Angle Between Sides= Center Pattern=false		(1), (2)				
	(2)	Pattern Type=ACS-WFC-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.265 Line Spacing=0.187	Coordinate Frame=POS-TARG Pattern Orientation=20.7 Angle Between Sides=69.1 Center Pattern=false		(3), (4)					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(1)	IC342X1	RA: 03 45 55.7000 (56.4820833d) Dec: +68 04 54.90 (68.08192d) Equinox: J2000 Plate Id: (?)		V=21.0+/-1.0	Coordinate Source: X-ray source				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(1) IC342X1	ACS/WFC, ACCUM, WFC	F555W	CR-SPLIT=NO		Pattern 1-1 (1)	360.0 Secs	
									[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]	[1]
	2		(1) IC342X1	ACS/WFC, ACCUM, WFC	F814W	CR-SPLIT=NO		Pattern 2-2 (1)	360.0 Secs	
								[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]	[1]	
3		(1) IC342X1	ACS/WFC, ACCUM, WFC	F658N	CR-SPLIT=NO			Pattern 3-3 (2)	600.0 Secs	
								[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)] [==>(Pattern 4)]	[2]	

Proposal 10768 - Visit 02 - Locating the Ultraluminous X-Ray Source in IC 342

Exposures (continued)	#	Label	Target	Config, Mode, Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	4	(1) IC342X1	ACS/WFC, ACCUM, WFC	F435W	CR-SPLIT=NO	Pattern 4-4 (2)	600.0 Secs [==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)] [==>(Pattern 4)]	[3]		

