



10814 - The Masses for ultraluminous X-ray sources

Cycle: 15, 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) NGC5204-ULX	ACS/SBC	2	29-Aug-2006 21:35:20.0	yes
02	(4) NGC3031-ULX	ACS/SBC	2	29-Aug-2006 21:35:25.0	yes
03	(3) NGC1313-ULX	ACS/SBC	2	29-Aug-2006 21:35:29.0	yes
04	(2) HOLMII-ULX	ACS/SBC	2	29-Aug-2006 21:35:32.0	yes

8 Total Orbits Used

ABSTRACT

Ultraluminous X-ray sources are non-nuclear sources in normal disk galaxies that are either stellar mass black holes that are super-Eddington emitters, or $1E3$ - $1E4$ Msolar black holes emitting normally. We can distinguish between these models by obtaining constraints for the mass of the primary, which can be accomplished through UV objective prism spectra. This strategy begins with the optical identification of the secondary and identification of its spectral type in order to determine its mass and the Roche Lobe radius. Secondly, we need to determine whether an accretion

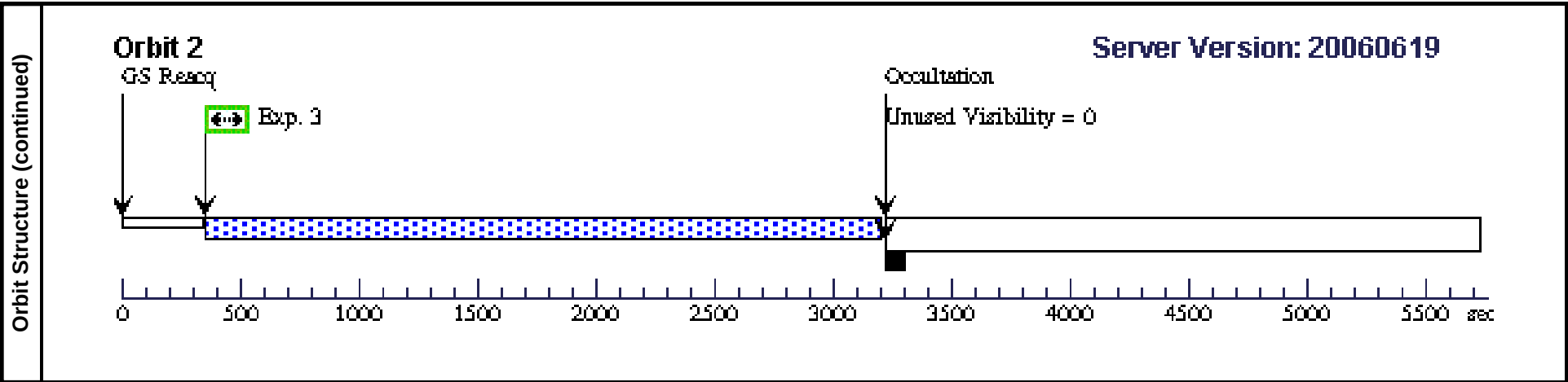
disk is present and if its high ionization UV line luminosities point to a stellar mass black hole or a more massive object. Finally, if the black hole is 10^3 - 10^4 Msolar, the orbital velocity of the secondary is so large that a Doppler shift will be detectable, even at the modest resolution of the prism.

OBSERVING DESCRIPTION

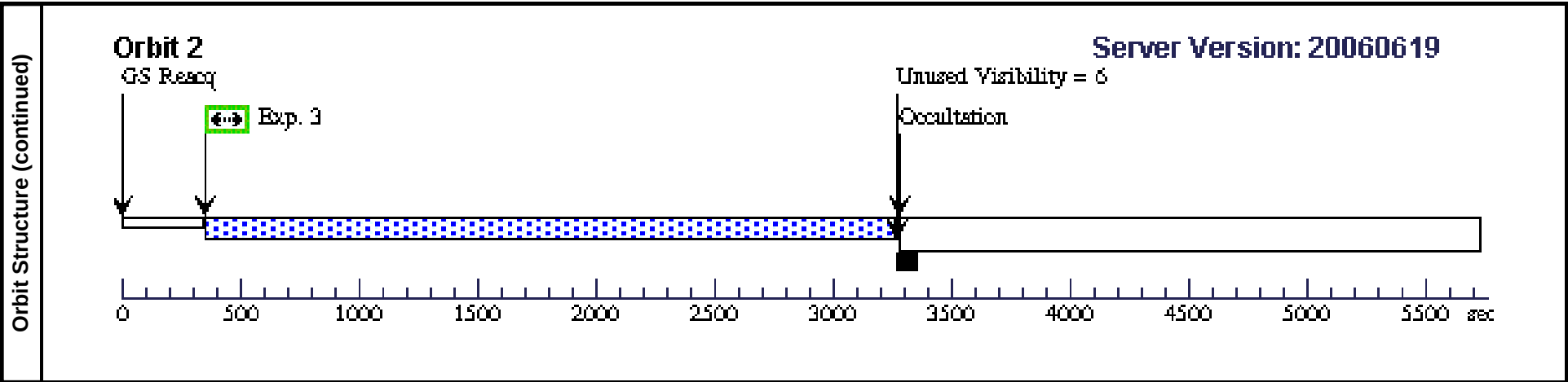
A ACS prism observation is being made of four fields, each of which lie in a nearby galaxy. While there are multiple objects in each field, there are certain orientations where an uncontaminated spectrum will be produced for our target, so each target has position angle restrictions. The spectral element is the PR130L being used with the SBC on the ACS. Two observations, each most of an orbit in length are scheduled for each target. A pair of short observations is also scheduled, as these are needed for wavelength calibration. The pair of 5 minute images are being taken with the F125LP filter on the SBC/ACS, as this is the closest match in spectral properties to the PR130L.

Proposal 10814 - Visit 01 - The Masses for ultraluminous X-ray sources

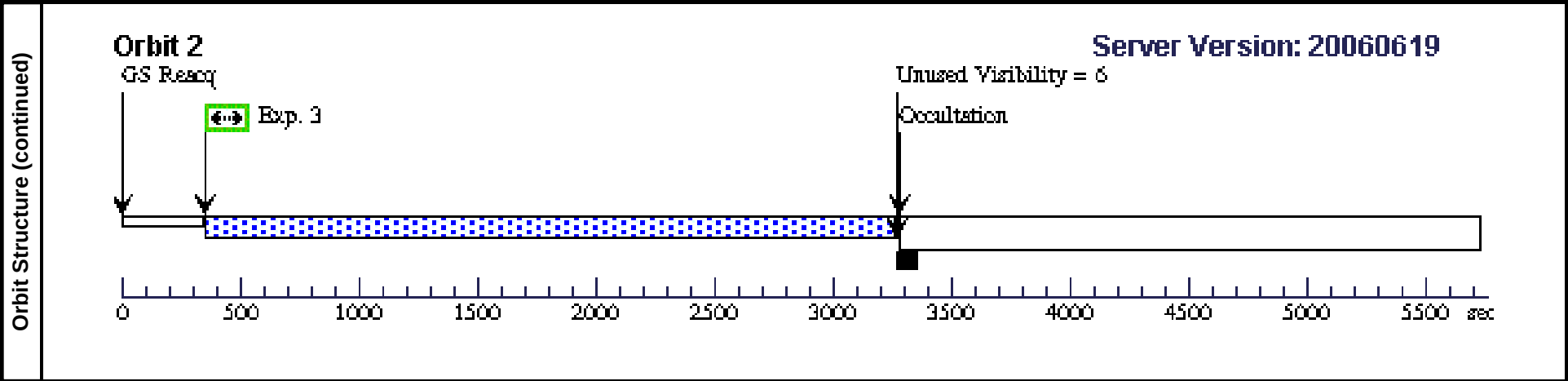
Visit	Proposal 10814, Visit 01, implementation Wed Aug 30 01:35:34 GMT 2006									
	Diagnostic Status: No Diagnostics Scientific Instruments: ACS/SBC Special Requirements: ORIENT 279.0D TO 332.0 D; ORIENT 99.0D TO 152.0 D; ORIENT 52.0D TO 73.0 D; ORIENT 232.0D TO 253.0 D									
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(1)	NGC5204-ULX	RA: 13 29 38.6000 (202.4108333d) Dec: +58 25 5.60 (58.41822d) Equinox: J2000		V=21.9+/-0.2	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(1) NGC5204-ULX	ACS/SBC, ACCUM, SBC	F165LP				600.0 Secs	
									[=>608.0 Secs]	[1]
	2		(1) NGC5204-ULX	ACS/SBC, ACCUM, SBC	PR130L				2080.0 Secs	
									[=>2088.0 Secs]	[1]
	3		(1) NGC5204-ULX	ACS/SBC, ACCUM, SBC	PR130L				2800.0 Secs	
									[=>2827.0 Secs]	[2]
Orbit Structure	Orbit 1 GS Acq Exp. 1 Pointing Maneuver Exp. 2 Unused Visibility = 0 Occultation 05001000150020002500300035004000450050005500secs.									



Visit	Proposal 10814, Visit 02, implementation Wed Aug 30 01:35:35 GMT 2006									
	Diagnostic Status: No Diagnostics Scientific Instruments: ACS/SBC Special Requirements: ORIENT 78.0D TO 148.0 D; ORIENT 258.0D TO 328.0 D									
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(4)	NGC3031-ULX	RA: 09 55 33.0000 (148.8875000d) Dec: +69 00 33.40 (69.00928d) Equinox: J2000			V=23.5+/-0.4		Reference Frame: ICRS		
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(4) NGC3031-ULX	ACS/SBC, ACCUM, SBC	F165LP				600.0 Secs	
									[==>]	[1]
	2		(4) NGC3031-ULX	ACS/SBC, ACCUM, SBC	PR130L				2150.0 Secs	
									[==>]	[1]
	3		(4) NGC3031-ULX	ACS/SBC, ACCUM, SBC	PR130L				2880.0 Secs	
									[==>]	[2]
Orbit Structure	Orbit 1 Server Version: 20060619									



Visit	Proposal 10814, Visit 03, implementation Wed Aug 30 01:35:36 GMT 2006									
	Diagnostic Status: No Diagnostics Scientific Instruments: ACS/SBC Special Requirements: ORIENT 42.0D TO 83.0 D; ORIENT 114.0D TO 144.0 D; ORIENT 94.0D TO 103.0 D; ORIENT 222.0D TO 263.0 D; ORIENT 294.0D TO 324.0 D									
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(3)	NGC1313-ULX	RA: 03 18 22.3000 (49.5929167d) Dec: -66 36 3.80 (-66.60106d) Equinox: J2000		V=23.5+/-0.4	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(3) NGC1313-ULX	ACS/SBC, ACCUM, SBC	F165LP				600.0 Secs	
									[==>]	[1]
	2		(3) NGC1313-ULX	ACS/SBC, ACCUM, SBC	PR130L				2150.0 Secs	
									[==>]	[1]
	3		(3) NGC1313-ULX	ACS/SBC, ACCUM, SBC	PR130L				2880.0 Secs	
									[==>]	[2]
Orbit Structure	Orbit 1 GS Acq Exp. 1 Pointing Maneuver Exp. 2 Unused Visibility = 5 Occultation Server Version: 20060619									



Proposal 10814 - Visit 04 - The Masses for ultraluminous X-ray sources

Visit	Proposal 10814, Visit 04, implementation Wed Aug 30 01:35:37 GMT 2006									
	Diagnostic Status: No Diagnostics Scientific Instruments: ACS/SBC Special Requirements: ORIENT 0.0D TO 46.0 D; ORIENT 57.0D TO 93.0 D; ORIENT 237.0D TO 273.0 D; ORIENT 179.0D TO 226.0 D									
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(2)	HOLMII-ULX	RA: 08 19 29.0000 (124.8708333d) Dec: +70 42 19.30 (70.70536d) Equinox: J2000		V=22.0+/-0.2	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(2) HOLMII-ULX	ACS/SBC, ACCUM, SBC	F165LP				600.0 Secs	
									[==>]	[1]
	2		(2) HOLMII-ULX	ACS/SBC, ACCUM, SBC	PR130L				2190.0 Secs	
									[==>]	[1]
	3		(2) HOLMII-ULX	ACS/SBC, ACCUM, SBC	PR130L				2920.0 Secs	
									[==>]	[2]
Orbit Structure	Orbit 1 GS Acq Exp. 1 Pointing Maneuver Exp. 2 Occultation Unused Visibility = 5 Server Version: 20060619									

