



14483 - XMM and HST Target of Opportunity Observations of Tidal Disruption

Events

Cycle: 24, 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>
A1	(2) GRB170714A	WFC3/UVIS	1	25-Jul-2017 13:01:30.0	yes
A2	(2) GRB170714A	WFC3/UVIS	1	25-Jul-2017 13:01:32.0	yes
A3	(2) GRB170714A	WFC3/UVIS	1	25-Jul-2017 13:01:33.0	yes

3 Total Orbits Used

ABSTRACT

Tidal disruption events (TDEs), where a star is disrupted while passing close to a black hole, enable a view of accretion onto supermassive objects from quiescence to super-Eddington rates, on a timescale of a few years. Here we propose to characterise the spectral and temporal properties two TDEs found in AO15. As part of a comprehensive multiwavelength campaign we will use XMM-Newton and HST to map either side of the expected

hot black-body peak; search for evidence of non-thermal components; track the cooling of the event and study the long and short timescale variability of the sources. In doing so we will create exquisite, panchromatic pictures of these extreme events.

OBSERVING DESCRIPTION

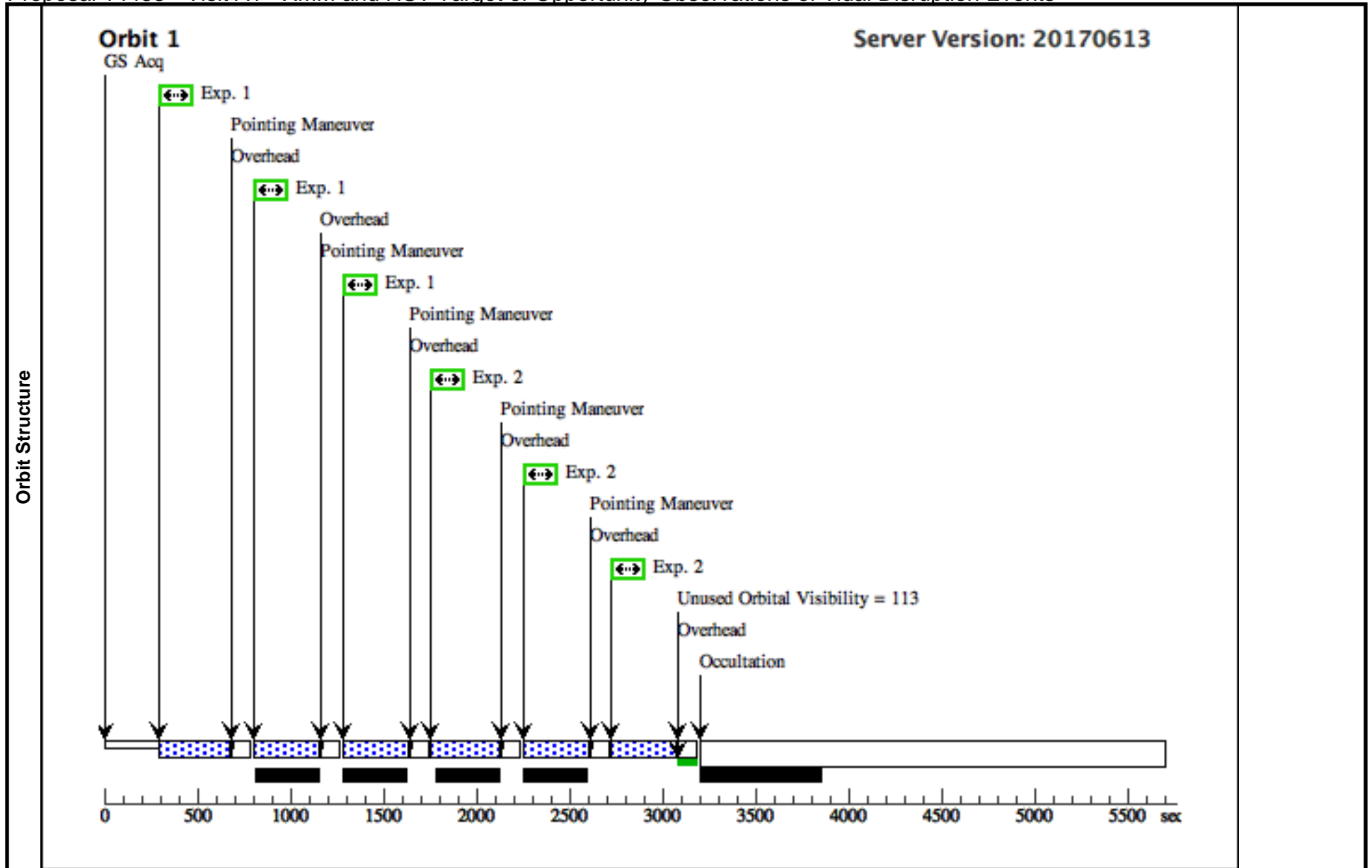
We request observations of GRB 170714A that has been triggered with our XMM programme.

We will use three visits to map the evolution of the transient using the F475W and F814W filters given the evidence for modest extinction. In each visit we will place the target near the corner of the chip to avoid CTE problems (we do not then pre-flash the chip). This is established through POS-TARG offsets to the UVIS2 aperture of -60 and -30 arcsec respectively. For each filter we will obtain 3 dithered exposures per orbit.

Proposal 14483 - Visit A1 - XMM and HST Target of Opportunity Observations of Tidal Disruption Events

Tue Jul 25 17:01:34 GMT 2017

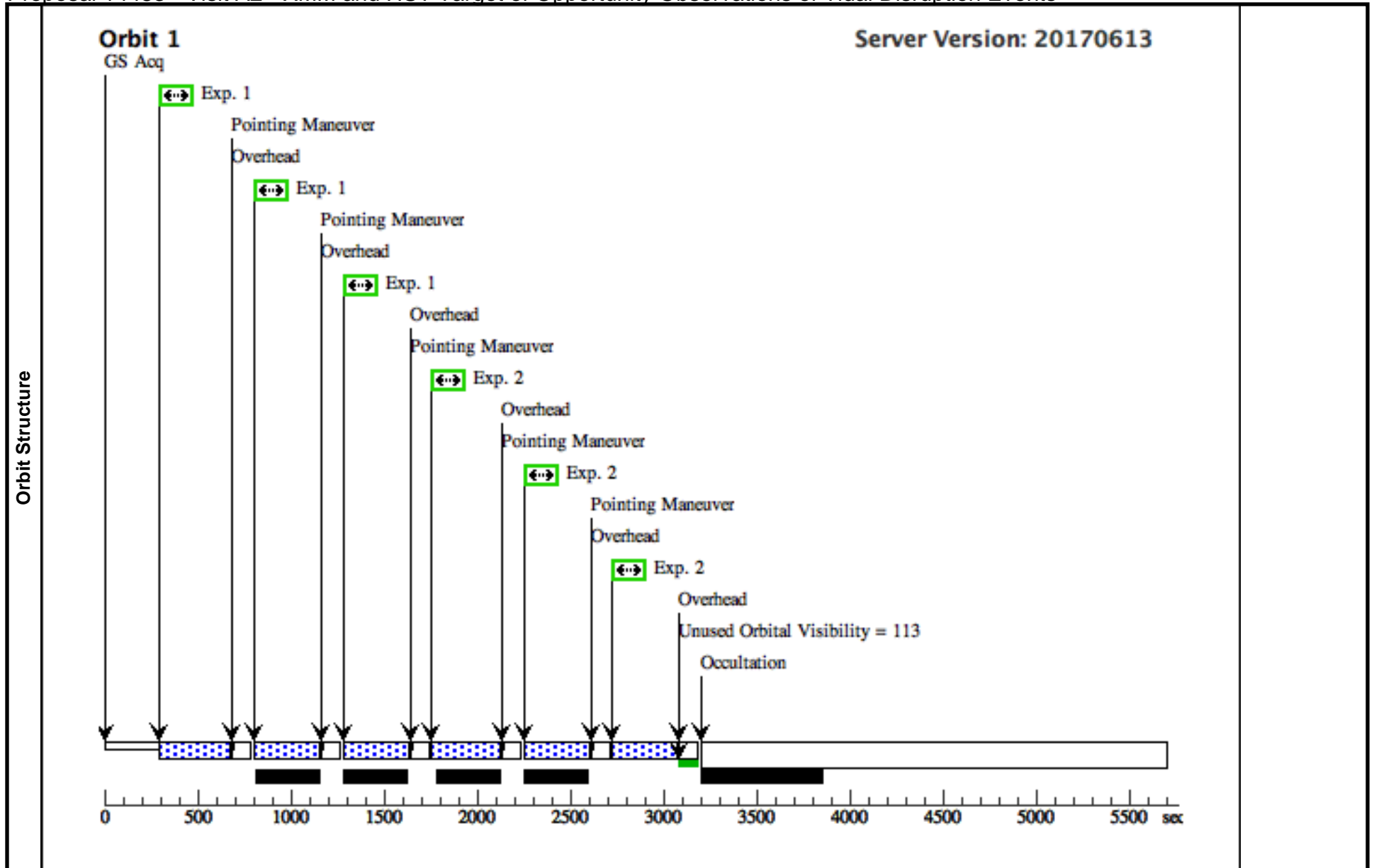
Visit	Proposal 14483, Visit A1 Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS Special Requirements: BEFORE 18-AUG-2017:00:00:00										
	(Exposure 1 (Pattern 3, Exps 1-1 in Visit A1)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser (Exposure 2 (Pattern 3, Exps 2-2 in Visit A1)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser										
Diagnosics											
Patterns	#	Primary Pattern				Secondary Pattern				Exposures	
	(3)	Pattern Type=WFC3-UVIS-DITHER- LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.135 Line Spacing=				Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false				(1), (2)	
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(2)	GRB170714A	RA: 02 17 23.9700 (34.3498750d) Dec: +01 59 29.00 (1.99139d) Equinox: J2000				V=23+/-1		Reference Frame: ICRS		
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit
	1	(2) GRB170714A	(2) GRB170714A	WFC3/UVIS, ACCUM, UVIS2	F475W	CR-SPLIT=NO	POS TARG -60,-30	Pattern 3, Exps 1-1 in Visit A1 (3)	348 Secs (1044 Secs)		
									[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]		[1]
2	(2) GRB170714A	(2) GRB170714A	WFC3/UVIS, ACCUM, UVIS2	F814W			POS TARG -60,-30	Pattern 3, Exps 2-2 in Visit A1 (3)	348 Secs (1044 Secs)		
									[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]		[1]



Proposal 14483 - Visit A2 - XMM and HST Target of Opportunity Observations of Tidal Disruption Events

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Visit	Proposal 14483, Visit A2 Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS Special Requirements: AFTER A1 BY 20 D TO 30 D										
	(Exposure 1 (Pattern 3, Exps 1-1 in Visit A2)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser (Exposure 2 (Pattern 3, Exps 2-2 in Visit A2)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser										
Diagnosics											
Patterns	#	Primary Pattern				Secondary Pattern				Exposures	
	(3)	Pattern Type=WFC3-UVIS-DITHER- LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.135 Line Spacing=				Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false				(1), (2)	
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(2)	GRB170714A	RA: 02 17 23.9700 (34.3498750d) Dec: +01 59 29.00 (1.99139d) Equinox: J2000				V=23+/-1		Reference Frame: ICRS		
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit
	1	(2) GRB170714A	(2) GRB170714A	WFC3/UVIS, ACCUM, UVIS2	F475W	CR-SPLIT=NO	POS TARG -60,-30	Pattern 3, Exps 1-1 in Visit A2 (3)	348 Secs (1044 Secs)		
									[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]		[1]
2	(2) GRB170714A	(2) GRB170714A	WFC3/UVIS, ACCUM, UVIS2	F814W			POS TARG -60,-30	Pattern 3, Exps 2-2 in Visit A2 (3)	348 Secs (1044 Secs)		
									[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]		[1]



Proposal 14483 - Visit A3 - XMM and HST Target of Opportunity Observations of Tidal Disruption Events

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Visit	Proposal 14483, Visit A3 Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS Special Requirements: AFTER A2 BY 20 D TO 30 D										
	(Exposure 1 (Pattern 3, Exps 1-1 in Visit A3)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser (Exposure 2 (Pattern 3, Exps 2-2 in Visit A3)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser										
Diagnosics											
Patterns	#	Primary Pattern				Secondary Pattern				Exposures	
	(3)	Pattern Type=WFC3-UVIS-DITHER- LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.135 Line Spacing=				Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false				(1), (2)	
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(2)	GRB170714A	RA: 02 17 23.9700 (34.3498750d) Dec: +01 59 29.00 (1.99139d) Equinox: J2000				V=23+/-1		Reference Frame: ICRS		
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit
	1	(2) GRB170714A	(2) GRB170714A	WFC3/UVIS, ACCUM, UVIS2	F475W	CR-SPLIT=NO	POS TARG -60,-30	Pattern 3, Exps 1-1 in Visit A3 (3)	348 Secs (1044 Secs)		
									[=>(Pattern 1)]		
									[=>(Pattern 2)]		[1]
									[=>(Pattern 3)]		
2	(2) GRB170714A	(2) GRB170714A	WFC3/UVIS, ACCUM, UVIS2	F814W			POS TARG -60,-30	Pattern 3, Exps 2-2 in Visit A3 (3)	348 Secs (1044 Secs)		
									[=>(Pattern 1)]		
									[=>(Pattern 2)]		[1]
									[=>(Pattern 3)]		

