



12447 - The Nature of the Remarkable Transient GRB 110328A

Cycle: 18, Proposal Category: GO/DD

(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) GRB-110328A	WFC3/IR WFC3/UVIS	1	26-Apr-2011 21:09:03.0	yes
02	(1) GRB-110328A	WFC3/IR WFC3/UVIS	1	26-Apr-2011 21:09:09.0	yes
03	(1) GRB-110328A	WFC3/IR WFC3/UVIS	1	26-Apr-2011 21:09:14.0	yes

3 Total Orbits Used

ABSTRACT

One orbit was approved for GO/DD 12447. The PI was given permission to use time under his related approved GRB program, 12370, for subsequent observations of this GRB. To allow the second visit to go forward quickly, it was kept on the schedule as GO/DD 12447, but the orbit was charged to GO 12370. As a result, THE SECOND VISIT OF 12447 HAS THE PROPRIETARY PERIOD ASSOCIATED WITH 12370. We apologize for the confusion caused by this change. However, it was done to allow rapid observations of an unusual astrophysical object.

We propose HST observations of the extraordinary transient, GRB 110328A. This object triggered the Swift automatic burst detection twice over the course of about ninety minutes, and has continued to be a bright X-ray source for the two days since. While this behavior might typically suggest a Galactic source, the high Galactic latitude of the object, and its coincidence with a star-forming galaxy at $z=0.35$ instead suggests a new type of extragalactic transient. WFC3 imaging in the optical and NIR will allow us to search for a varying point source to far greater depth than could be done from the ground, given the presence of an apparent host, and the use of the F160W filter may allow us to pierce enshrouding dust, if extinction is the reason for the present lack of a detection in the optical. While we do not yet know the astrophysical source of this transient, it appears unique among the hundreds of transients so far detected by Swift. This alone should provide strong grounds for HST observations of this unusual and potentially important object.

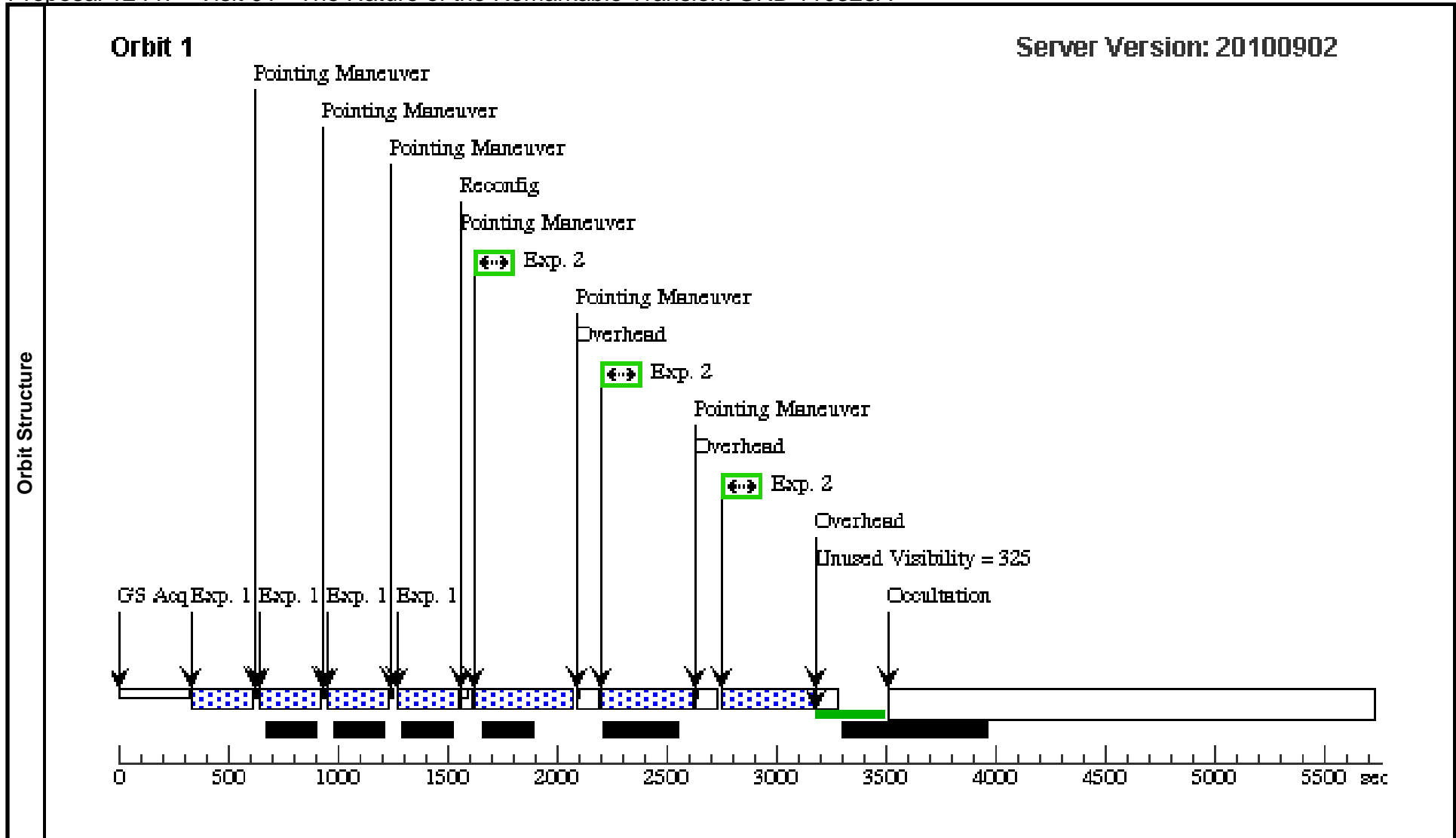
OBSERVING DESCRIPTION

tbd

Proposal 12447 - Visit 01 - The Nature of the Remarkable Transient GRB 110328A

Wed Apr 27 01:09:17 GMT 2011

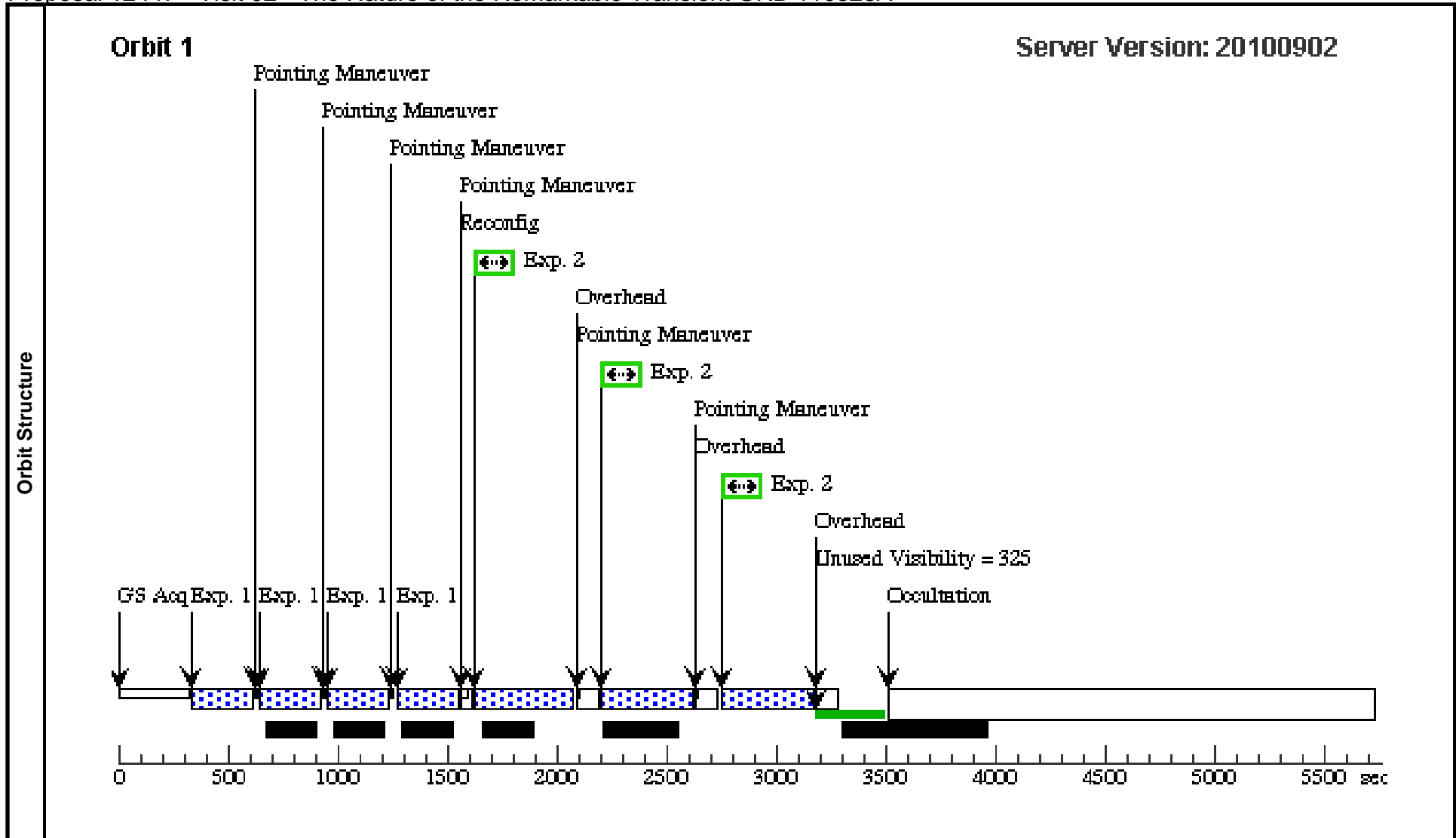
Visit	Proposal 12447, Visit 01, completed Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR, WFC3/UVIS Special Requirements: BEFORE 05-APR-2011:00:00:00									
	#	Primary Pattern	Secondary Pattern	Exposures						
Patterns	(1)	Pattern Type=WFC3-UVIS-DITHER- LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.135 Line Spacing= Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(2)						
	(4)	Pattern Type=WFC3-IR-DITHER- BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=1.716 Line Spacing=1.095 Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(1)						
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(1)	GRB-110328A	RA: 16 44 49.9300 (251.2080417d) Dec: +57 34 59.70 (57.58325d) Equinox: J2000		V=23	Reference Frame: ICRS				
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i>										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(1) GRB-110328A	WFC3/IR, MULTIACCUM, IR	F160W	SAMP-SEQ=STEP5 0; NSAMP=10			Pattern 4, Exps 1-1 i n Visit 01 (4)	[=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)] [=>(Pattern 4)]
2		(1) GRB-110328A	WFC3/UVIS, ACCUM, UVIS2	F606W				Pattern 1, Exps 2-2 i n Visit 01 (1)	420 Secs [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)]	[1]



Proposal 12447 - Visit 02 - The Nature of the Remarkable Transient GRB 110328A

Wed Apr 27 01:09:18 GMT 2011

Visit	Proposal 12447, Visit 02, completed Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR, WFC3/UVIS Special Requirements: SAME ORIENT AS 01; BETWEEN 20-APR-2011:00:00:00 AND 27-APR-2011:00:00:00									
	Patterns	#	Primary Pattern	Secondary Pattern	Exposures					
		(1)	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		(2)				
	(4)	Pattern Type=WFC3-IR-DITHER- BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=1.716 Line Spacing=1.095	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(1)					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(1)	GRB-110328A	RA: 16 44 49.9300 (251.2080417d) Dec: +57 34 59.70 (57.58325d) Equinox: J2000		V=23	Reference Frame: ICRS				
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i>										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(1) GRB-110328A	WFC3/IR, MULTIACCUM, IR	F160W	SAMP-SEQ=STEP5 0; NSAMP=10			Pattern 4, Exps 1-1 i n Visit 02 (4)	[=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)] [=>(Pattern 4)]
	2		(1) GRB-110328A	WFC3/UVIS, ACCUM, UVIS2	F606W			Pattern 1, Exps 2-2 i n Visit 02 (1)	420 Secs [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)]	[1]



Proposal 12447 - Visit 03 - The Nature of the Remarkable Transient GRB 110328A

Wed Apr 27 01:09:19 GMT 2011

Visit	Proposal 12447, Visit 03, withdrawn Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR, WFC3/UVIS Special Requirements: BETWEEN 31-MAY-2011:00:00:00 AND 10-JUN-2011:00:00:00									
	#	Primary Pattern	Secondary Pattern	Exposures						
Patterns	(1)	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		(2)						
	(4)	Pattern Type=WFC3-IR-DITHER- BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=1.716 Line Spacing=1.095 Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(1)						
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(1)	GRB-110328A	RA: 16 44 49.9300 (251.2080417d) Dec: +57 34 59.70 (57.58325d) Equinox: J2000		V=23	Reference Frame: ICRS				
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i>										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(1) GRB-110328A	WFC3/IR, MULTIACCUM, IR	F160W	SAMP-SEQ=STEP5 0; NSAMP=10			Pattern 4, Exps 1-1 i n Visit 03 (4)	[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)] [==>(Pattern 4)]
2		(1) GRB-110328A	WFC3/UVIS, ACCUM, UVIS2	F606W				Pattern 1, Exps 2-2 i n Visit 03 (1)	420 Secs [==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]	[1]

