



10780 - The Unusual Afterglow and Host Galaxy of the Short GRB 060121

Cycle: 14, Proposal Category: GO/DD

(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) GRB060121	NIC3	2	30-Jun-2006 21:22:25.0	yes
02	(1) GRB060121	ACS/WFC	2	30-Jun-2006 21:22:32.0	yes
03	(2) GRB060121-OPT	NIC3	2	30-Jun-2006 21:22:37.0	yes
04	(2) GRB060121-OPT	NIC3	2	30-Jun-2006 21:22:43.0	yes

8 Total Orbits Used

ABSTRACT

We request Director's Discretionary Time to observe the afterglow and host galaxy of the short-hard gamma-ray bursts GRB 060121. This is only the fourth time an optical afterglow of a short-hard burst has been found at its properties are significantly different to other cases. Both the afterglow and host galaxy are much fainter than previous short bursts (for which optical afterglows have been located) and the afterglow may also show the signature of dust extinction. Such extinction is completely unexpected for short bursts, given the currently popular model of their origin in NS-NS mergers. We propose ACS and NICMOS observations which will locate the afterglow and host galaxy of GRB 060121, provide constraints on its beaming angle, search for the signature of dust, and measure the offset from its host. These observations offer a strong test of NS-NS merger models.

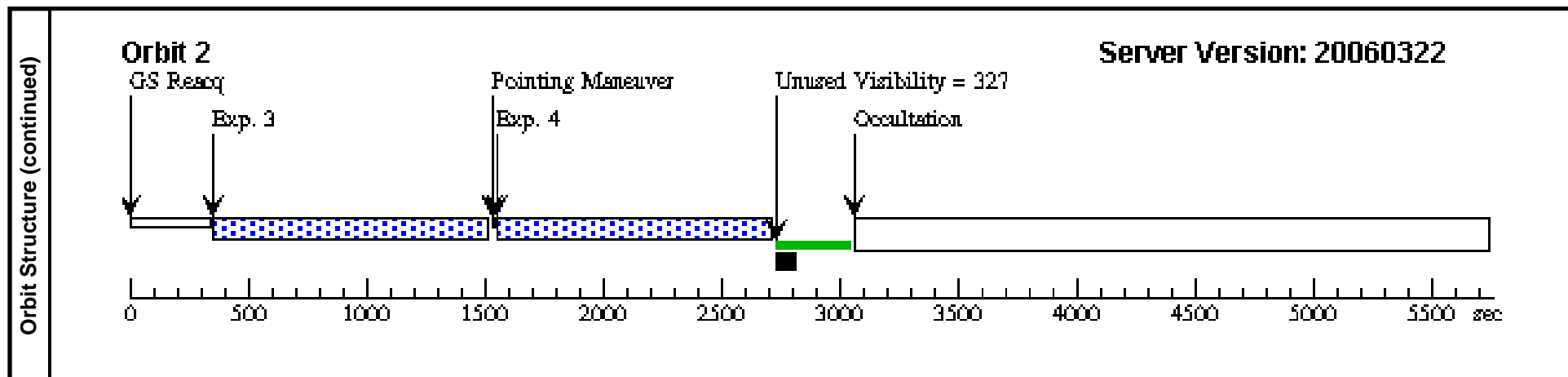
OBSERVING DESCRIPTION

TBD

Proposal 10780 - Visit 01 - The Unusual Afterglow and Host Galaxy of the Short GRB 060121

Sat Jul 01 01:22:45 GMT 2006

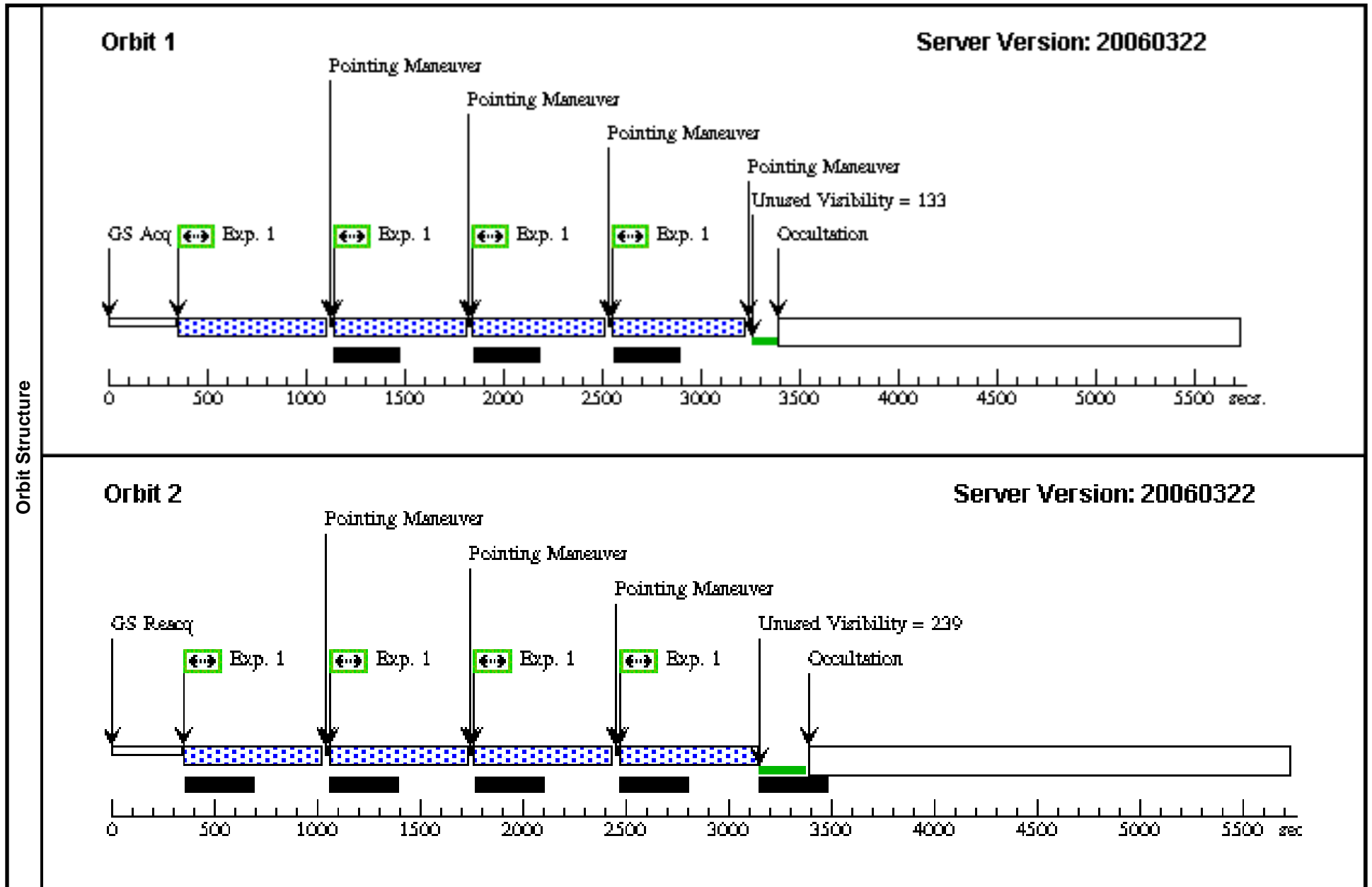
Visit	Proposal 10780, Visit 01 Diagnostic Status: No Diagnostics Scientific Instruments: NIC3 Special Requirements: BETWEEN 27-FEB-2006:00:00:00 AND 13-MAR-2006:00:00:00; VISIBILITY INTERVAL 3060 S									
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(1)	GRB060121	RA: 09 09 52.1300 (137.4672083d) Dec: +45 39 44.90 (45.66247d) Equinox: J2000 Plate Id: (?)		V=27.0+/-1.0	Coordinate Source: GUIDE_STAR_CATALOG				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	(1) GRB060121	(1) GRB060121	NIC3, MULTIACCUM, NIC3	F160W	NSAMP=11; SAMP-SEQ=SPARS 128	POS TARG -1.426,- 1.421		[==>]	[1]
	2	(1) GRB060121	(1) GRB060121	NIC3, MULTIACCUM, NIC3	F160W	NSAMP=11; SAMP-SEQ=SPARS 128	POS TARG -1.426,1 .523		[==>]	[1]
	3	(1) GRB060121	(1) GRB060121	NIC3, MULTIACCUM, NIC3	F160W	NSAMP=11; SAMP-SEQ=SPARS 128	POS TARG 1.528,-1 .421		[==>]	[2]
	4	(1) GRB060121	(1) GRB060121	NIC3, MULTIACCUM, NIC3	F160W	NSAMP=11; SAMP-SEQ=SPARS 128	POS TARG 1.528,1. 523		[==>]	[2]
Orbit Structure	<p>Orbit 1 Server Version: 20060322</p> <p>The diagram illustrates the timeline for Orbit 1. It starts at 0 seconds with 'GS Acq Exp. 1' (0-400s). 'Exp. 2' occurs from 1500 to 2800 seconds. A 'Pointing Maneuver' is scheduled at 2800 seconds, followed by a period of 'Unused Visibility = 300' seconds (2800-3000s). An 'Occultation' begins at 3000 seconds and continues until 5500 seconds. The x-axis is labeled 'secs.' and ranges from 0 to 5500 with major ticks every 500 units.</p>									



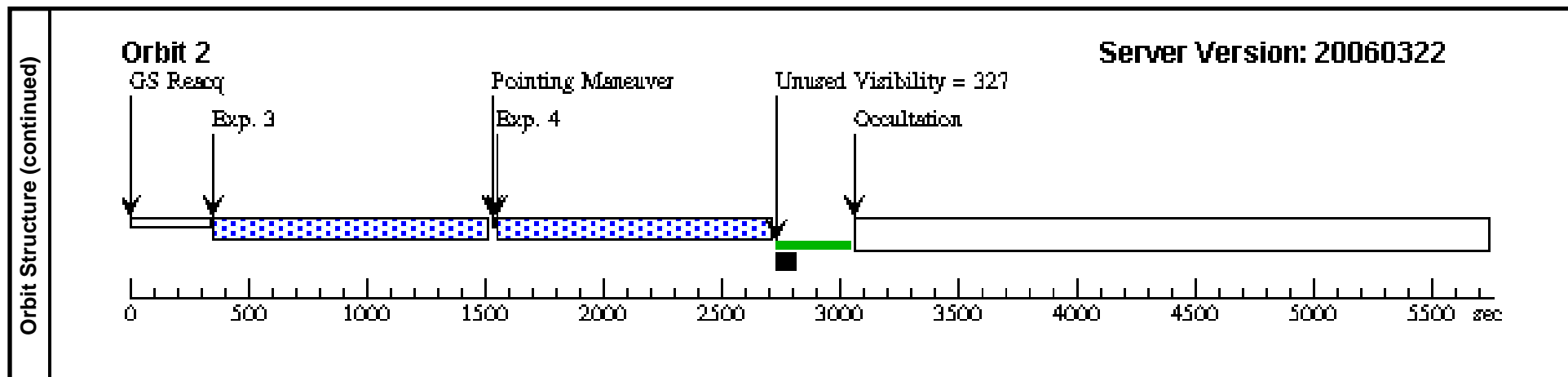
Proposal 10780 - Visit 02 - The Unusual Afterglow and Host Galaxy of the Short GRB 060121

Sat Jul 01 01:22:46 GMT 2006

Visit	Proposal 10780, Visit 02 Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: BETWEEN 27-FEB-2006:00:00:00 AND 13-MAR-2006:00:00:00									
	Patterns	#	Primary Pattern			Secondary Pattern			Exposures	
		(1)	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	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	(1)			
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous	
	(1)	GRB060121	RA: 09 09 52.1300 (137.4672083d) Dec: +45 39 44.90 (45.66247d) Equinox: J2000 Plate Id: (?)				V=27.0+/-1.0		Coordinate Source: GUIDE_STAR_CATALOG	
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(1) GRB060121	ACS/WFC, ACCUM, WFC1	F606W	CR-SPLIT=NO		Pattern 1-1 (1)	550.0 Secs [==>(Pattern 1,1)] [==>(Pattern 1,2)] [==>(Pattern 1,3)] [==>(Pattern 1,4)]	[1]
									[==>(Pattern 2,1)] [==>(Pattern 2,2)] [==>(Pattern 2,3)] [==>(Pattern 2,4)]	[2]



Visit	Proposal 10780, Visit 03 Diagnostic Status: No Diagnostics Scientific Instruments: NIC3 Special Requirements: VISIBILITY INTERVAL 3060 S									
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(2)	GRB060121-OPT	RA: 09 09 51.9900 (137.4666250d) Dec: +45 39 45.60 (45.66267d) Equinox: J2000 Plate Id: (?)		V=27.0+/-1.0	Coordinate Source: GUIDE_STAR_CATALOG				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	(2) GRB060121-OP T	(2) GRB060121-OP	NIC3, MULTIACCUM, NIC3	F160W	NSAMP=11; SAMP-SEQ=SPARS 128	POS TARG -1.426,- 1.421		[==>]	[1]
	2	(2) GRB060121-OP T	(2) GRB060121-OP	NIC3, MULTIACCUM, NIC3	F160W	NSAMP=11; SAMP-SEQ=SPARS 128	POS TARG -1.426,1 .523		[==>]	[1]
	3	(2) GRB060121-OP T	(2) GRB060121-OP	NIC3, MULTIACCUM, NIC3	F160W	NSAMP=11; SAMP-SEQ=SPARS 128	POS TARG 1.528,-1 .421		[==>]	[2]
	4	(2) GRB060121-OP T	(2) GRB060121-OP	NIC3, MULTIACCUM, NIC3	F160W	NSAMP=11; SAMP-SEQ=SPARS 128	POS TARG 1.528,1. 523		[==>]	[2]
Orbit Structure	<p>Orbit 1 Server Version: 20060322</p> <p>The diagram illustrates the timing of observations within Orbit 1. The x-axis represents time in seconds, ranging from 0 to 5500. Key events are marked with arrows: 'GS Acq Exp. 1' occurs from 0 to approximately 400 seconds; 'Exp. 2' is a long exposure from 1500 to 2800 seconds; a 'Pointing Maneuver' occurs between 2800 and 3000 seconds; 'Unused Visibility = 300' is a period from 3000 to 3100 seconds; and 'Occultation' begins at 3100 seconds and continues until the end of the orbit at 5500 seconds. The exposure periods are shown as blue checkered bars, and the occultation period is a solid white bar.</p>									



Visit	Proposal 10780, Visit 04 Diagnostic Status: No Diagnostics Scientific Instruments: NIC3 Special Requirements: VISIBILITY INTERVAL 3060 S									
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(2)	GRB060121-OPT	RA: 09 09 51.9900 (137.4666250d) Dec: +45 39 45.60 (45.66267d) Equinox: J2000 Plate Id: (?)		V=27.0+/-1.0	Coordinate Source: GUIDE_STAR_CATALOG				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	(2) GRB060121-OP T	(2) GRB060121-OP T	NIC3, MULTIACCUM, NIC3	F110W	NSAMP=11; SAMP-SEQ=SPARS 128	POS TARG -1.426,- 1.421		[==>]	[1]
	2	(2) GRB060121-OP T	(2) GRB060121-OP T	NIC3, MULTIACCUM, NIC3	F110W	NSAMP=11; SAMP-SEQ=SPARS 128	POS TARG -1.426,1 .523		[==>]	[1]
	3	(2) GRB060121-OP T	(2) GRB060121-OP T	NIC3, MULTIACCUM, NIC3	F110W	NSAMP=11; SAMP-SEQ=SPARS 128	POS TARG 1.528,-1 .421		[==>]	[2]
	4	(2) GRB060121-OP T	(2) GRB060121-OP T	NIC3, MULTIACCUM, NIC3	F110W	NSAMP=11; SAMP-SEQ=SPARS 128	POS TARG 1.528,1. 523		[==>]	[2]
Orbit Structure	<p>Orbit 1 Server Version: 20060322</p> <p>The diagram illustrates the timing of observations within Orbit 1. The x-axis represents time in seconds, ranging from 0 to 5500. Key events are marked with arrows: 'GS Acq Exp. 1' occurs from 0 to approximately 400 seconds; 'Exp. 2' occurs from 1500 to 2800 seconds; a 'Pointing Maneuver' occurs from 2800 to 3000 seconds; 'Unused Visibility = 300' is indicated between 3000 and 3100 seconds; and 'Occultation' begins at 3100 seconds and continues until the end of the orbit at 5500 seconds. The observation periods are shown as blue checkered bars, while the occultation period is a solid white bar.</p>									

