



# Observing Application

Date : Mar, 31 2011  
 Proposal ID : VLBA/11A-133  
 Legacy ID : BS210  
 PI : Alicia Soderberg  
 Type : Director's Discretionary  
 Time - Target of Opportunity  
 Category : Energetic Transients and Pulsars  
 Total Time : 26.0

## VLBI observations will reveal the nature of the most peculiar GRB 110328A

### Abstract:

The recent gamma-ray transient, GRB 110328A, is a unique event in the history of GRB observations. The transient has triggered the Swift satellite five times in the past 2 days. We have discovered a bright long-wavelength counterpart at radio and mm-bands and have since undertaken a monitoring campaign that extends across the electromagnetic spectrum. We aim to decipher the nature of this peculiar transient through VLBI observations used in conjunction with our unique dataset.

### Authors:

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### Related proposals:

### Joint:

Not a Joint Proposal

### Observing type(s):

Continuum, Single Pointing(s), Monitoring

### VLBA Resources

Name	Wavelength	Processor	Stations	Observing Parameters	Correlation Parameters

Name	Wavelength	Processor	Stations	Observing Parameters	Correlation Parameters
VLBA-X	3.6 cm	Socorro-DiFX	VLBA <input checked="" type="checkbox"/> Br <input checked="" type="checkbox"/> Fd <input checked="" type="checkbox"/> Hn <input checked="" type="checkbox"/> Kp <input checked="" type="checkbox"/> La <input checked="" type="checkbox"/> Mk <input checked="" type="checkbox"/> Kp <input checked="" type="checkbox"/> Ov <input checked="" type="checkbox"/> Pt <input checked="" type="checkbox"/> Sc <input checked="" type="checkbox"/> HSA Ar Ef GBT VLA-Y27 VLA-Y1 Geodetic	Bandwidth: 16 MHz Baseband 8 Channels Sample Rate 32 (Msample/s) Bits/Sample 2 Polarization Dual Agg. Bit Rate 512 (Mbits/sec)	Full Polarization <input checked="" type="checkbox"/> Pulsar Gate Correlator Passes 1 Integration Period (sec) 2.0 Spectral Points /BBC 8 No of Fields 0
VLBA-K	1.3 cm	Socorro-DiFX	VLBA <input checked="" type="checkbox"/> Br <input checked="" type="checkbox"/> Fd <input checked="" type="checkbox"/> Hn <input checked="" type="checkbox"/> Kp <input checked="" type="checkbox"/> La <input checked="" type="checkbox"/> Mk <input checked="" type="checkbox"/> Kp <input checked="" type="checkbox"/> Ov <input checked="" type="checkbox"/> Pt <input checked="" type="checkbox"/> Sc <input checked="" type="checkbox"/> HSA Ar Ef GBT VLA-Y27 VLA-Y1 Geodetic	Bandwidth: 16 MHz Baseband 8 Channels Sample Rate 32 (Msample/s) Bits/Sample 2 Polarization Dual Agg. Bit Rate 512 (Mbits/sec)	Full Polarization <input checked="" type="checkbox"/> Pulsar Gate Correlator Passes 1 Integration Period (sec) 2.0 Spectral Points /BBC 8 No of Fields 1

### Sources:

Name	Position		Velocity		Group
GRB 110328A	Coordinate System	Equatorial	Convention	Radio	Event
	Equinox	J2000			
	Right Ascension	16:44:49.925 00:00:00.0	Ref. Frame	LSRK	
	Declination	+57:34:59.68 00:00:00.0	Velocity	0.00	

### Sessions:

Name	Session Time (hours)	Repeat	Separation	GST minimum	GST maximum	Elevation Minimum
FirstTwo	7.00	2	7 day	14:00:00	17:00:00	0
SecondTwo	6.00	2	14 day	14:00:00	17:00:00	0

### Session Constraints:

Name	Constraints	Comments
FirstTwo		
SecondTwo		TBD separation

### Session Source/Resource Pairs:

Session Name	Source	Resource	Time	Figure of Merit
FirstTwo	GRB 110328A	VLBA-X	3.5 hour	0.06 mJy/bm
FirstTwo	GRB 110328A	VLBA-K	3.5 hour	0.07 mJy/bm
SecondTwo	GRB 110328A	VLBA-X	3.0 hour	0.06 mJy/bm
SecondTwo	GRB 110328A	VLBA-K	3.0 hour	0.06 mJy/bm