



Observing Application

Date : Mar, 30 2011
 Proposal ID : VLBA/11A-132
 Legacy ID : BB304
 PI : Geoffrey Bower
 Type : Director's Discretionary
 Time - Target of Opportunity
 Category : Energetic Transients and Pulsars
 Total Time : 8.0

The Peculiar Swift event GRB110328A / Swift J164449.3+573451

Abstract:

The recently discovered GRB110328A (Cummings et al. 2011 GCN11823) has exhibited behavior quite unlike normal long-duration GRBs. Radio and X-ray variability, as well as association with a galaxy at $z=0.35$, argue that the source may be a tidal disruption event viewed face-on. VLBA observations can probe the structure on parsec scales and provide constraints on the expansion velocity of any relativistic outflow. We request two observations over the next 5 days to explore structural variability on the timescales of flux density evolution. Observations months later may detect overall expansion of the source.

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Related proposals:

Joint:

Not a Joint Proposal

Observing type(s):

Continuum, Single Pointing(s), Astrometry

VLBA Resources

Name	Wavelength	Processor	Stations	Observing Parameters	Correlation Parameters

Name	Wavelength	Processor	Stations	Observing Parameters	Correlation Parameters
VLBA512	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"/> <hr/> HSA Ar Ef GBT VLA-Y27 <hr/> VLA-Y1 <hr/> Geodetic	Bandwidth: 16 MHz Baseband Channels: 8 Sample Rate (Msample/s): 32 Bits/Sample: 2 Polarization: Dual Agg. Bit Rate (Mbits/sec): 512	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
GRB110328A	Coordinate System	Equatorial	Convention	Radio	Swift
	Equinox	J2000			
	Right Ascension	16:44:49.93	Ref. Frame	LSRK	
		00:00:00.0			
Declination	+57:34:59.7	Velocity	0.00		
	00:00:00.0				

Sessions:

Name	Session Time (hours)	Repeat	Separation	GST minimum	GST maximum	Elevation Minimum
TwoObs	4.00	2	5 day	16:00:00	08:00:00	0

Session Constraints:

Name	Constraints	Comments

Session Source/Resource Pairs:

Session Name	Source	Resource	Time	Figure of Merit
TwoObs	GRB110328A	VLBA512	4.0 hour	0.04 mJy/bm

Staff support: None

Plan of Dissertation: no