



Observing Application

Date : May, 09 2012
 Proposal ID : VLBA/12A-476
 Legacy ID : BO42
 PI : Monica Orienti
 Type : Director's Discretionary
 Time - Target of
 Opportunity
 Category : Active Galactic Nuclei
 Total Time : 10.0

The radio emission of the gamma-ray flaring FSRQ at the highest redshift

Abstract:

We request VLBA observations at 8.4, 15, and 22 GHz of the new gamma-ray flat spectrum radio quasar TXS 0536+145. This source was detected in flaring activity on 2012 March 22, and it is the highest redshift flaring gamma-ray object detected by Fermi-LAT. Considering the high redshift and the relatively flat gamma-ray spectrum, the knowledge of its physical properties can provide unique information on the study of the Extragalactic Background Light (EBL). The gamma-ray flaring event triggered multifrequency observations in X-ray, optical, and radio bands. With this proposal we would like to complement the information on the radio emission provided by the on-going monitoring campaign with the single-dish Medicina telescope, with high-resolution VLBA observations necessary to determine the parsec-scale properties of this source.

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Related proposals:

Joint:

Not a Joint Proposal

Observing type(s):

Continuum

VLBA Resources

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

Sources:

Name	Position		Velocity		Group
txs0536+145	Coordinate System	Equatorial	Convention	Optical	0536+145
	Equinox	J2000			
	Right Ascension	05:39:42.36	Ref. Frame	Barycentric	
		00:00:00.0			
Declination	+14:33:45.5	Redshift	2.69000		
	00:00:00.0				

Sessions:

Name	Session Time (hours)	Repeat	Separation	GST minimum	GST maximum	Elevation Minimum
0536+145	2.00	5	60 day	10:00:00	16:00:00	0

Session Constraints:

Name	Constraints	Comments