Observing Application

Date :	Dec, 15 2008
Proposal ID :	VLA/08C-244
Legacy ID :	AC951
PI :	Poonam Chandra
Type :	Rapid Response - Exploratory Time
Category :	Extragalactic
Total Time :	30.0

Late time deep radio monitoring of brightest naked eye burst GRB 080319B

Abstract:

GRB 080319B was a remarkable gamma ray burst (GRB) detected by the Swift satellite, setting a new record for the farthest object that could be seen with the naked eye at a redshift of 0.937. The afterglow of the burst set a new record for the "most intrinsically bright object ever observed by humans in the universe" (total energy of 10^{54} ergs). The late time excess of a red light indicates a presence of an underlying supernova (Tanvir et al. 2008). Hence, this burst is ideal for a late time, deep radio follow-up. Because of its huge energy, its late time jet is highly likely to show up in radio bands. If we indeed detect the radio emission from such late epoch (detection 19th March 2008), it will be an excellent test of the theory for late time jets and will be unique determination of the GRB calorimetry.

Authors:

Name	Institution	Email	Status
Poonam Chandra	National Radio Astronomy Observatory	pc8s@virginia.edu	
Dale Frail	National Radio Astronomy Observatory	dfrail@nrao.edu	
Alicia Soderberg	Princeton University	alicia@astro.princeton.edu	

Principal Investigator: Poonam Chandra
Contact: Poonam Chandra
Telephone: 4349244896
Email: pc8s@virginia.edu

Related proposals:

AK706

Joint:

Not a Joint Proposal

Observing type(s):

Continuum, Triggered Transient

VLA Resources

Name	Conf.	Frontend & Backend	Setup
Obs-1	A	L Band 20 cm 1000 - 2000 MHz VLA Correlator - Single Channel Continuum	Rest frequencies: 1464.9,1385.1 MHz Bandwidth: 50 MHz

Sources:

Name	RA / RA Range	Dec / Dec Range	Epoch	Velocity / z	Group
GRB080319B	14:26:37.0 00:00:00.0	+36:25:10 00:00:00	J2000	Redshift : 0.937	GRb

Sessions:

Name	Session Time (hours)	Repeat	Separation	LST minimum	LST maximum	Elevation Minimum
GRBsession	10.00	3	2 day	07:30:00	21:00:00	0

Session Constraints:

Name	Constraints	Comments
GRBsession		We are mainly aiming for the open dynamic slots on 21st Dec (LST 9:30-21:00), 24th December (LST 7:30-17:30) and 27th December (LST 10:00-21:00).

Session Source/Resource Pairs:

Session Name	Source	Resource	Time	Figure of Merit	Subarray
GRBsession	GRB080319B	Obs-1	10.0 hour	0.01 mJy/bm	

Present for observation: no Staff support: None Plan of Dissertation: no