



# Observing Application

Date : May, 10 2011  
Proposal ID : VLA/11A-268  
Legacy ID : AC1052  
PI : C. (Teddy) Cheung  
Type : Director's Discretionary  
Time - Target of Opportunity  
Category : Energetic Transients and Pulsars  
Total Time : 8.0

## Further EVLA Follow-up of the Crab following a Giant Gamma-ray flare

### Abstract:

Following the recent gamma-ray detection of a bright flaring in the Crab by Fermi-LAT and AGILE, we obtained 4 epochs of EVLA follow-up at several frequencies (mainly 4 and 8 GHz). A radio point source was detected. If confirmed, our EVLA observations suggest a different gamma-ray emission site than currently posited. We propose further EVLA to confirm this source and to follow the detected radio source's flux and spectral evolution.

### Authors:

Name	Institution	Email	Status
C. (Teddy) Cheung	Naval Research Laboratory	teddy@slac.stanford.edu	
Greg Taylor	New Mexico, University of	gbtaylor@unm.edu	

Principal Investigator: C. (Teddy) Cheung  
Contact: C. (Teddy) Cheung  
Telephone: 202 404 7202  
Email: teddy@slac.stanford.edu

### Related proposals:

S3184

### Joint:

Not a Joint Proposal

### Observing type(s):

Continuum

### VLA Resources

Name	Conf.	Frontend & Backend	Setup
Kband	B	K Band 1.3 cm 18000 - 26500 MHz WIDAR OSRO1: 2 Subbands/Full polz	Rest frequencies: 21500.0, 22500.0 MHz Subband Bandwidth: 128.0 MHz No. of Channels: 64 Poln. products: 4.0 Channel Width: 2000.0 kHz

Name	Conf.	Frontend & Backend	Setup
Cband	B	C Band 6 cm 4000-8000 MHz WIDAR OSRO1: 2 Subbands/Full polz	Rest frequencies: 1420.40575 MHz Subband Bandwidth: 128.0 MHz No. of Channels: 64 Poln. products: 4.0 Channel Width: 2000.0 kHz

#### Sources:

Name	Position		Velocity		Group
Crab	Coordinate System	Equatorial	Convention	Radio	Run
	Equinox	J2000			
	Right Ascension	05:34:31.95	Ref. Frame	LSRK	
	Declination	00:00:00.0			
			+22:00:52.0	Velocity	
	00:00:00.0				

#### Sessions:

Name	Session Time (hours)	Repeat	Separation	LST minimum	LST maximum	Elevation Minimum
Cbandsess	1.00	4	3 day	02:30:00	08:30:00	20
Kbandsess	1.00	4	3 day	02:30:00	08:30:00	30

#### Session Constraints:

Name	Constraints	Comments

#### Session Source/Resource Pairs:

Session Name	Source	Resource	Time	Figure of Merit	Subarray
Cbandsess	Crab	Cband	1.0 hour	1 mJy/bm	
Kbandsess	Crab	Kband	1.0 hour	1 mJy/bm	

Present for observation: no

Staff support: None

Plan of Dissertation: no