Observing Application

Date :	Aug, 07 2012
Proposal ID :	VLA/12B-369
Legacy ID :	AS1217
PI :	Charlottesville Summer Students
Type :	Director's Discretionary Time - Target of Opportunity
Category :	Normal Galaxies, Groups, and Clusters
Total Time :	1.0

An Anomalous Point Source in the Arp 240 Merger Field

Abstract:

On June 28, 2012, we used the VLA to map continuum emission associated with supernovae and compact AGNs in the galaxy merger between NGC 5257 and 5258, also known as Arp 240. At frequencies of 8.4 and 6.2 GHz, the two images produced showed an unresolved source of flux above two sigma approximately two arcminutes north of NGC 5257. After searching through the databases of SIMBAD, NED, and any other catalogue of sources we could find, we were unable to locate any record or explanation of the source of our mystery emission. We request, as a Target of Opportunity proposal, one additional hour of observing time with the VLA to repeat our original project. We wish to observe the target in both C band and X band in an attempt to detect the source again. More data on this source will help us understand the time evolution and possible progenitor of our anomalous source.

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Related proposals:

Joint:

Not a Joint Proposal

Observing type(s):

Continuum

VLA Resources

Name	Conf.	Frontend & Backend	Setup

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CbandObs	B	C Band 6 cm 4000-8000 MHz WIDAR OSRO, Dual Polarization	Rest frequencies: 5000.0,6000.0 MHz Subband Bandwidth: 128.0 MHz No. of Channels: 128 Poln. products: 2.0 Channel Width: 1000.0 kHz Total Bandwidth: 2,048.00 MHz
XbandObs	B	X Band 3.6 cm 8000 - 12000 MHz WIDAR OSRO, Dual Polarization	Rest frequencies: 8500.0,9500.0 MHz Subband Bandwidth: 128.0 MHz No. of Channels: 128 Poln. products: 2.0 Channel Width: 1000.0 kHz Total Bandwidth: 2,048.00 MHz

Testing Resource Images

Sources:

Name	Position		Velocity		Group
Arp240	**Coordinate System**	Equatorial	**Convention**	Optical	Arp240Group
	Equinox	J2000			
	Right Ascension	13:39:55.2	**Ref. Frame**	Barycentric	
		00:00:00.0			
	Declination	+00:50:13.0	**Velocity**	0.00	
		00:00:00.0			

Sessions:

Name	Session Time (hours)	Repeat	Separation	LST minimum	LST maximum	Elevation Minimum
Arp240Cband	0.50	1	0 day	09:00:00	17:00:00	15
Arp240Xband	0.50	1	0 day	09:00:00	17:00:00	15

Session Constraints:

Name	Constraints	Comments

Session Source/Resource Pairs:

Session Name	Source	Resource	Time	Figure of Merit	Subarray
Arp240Cband	Arp240	CbandObs	0.5 hour	0.1 mJy/bm	
Arp240Xband	Arp240	XbandObs	0.5 hour	0.1 mJy/bm	

Present for observation: no Staff support: Consultation Plan of Dissertation: no