



Observing Application

Date : Jun, 23 2011
 Proposal ID : VLA/11A-280
 Legacy ID : AR771
 PI : Nirupam Roy
 Type : Director's Discretionary
 Time - Target of
 Opportunity
 Category : Energetic Transients and
 Pulsars
 Total Time : 6.0

The EVLA Nova Project: Searching for Radio Emission from Nova V1312 Scorpii

Abstract:

We request 6 hours of EVLA wideband observations to perform early-time monitoring of the newly discovered nova V1312 Scorpii, in order to (1) detect the ejecta while they are completely optically thick, (2) estimate the distance to the nova using the simple model of emission from an optically thick expanding sphere of ejecta, and (3) search for synchrotron emission from shocks associated with jets and the shaping of the ejecta. These observations will help us to determine if V1312 Scorpii is a good target for further long-term monitoring to address the question of whether the unique behavior of V1723 Aql is a generic feature of all classical novae.

Authors:

Name	Institution	Email	Status
Nirupam Roy	National Radio Astronomy Observatory	nroy@aoc.nrao.edu	
Jennifer Sokoloski	Columbia University	jeno@astro.columbia.edu	
Michael Rupen	National Radio Astronomy Observatory	mrupen@nrao.edu	
Miriam Krauss	National Radio Astronomy Observatory	mkh@aoc.nrao.edu	
Laura Chomiuk	Harvard-Smithsonian Center for Astrophysics	lchomiuk@cfa.harvard.edu	
Amy Mioduszewski	National Radio Astronomy Observatory	amiodusz@nrao.edu	
Tim O'Brien	Manchester, University of (Jodrell Bank)	tob@jb.man.ac.uk	
Mike Bode	Liverpool John Moores University	mfb@astro.livjm.ac.uk	
Gillian Knapp	Princeton University	gk@astro.princeton.edu	
Stewart Eyres	Central Lancashire, University of	spseyres@uclan.ac.uk	
Gregg Hallinan	National Radio Astronomy Observatory	gregg@astro.berkeley.edu	Graduating: N/A Thesis: false

Principal Investigator: Nirupam Roy
 Contact: Nirupam Roy
 Telephone: 575-835-7095
 Email: nroy@aoc.nrao.edu

Related proposals:

AS1039, VLA/10B-200, VLA/10B-233, VLA/11A-239, VLA/11A-254, VLA/11B-170

Joint:

Not a Joint Proposal

Observing type(s):

Continuum, Polarimetry, Single Pointing(s), Monitoring

VLA Resources

Name	Conf.	Frontend & Backend	Setup
C wide	Any	C Band 6 cm 4000-8000 MHz WIDAR RSRO	Comments: null
Ka wide	Any	Ka Band 0.9 cm 26500 - 40000 MHz WIDAR RSRO	Comments: null

Sources:

Name	Position		Velocity		Group
Nova V1312 Sco	Coordinate System	Equatorial	Convention	Radio	V1312 Sco
	Equinox	J2000			
	Right Ascension	16:55:11.0 00:00:00.0	Ref. Frame	LSRK	
	Declination	-38:38:12.0 00:00:00.0	Velocity	0.00	

Sessions:

Name	Session Time (hours)	Repeat	Separation	LST minimum	LST maximum	Elevation Minimum
V1312Sco Look	2.00	3	10 day	00:00:00	24:00:00	0

Session Constraints:

Name	Constraints	Comments
V1312Sco Look		We propose observing ASAP; a week later; then at an age of ~50 days.

Session Source/Resource Pairs:

Session Name	Source	Resource	Time	Figure of Merit	Subarray
V1312Sco Look	Nova V1312 Sco	C wide	1.0 hour	0.007 mJy/bm	
V1312Sco Look	Nova V1312 Sco	Ka wide	1.0 hour	0.030 mJy/bm	

Present for observation: yes

Staff support: None

Plan of Dissertation: no