



# Observing Application

Date : Apr, 29 2011  
Proposal ID : VLA/11A-265  
Legacy ID : AS1102  
PI : Alicia Soderberg  
Type : Director's Discretionary  
Time - Target of  
Opportunity  
Category : Energetic Transients and  
Pulsars  
Total Time : 3.0

## A Search for Radio Emission from the Type Ia SN 2011by

### Abstract:

One of the outstanding mysteries of Type Ia Supernovae is the nature of their progenitors: single vs double degenerate white dwarf systems. EVLA has the potential to reveal the progenitors since the interaction of the supernova shockwave with the circumstellar material should produce weak (but detectable!) radio emission in the single degenerate progenitor scenario. Here we request EVLA follow-up observations of the nearby and very young Type Ia SN 2011by.

### Authors:

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### Related proposals:

AS1015, AS1058, AS1089

### Joint:

Not a Joint Proposal

### Observing type(s):

Continuum, Single Pointing(s)

### VLA Resources

Name	Conf.	Frontend & Backend	Setup
C-band	B	C Band 6 cm 4000-8000 MHz WIDAR RSRO	Comments: We request 2 GHz of bandwidth for maximal sensitivity.

### Sources:

Name	Position	Velocity	Group
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Name	Position		Velocity		Group
SN 2011by	Coordinate System	Equatorial	Convention	Radio	SN
	Equinox	J2000			
	Right Ascension	11:55:45.6 00:00:00.0	Ref. Frame	LSRK	
	Declination	+55:19:34.0 00:00:00.0	Velocity	0.00	

### Sessions:

Name	Session Time (hours)	Repeat	Separation	LST minimum	LST maximum	Elevation Minimum
Tonight	3.00	1	0 day	00:00:00	24:00:00	0

### Session Constraints:

Name	Constraints	Comments

### Session Source/Resource Pairs:

Session Name	Source	Resource	Time	Figure of Merit	Subarray
Tonight	SN 2011by	C-band	3.0 hour	0.003 mJy/bm	

Present for observation: no

Staff support: None

Plan of Dissertation: no