



Observing Application

Date : Jun, 07 2010
 Proposal ID : VLA/10B-228
 Legacy ID : AS1058
 PI : Alicia Soderberg
 Type : Rapid Response -
 Exploratory Time
 Category : Extragalactic
 Total Time : 12.0

A Search for Radio Emission from PTF10icb

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 PTF10icb.

Authors:

Name	Institution	Email	Status
Alicia Soderberg	Harvard-Smithsonian Center for Astrophysics	ASODERBERG@CFA.HARVARD.EDU	
Laura Chomiuk	National Radio Astronomy Observatory	chomiuk@astro.wisc.edu	

Principal Investigator: Alicia Soderberg
 Contact: Alicia Soderberg
 Telephone: 609-258-2725
 Email: ASODERBERG@CFA.HARVARD.EDU

Related proposals:

AS1015

Joint:

Not a Joint Proposal

Observing type(s):

Continuum

VLA Resources

Name	Conf.	Frontend & Backend	Setup
L-band	D	L Band 20 cm 1000 - 2000 MHz WIDAR OSRO1: 2 Subbands/Full polz	Rest frequencies: 1328.0,1456.0 MHz Bandwidth: 128.0 MHz No. of Channels: 64 Poln. products: 4.0 Channel Width: 2000.0 kHz

Name	Conf.	Frontend & Backend	Setup
C-band	D	C Band 6 cm 4000-8000 MHz WIDAR OSRO1: 2 Subbands/Full polz	Rest frequencies: 4896.0, 5024.0 MHz Bandwidth: 128.0 MHz No. of Channels: 64 Poln. products: 4.0 Channel Width: 2000.0 kHz
X-band	D	X Band 3.6 cm 8080 - 8750 MHz WIDAR OSRO1: 2 Subbands/Full polz	Rest frequencies: 8396.0, 8524.0 MHz Bandwidth: 128.0 MHz No. of Channels: 64 Poln. products: 4.0 Channel Width: 2000.0 kHz

Sources:

Name	Position		Velocity		Group
PTF10icb	Coordinate System	Equatorial	Convention	Radio	SN
	Equinox	J2000			
	Right Ascension	12:54:49.0 00:00:00.0	Ref. Frame	LSRK	
	Declination	+58:52:55 00:00:00	Velocity	0.00	

Sessions:

Name	Session Time (hours)	Repeat	Separation	LST minimum	LST maximum	Elevation Minimum
Tonight	2.00	1	0 day	08:00:00	15:00:00	0
In4days	3.00	1	4 day	08:00:00	15:00:00	0
In10days	3.00	1	10 day	08:00:00	15:00:00	0
In20days	4.00	1	20 day	08:00:00	15:00:00	0

Session Constraints:

Name	Constraints	Comments
Tonight		This is first observation: L- and X-band
In4days		This is second observation
In10days		Third observation
In20days		This is 4th observation

Session Source/Resource Pairs:

Session Name	Source	Resource	Time	Figure of Merit	Subarray
Tonight	PTF10icb	L-band	1.0 hour	0.1 mJy/bm	
Tonight	PTF10icb	X-band	1.0 hour	0.02 mJy/bm	
In4days	PTF10icb	L-band	1.0 hour	0.1 mJy/bm	
In4days	PTF10icb	C-band	1.0 hour	0.02 mJy/bm	
In4days	PTF10icb	X-band	1.0 hour	0.02 mJy/bm	
In10days	PTF10icb	L-band	1.0 hour	0.1 mJy/bm	