



Observing Application

Date : Jun, 01 2010
Proposal ID : VLA/10A-267
Legacy ID : AL756
PI : Carol Lonsdale
Type : Rapid Response -
Exploratory Time
Category : Extragalactic
Total Time : 1.0

A hyperluminous extremely red high redshift WISE Starburst/QSO candidate

Abstract:

The Wide Field Infrared Survey Explorer (WISE) has just discovered what may be one of the most luminous heavily dust obscured starburst/QSOs known, representing a critical phase in galaxy evolution. In particular it may represent a critical, and very brief, phase close to the turn on of radio feedback. It is detected at WISE 12 and 24 microns and is a dropout in the near-IR bands 3.5 and 4.5 microns. It is detected by NVSS at 3.4 mJy at 1.4 GHz with evidence for being resolved, and has a Ly-alpha redshift of 2.45. We request a rapid response X band observation with EVLA in D configuration to determine spectral index, to obtain a much more accurate radio position, and to get an idea of the source extent and structure. We are also requesting 30 and 90GHz observations with GBT but not linking that to this proposal. The goal is to allow us to subsequently prepare a comprehensive continuum and line mapping (CO and possibly other molecular tracers) and total flux observations with EVLA and GBT.

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Related proposals:

Joint:

Not a Joint Proposal

Observing type(s):

Continuum, Single Pointing(s)

VLA Resources

Name	Conf.	Frontend & Backend	Setup
wise_hiz	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
wise_hiz	Coordinate System	Equatorial	Convention	Optical	WISE ULIRG candidates
	Equinox	J2000			
	Right Ascension	18:14:17.3	Ref. Frame	LSRK	
		00:00:00.0			
	Declination	+34:12:24	Velocity	732550.00	
00:00:00					

Sessions:

Name	Session Time (hours)	Repeat	Separation	LST minimum	LST maximum	Elevation Minimum
1	1.00	1	0 day	21:00:00	23:00:00	30

Session Constraints:

Name	Constraints	Comments

Session Source/Resource Pairs:

Session Name	Source	Resource	Time	Figure of Merit	Subarray
1	wise_hiz	wise_hiz	1.0 hour	0.02 mJy/bm	

Present for observation: no

Staff support: None

Plan of Dissertation: no