



Observing Application

Date : Sep, 29 2008
 Proposal ID : VLA/08B-248
 Legacy ID : AT369
 PI : Greg Taylor
 Type : Rapid Response -
 Exploratory Time
 Category : Extragalactic
 Total Time : 2.0

Multi-Frequency imaging of two candidate Binary Black Systems

Abstract:

We propose to obtain high resolution (A-configuration VLA) imaging at 1.4, 5, 8, and 22 GHz of two candidate binary black hole systems discovered in a recent analysis of over 10,000 SDSS quasars. Both systems are radio loud and could be worth follow-up observations with the VLBA depending on the outcome of the proposed VLA observations. The number of known close binary black hole systems is very small, so even adding two new systems would be of considerable interest. If they are not found to be binary black holes then another possibility is jet interactions with the emission line region.

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Related proposals:

Joint:

Not a Joint Proposal

Observing type(s):

Continuum

VLA Resources

Name	Conf.	Frontend & Backend	Setup
1.4	A	L Band 20 cm 1000 - 2000 MHz VLA Correlator - Single Channel Continuum	Rest frequencies: 1464.9,1385.1 MHz Bandwidth: 50 MHz

Name	Conf.	Frontend & Backend	Setup
5.0	A	C Band 6 cm 4200-7700 MHz VLA Correlator - Single Channel Continuum	Rest frequencies: 4885.1,4835.1 MHz Bandwidth: 50 MHz
8.4	A	X Band 3.6 cm 8080 - 8750 MHz VLA Correlator - Single Channel Continuum	Rest frequencies: 8435.1,8485.1 MHz Bandwidth: 50 MHz
22.2	A	K Band 1.3 cm 18000 - 26500 MHz VLA Correlator - Single Channel Continuum	Rest frequencies: 22485.1,22435.1 MHz Bandwidth: 50 MHz

Sources:

Name	RA / RA Range	Dec / Dec Range	Epoch	Velocity / z	Group
SDSS1517+33	15:17:09.2 00:00:00	33:53:24.7 00:00:00	J2000	Redshift : 0.135	doubles
SDSS1129+60	11:29:39.78 00:00:00	60:57:42.5 00:00:00	J2000	Redshift : 0.112	doubles

Sessions:

Name	Session Time (hours)	Repeat	Separation	LST minimum	LST maximum	Elevation Minimum
exploratory	2.00	1	0 day	10:00:00	20:00:00	0

Session Constraints:

Name	Constraints	Comments

Session Source/Resource Pairs:

Session Name	Source	Resource	Time	Figure of Merit	Subarray
exploratory	SDSS1517+33 SDSS1129+60	1.4	0.5 hour	0.05 mJy/bm	
exploratory	SDSS1517+33 SDSS1129+60	5.0	0.5 hour	0.05 mJy/bm	
exploratory	SDSS1517+33 SDSS1129+60	8.4	0.5 hour	0.05 mJy/bm	
exploratory	SDSS1517+33 SDSS1129+60	22.2	0.5 hour	0.1 mJy/bm	

Present for observation: no

Staff support: None

Plan of Dissertation: no