



Observing Application

Date : Oct, 07 2008
Proposal ID : VLA/08C-240
Legacy ID : AC950
PI : Ishwara Chandra
Type : Rapid Response -
Exploratory Time
Category : Extragalactic
Total Time : 2.0

High resolution observation of candidate Double-Double radio galaxy.

Abstract:

We have discovered a possible double-double radio galaxy (DDRG) with GMRT at 150, 610 and 1400 MHz in the field of Upsilon Andromeda. The double-double morphology indicates multiple epoch of radio activity where the diffuse outer lobes belong to the previous epoch of activity and the inner compact double corresponds to the recent epoch. There are only a dozen DDRGs known till date and it is important to discover more sources of this class to understand the frequency of occurrence of episodic jet activity in radio galaxies and quasars. Even at the highest resolution of GMRT at 1400 MHz (about 2 arc sec), the inner compact double is not unambiguously resolved into a triple. Observations with a resolution of an arc-second or better is needed to clearly resolve the core and also to get an estimate of its spectral index. VLA-A array at 5 GHz is ideal for this purpose and we request C-band observations with the VLA-A array for about 2 hours. Since the VLA is currently in A configuration, we request this proposal be considered under "Rapid Response Science" stream. This will form a chapter in the thesis of Samuel George.

Authors:

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Related proposals:

None

Joint:

Not a Joint Proposal

Observing type(s):

Continuum

VLA Resources

Name	Conf.	Frontend & Backend	Setup
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Name	Conf.	Frontend & Backend	Setup
C-band	A	C Band 6 cm 4200-7700 MHz VLA Correlator - Single Channel Continuum	Rest frequencies: 4885.1, 4835.1 MHz Bandwidth: 50 MHz

Sources:

Name	RA / RA Range	Dec / Dec Range	Epoch	Velocity / z	Group
GMRTJ0137	01:37:43.6 00:00:00.0	+41:21:57 00:00:00	J2000	Velocity : 0.00	DDRG

Sessions:

Name	Session Time (hours)	Repeat	Separation	LST minimum	LST maximum	Elevation Minimum
DDRG	2.00	1	0 day	20:00:00	07:00:00	18

Session Constraints:

Name	Constraints	Comments
DDRG	no constraints	Two hours inclusive of time required for flux and phase calibration and antenna slewing

Session Source/Resource Pairs:

Session Name	Source	Resource	Time	Figure of Merit	Subarray
DDRG	GMRTJ0137	C-band	2.0 hour	0.02 mJy/bm	

Present for observation: no

Staff support: None

Plan of Dissertation: no