



Observing Application

Date : Feb, 26 2009
 Proposal ID : VLA/09A-190
 Legacy ID : AM993
 PI : Ian McGreer
 Type : Rapid Response -
 Exploratory Time
 Category : Extragalactic
 Total Time : 5.0

High resolution imaging of a z=5.2 radio-loud quasar

Abstract:

We have recently discovered a radio quasar at z=5.2 through a program which combines the FIRST and SDSS surveys. The quasar is marginally resolved in the FIRST survey, with a 1.4GHz flux of 3mJy. It is one of only a handful of radio sources currently known at z>5. Observations in the X band with the B configuration will reveal both the radio structure of the source on arcsecond scales and the shape of the radio spectrum at GHz frequencies, yielding valuable information about the radio morphology of the object. These observations will also be used to examine the possibility that the object is gravitationally lensed, and set up future VLBA observations to be proposed in June.

Authors:

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Related proposals:

Joint:

Not a Joint Proposal

Observing type(s):

Continuum

VLA Resources

| Name | Conf. | Frontend & Backend | Setup |
|-------|-------|--|---|
| Bcont | B | X Band 3.6 cm 8080 - 8750 MHz VLA Correlator - Single Channel Continuum | Rest frequencies: 8435.1, 8485.1 MHz Bandwidth: 50 MHz |

Sources:

| Name | RA / RA Range | Dec / Dec Range | Epoch | Velocity / z | Group |
|----------------|--------------------------|-----------------------|-------|-----------------|------------|
| J074154+252029 | 07:41:54.7 00:00:00.0 | +25:20:29 00:00:00 | J2000 | Velocity : 0.00 | J0741+2520 |

Sessions:

| Name | Session Time (hours) | Repeat | Separation | LST minimum | LST maximum | Elevation Minimum |
|----------|----------------------|--------|------------|-------------|-------------|-------------------|
| Xsession | 5.00 | 1 | 0 day | 03:00:00 | 12:30:00 | 0 |

Session Constraints:

| Name | Constraints | Comments |
|------|-------------|----------|
| | | |

Session Source/Resource Pairs:

| Session Name | Source | Resource | Time | Figure of Merit | Subarray |
|--------------|----------------|----------|----------|-----------------|----------|
| Xsession | J074154+252029 | Bcont | 5.0 hour | 0.01 mJy/bm | |

Present for observation: no

Staff support: None

Plan of Dissertation: no