



Observing Application

Date : Jul, 22 2010
Proposal ID : VLA/10B-235
Legacy ID : AS1061
PI : Lorant Sjouwerman
Type : Rapid Response -
Exploratory Time
Category : Extragalactic
Total Time : 8.0

A first detection of a 6.7 GHz methanol maser in M31?

Abstract:

We found a plausible 6.7 GHz methanol maser in M31 (AS992, VLA-D) and ask for up to 8h exploratory time to confirm the detection with the EVLA. The EVLA has more 6.7 GHz receivers and less problems with non-closing baselines in the part of the band where the line was found with the VLA correlator. This would be the first maser in M31 and e.g. enable tangential velocity measurements of M31, determining the motion of M31 in the Local Group.

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Related proposals:

AS992

Joint:

Not a Joint Proposal

Observing type(s):

Spectroscopy

VLA Resources

| Name | Conf. | Frontend & Backend | Setup |
|------|-------|--|---|
| e+3b | Any | C Band 6 cm 4000-8000 MHz WIDAR OSRO2: 1 Subband/Dual polz | Rest frequencies: 6668 MHz Bandwidth: 2.0 MHz No. of Channels: 256 Poln. products: 2.0 Channel Width: 7.813 kHz |

Sources:

| Name | Position | | Velocity | | Group |
|-----------|-------------------|------------|------------|-------------|-------|
| east+3bis | Coordinate System | Equatorial | Convention | Optical | maybe |
| | Equinox | J2000 | | | |
| | Right Ascension | 00:44:15.0 | Ref. Frame | Barycentric | |
| | | 00:00:00.0 | | | |
| | Declination | +41:20:00 | Velocity | -240.00 | |
| | | 00:00:00 | | | |

Sessions:

| Name | Session Time (hours) | Repeat | Separation | LST minimum | LST maximum | Elevation Minimum |
|------|----------------------|--------|------------|-------------|-------------|-------------------|
| m31 | 2.00 | 4 | 0 day | 20:00:00 | 05:00:00 | 0 |

Session Constraints:

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

Session Source/Resource Pairs:

| Session Name | Source | Resource | Time | Figure of Merit | Subarray |
|--------------|-----------|----------|----------|-----------------|----------|
| m31 | east+3bis | e+3b | 2.0 hour | 0.8 mJy/bm | |

Present for observation: no

Staff support: None

Plan of Dissertation: no