



Observing Application

Date : Mar, 27 2008
Proposal ID : VLA/08A-237
Legacy ID : AA323
PI : Esteban Araya
Type : Rapid Response - Target
of Opportunity
Category : Galactic
Total Time : 1.0

A New H₂CO Flare in IRAS 18566+0408

Abstract:

We have detected the fourth H₂CO maser flare event in IRAS18566+0408. The flare is occurring almost at the time that was predicted based on (sparse) data from the three previous flare events. We detected this new flare with Arecibo and three days after we observed the maser with the VLA. Our preliminary results indicate that the maser increased brightness between the Arecibo and VLA observations. Today (March 27, 2008; five days after the VLA observation) we obtained a new Arecibo data point. Based on the new Arecibo observations, it appears that the peak of the flare occurred within a couple of days of the VLA observations, however, this is unclear because of uncertainties in the Arecibo and VLA relative calibration. We propose to obtain an additional VLA data point of the H₂CO maser on April 1 or April 11 (during one of the next Arecibo observations) to assess the consistency between the Arecibo and VLA measurements, and thus, to pinpoint when the peak of the flare occurred.

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Related proposals:

AA314, AA316, AA318

Joint:

Not a Joint Proposal

Observing type(s):

Spectroscopy, Single Pointing(s), Monitoring

VLA Resources

Name	Conf.	Frontend & Backend	Setup
H ₂ CO	C	C Band 6 cm 4200-7700 MHz VLA Correlator - Spectral Line	Rest frequencies: 4829.6569 MHz Bandwidth: 1.5625 MHz Spectral resolution: 6.104 kHz IF Mode: 2 No. of Channels: 256

Sources:

Name	RA / RA Range	Dec / Dec Range	Epoch	Velocity / z	Group
IR18566+0408	18:59:09.1 00:00:00.0	+04:12:15 00:00:00	J2000	Velocity : 80.0	sources

Sessions:

Name	Session Time (hours)	Repeat	Separation	LST minimum	LST maximum	Elevation Minimum
h2co	1.00	1	0 day	00:00:00	24:00:00	0

Session Constraints:

Name	Constraints	Comments
h2co	Scheduling: April 01 (preferable) or April 11. (close to 10:30 UT if possible)	

Session Source/Resource Pairs:

Session Name	Source	Resource	Time	Figure of Merit
h2co	IR18566+0408	H2CO	1.0 hour	4 mJy/bm

Present for observation: no

Staff support: Consultation

Plan of Dissertation: no