



Observing Application

Date: Apr 9, 2007
 Proposal ID: VLA/07B-261
Legacy ID: AM912
 PI: Karl Menten
 Type: Rapid Response
 Exploratory Time
 Category: Galactic
 Total time: 30.0 hour

Methanol Masers in Prominent Galactic Star Formation Regions

Abstract:

We propose to survey a flux-density complete sample of 91 star-forming regions with OH masers (observable in 80 pointings) with the EVLA antennas operating at 6.7 GHz in the D-configuration. In addition to methanol maser associated with OH masers, we expect to detect many new, probably very young star forming regions, and to measure positions accurate to ca. 1 arcsec. This will allow a detailed comparison with radio continuum and Spitzer infrared maps with comparable resolution, and allow the evolutionary state of methanol masers to be better understood.

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Joint:

Not a Joint Proposal

Observing type(s):

Spectroscopy, *

Resources:

Resource name	Tele. Conf.	Frontend & Backend	Set up
Darray	VLA D	C Band 6 cm 4500 - 5000 MHz VLA Correlator - Spectral Line	IF mode: 4 Bandwidth: 1.5625 MHz Number of channels: 64 Spectral resolution: 24.414 kHz Rest frequencies: 6668.518 MHz
Aarray	VLA A	C Band 6 cm 4500 - 5000 MHz VLA Correlator - Spectral Line	IF mode: 4 Bandwidth: 1.5625 MHz Number of channels: 64 Spectral resolution: 24.414 kHz Rest frequencies: 6668.518 MHz

Sources:

Source name	RA / RA Range	DEC / DEC Range	System	Velocity/z	Group name
G0.375+0.041	17:46:21 00:00:00.0	-28:35:39 00:00:00	J2000	0 km/s	oh-group
G0.547-0.852	17:50:14 00:00:00.0	-28:54:30 00:00:00	J2000	0 km/s	oh-group
G0.666-0.034	17:47:20 00:00:00.0	-28:23:06 00:00:00	J2000	0 km/s	oh-group
G2.143+0.010	17:50:36 00:00:00.0	-27:05:46 00:00:00	J2000	0 km/s	oh-group
G5.886-0.393	18:00:30 00:00:00.0	-24:04:00 00:00:00	J2000	0 km/s	oh-group
G6.049-1.447	18:04:53 00:00:00.0	-24:26:41 00:00:00	J2000	0 km/s	oh-group
G9.622+0.195	18:06:14 00:00:00.0	-20:31:31 00:00:00	J2000	0 km/s	oh-group
G10.624-0.385	18:10:28 00:00:00.0	-19:55:49 00:00:00	J2000	0 km/s	oh-group
G12.21-0.10	18:12:42 00:00:00.0	-18:24:20 00:00:00	J2000	0 km/s	oh-group
G12.216-0.117	18:12:44 00:00:00.0	-18:24:23 00:00:00	J2000	0 km/s	oh-group
G12.680-0.181	18:13:54 00:00:00.0	-18:01:46 00:00:00	J2000	0 km/s	oh-group
G12.890+0.488	18:11:51 00:00:00.0	-17:31:29 00:00:00	J2000	0 km/s	oh-group
G12.908-0.259	18:14:39 00:00:00.0	-17:52:00 00:00:00	J2000	0 km/s	oh-group
G17.639+0.155	18:22:26 00:00:00.0	-13:30:12 00:00:00	J2000	0 km/s	oh-group
G20.081-0.135	18:28:10 00:00:00.0	-11:28:48 00:00:00	J2000	0 km/s	oh-group
G28.147-0.005	18:42:42 00:00:00.0	-04:15:35 00:00:00	J2000	0 km/s	oh-group
G28.199-0.048	18:42:58 00:00:00.0	-04:13:58 00:00:00	J2000	0 km/s	oh-group
G30.589-0.044	18:47:18 00:00:00.0	-02:06:16 00:00:00	J2000	0 km/s	oh-group
G30.703-0.069	18:47:36 00:00:00.0	-02:00:54 00:00:00	J2000	0 km/s	oh-group
G31.412+0.307	18:47:34 00:00:00.0	-01:12:46 00:00:00	J2000	0 km/s	oh-group
G32.744-0.076	18:51:21 00:00:00.0	-00:12:06 00:00:00	J2000	0 km/s	oh-group
G34.257+0.154	18:53:18 00:00:00.0	+01:14:58 00:00:00	J2000	0 km/s	oh-group

G335.024+0.350	18:54:00 00:00:00.0	+02:01:18 00:00:00	J2000	0 km/s	oh-group
G35.197-0.743	18:58:13 00:00:00.0	+01:40:35 00:00:00	J2000	0 km/s	oh-group
G35.200-1.736	19:01:45 00:00:00.0	+01:13:32 00:00:00	J2000	0 km/s	oh-group
G35.577-0.029	18:56:22 00:00:00.0	+02:20:27 00:00:00	J2000	0 km/s	oh-group
G40.622-0.137	19:06:01 00:00:00.0	+06:46:35 00:00:00	J2000	0 km/s	oh-group
G843.16+0.02	19:10:16 00:00:00.0	+09:05:46 00:00:00	J2000	0 km/s	oh-group
3G43.796-0.127	19:11:54 00:00:00.0	+09:35:50 00:00:00	J2000	0 km/s	oh-group
G45.071+0.134	19:13:22 00:00:00.0	+10:50:54 00:00:00	J2000	0 km/s	oh-group
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Sessions:

Session Name	Session Time	Repeat	Separation	LST Minimum	LST Maximum	Elevation Minimum
Darray	5.0 hours	3	0 day	15:00:00	20:00:00	0
Aarray	5.0 hours	3	0 day	15:00:00	20:00:00	0

Session Constraints:

Session Name	Constraint	Comments
Darray		
Aarray		

Session Source/Resource Pairs:

Session Name	Source	Resource	Time	Figure of Merit
Darray	G0.375+0.041/oh-group	Darray	0.0625 hour	40mJy/bm
Darray	G0.547-0.852/oh-group	Darray	0.0625 hour	40mJy/bm
Darray	G0.666-0.034/oh-group	Darray	0.0625 hour	40mJy/bm
Darray	G2.143+0.010/oh-group	Darray	0.0625 hour	40mJy/bm
Darray	G5.886-0.393/oh-group	Darray	0.0625 hour	40mJy/bm
Darray	G6.049-1.447/oh-group	Darray	0.0625 hour	40mJy/bm
Darray	G9.622+0.195/oh-group	Darray	0.0625 hour	40mJy/bm
Darray	G10.624-0.385/oh-group	Darray	0.0625 hour	40mJy/bm
Darray	G12.21-0.10/oh-group	Darray	0.0625 hour	40mJy/bm
Darray	G12.216-0.117/oh-group	Darray	0.0625 hour	40mJy/bm
Darray	G12.680-0.181/oh-group	Darray	0.0625 hour	40mJy/bm
Darray	G12.890+0.488/oh-group	Darray	0.0625 hour	40mJy/bm
Darray	G12.908-0.259/oh-group	Darray	0.0625 hour	40mJy/bm
Darray	G17.639+0.155/oh-group	Darray	0.0625 hour	40mJy/bm
Darray	G20.081-0.135/oh-group	Darray	0.0625 hour	40mJy/bm
Darray	G28.147-0.005/oh-group	Darray	0.0625 hour	40mJy/bm
Darray	G28.199-0.048/oh-group	Darray	0.0625 hour	40mJy/bm
Darray	G30.589-0.044/oh-group	Darray	0.0625 hour	40mJy/bm
Darray	G30.703-0.069/oh-group	Darray	0.0625 hour	40mJy/bm
Darray	G31.412+0.307/oh-group	Darray	0.0625 hour	40mJy/bm
Darray	G32.744-0.076/oh-group	Darray	0.0625 hour	40mJy/bm
Darray	G34.257+0.154/oh-group	Darray	0.0625 hour	40mJy/bm

Darray	G335.024+0.350/oh-group	Darray	0.0625 hour	40mJy/bm
Darray	G35.197-0.743/oh-group	Darray	0.0625 hour	40mJy/bm
Darray	G35.200-1.736/oh-group	Darray	0.0625 hour	40mJy/bm
Darray	G35.577-0.029/oh-group	Darray	0.0625 hour	40mJy/bm
Darray	G40.622-0.137/oh-group	Darray	0.0625 hour	40mJy/bm
Darray	G843.16+0.02/oh-group	Darray	0.0625 hour	40mJy/bm
Darray	3G43.796-0.127/oh-group	Darray	0.0625 hour	40mJy/bm
Darray	G45.071+0.134/oh-group	Darray	0.0625 hour	40mJy/bm
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Aarray	G0.375+0.041/oh-group	Aarray	0.0625 hour	40mJy/bm
Aarray	G0.547-0.852/oh-group	Aarray	0.0625 hour	40mJy/bm
Aarray	G0.666-0.034/oh-group	Aarray	0.0625 hour	40mJy/bm
Aarray	G2.143+0.010/oh-group	Aarray	0.0625 hour	40mJy/bm
Aarray	G5.886-0.393/oh-group	Aarray	0.0625 hour	40mJy/bm
Aarray	G6.049-1.447/oh-group	Aarray	0.0625 hour	40mJy/bm
Aarray	G9.622+0.195/oh-group	Aarray	0.0625 hour	40mJy/bm
Aarray	G10.624-0.385/oh-group	Aarray	0.0625 hour	40mJy/bm
Aarray	G12.21-0.10/oh-group	Aarray	0.0625 hour	40mJy/bm
Aarray	G12.216-0.117/oh-group	Aarray	0.0625 hour	40mJy/bm
Aarray	G12.680-0.181/oh-group	Aarray	0.0625 hour	40mJy/bm
Aarray	G12.890+0.488/oh-group	Aarray	0.0625 hour	40mJy/bm
Aarray	G12.908-0.259/oh-group	Aarray	0.0625 hour	40mJy/bm
Aarray	G17.639+0.155/oh-group	Aarray	0.0625 hour	40mJy/bm
Aarray	G20.081-0.135/oh-group	Aarray	0.0625 hour	40mJy/bm

Aarray	G28.147-0.005/oh-group	Aarray	0.0625 hour	40mJy/bm
Aarray	G28.199-0.048/oh-group	Aarray	0.0625 hour	40mJy/bm
Aarray	G30.589-0.044/oh-group	Aarray	0.0625 hour	40mJy/bm
Aarray	G30.703-0.069/oh-group	Aarray	0.0625 hour	40mJy/bm
Aarray	G31.412+0.307/oh-group	Aarray	0.0625 hour	40mJy/bm
Aarray	G32.744-0.076/oh-group	Aarray	0.0625 hour	40mJy/bm
Aarray	G34.257+0.154/oh-group	Aarray	0.0625 hour	40mJy/bm
Aarray	G335.024+0.350/oh-group	Aarray	0.0625 hour	40mJy/bm
Aarray	G35.197-0.743/oh-group	Aarray	0.0625 hour	40mJy/bm
Aarray	G35.200-1.736/oh-group	Aarray	0.0625 hour	40mJy/bm
Aarray	G35.577-0.029/oh-group	Aarray	0.0625 hour	40mJy/bm
Aarray	G40.622-0.137/oh-group	Aarray	0.0625 hour	40mJy/bm
Aarray	G843.16+0.02/oh-group	Aarray	0.0625 hour	40mJy/bm
Aarray	3G43.796-0.127/oh-group	Aarray	0.0625 hour	40mJy/bm
Aarray	G45.071+0.134/oh-group	Aarray	0.0625 hour	40mJy/bm
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Total Time per Configuration:

Configuration	Total Time
D	15.0
A	15.0

Present for observation: no Staff support: None