

v255i

| | |
|--------------------|--|
| Description | Proper motion and Parallax of Methanol Masers: A search for infalling ga |
| Antennas | At-Cd-Ho-Mp-Pa |
| Start | 68 12:00:00 |
| Stop | 68 23:59:59 |
| PI | S.P. Ellingsen |

Setup v255i.5cm:

| | |
|----------------------|--|
| Station Modes | At Cd Ho Mp Pa |
| Channel 1 | IFP#1-L0 6642 - 6658 MHz USB RCP |
| Channel 2 | IFP#1-HI 6658 - 6674 MHz USB RCP |
| Channel 3 | IFP#2-L0 6642 - 6658 MHz USB LCP |
| Channel 4 | IFP#2-HI 6658 - 6674 MHz USB LCP |
| DAS 1 Skyfreq | 6658 MHz |
| Bandwidth | 16 MHz |
| DAS Mode | vsop.pro (telescope) |

Setup v255i.5cm-icrf:

| | |
|----------------------|--|
| Station Modes | At Cd Ho Mp Pa |
| Channel 1 | IFP#1-L0 6300 - 6316 MHz USB RCP |
| Channel 2 | IFP#1-HI 6316 - 6332 MHz USB RCP |
| Channel 3 | IFP#2-L0 6642 - 6658 MHz USB LCP |
| Channel 4 | IFP#2-HI 6658 - 6674 MHz USB LCP |
| DAS 1 Skyfreq | 6316 & 6658 MHz |
| Bandwidth | 16 MHz |
| DAS Mode | vsop.pro (telescope) |

Mode changes:

68 12:00:00 v255i.5cm

68 12:10:00 v255i.5cm-icrf

68 14:00:00 v255i.5cm

68 18:00:00 v255i.5cm-icrf

68 18:45:00 v255i.5cm

68 23:15:00 v255i.5cm-icrf

Ftp: <ftp://ftp.atnf.csiro.au/pub/people/vlbi/v255/v255i>

Comments:

The basic method and frequencies for this experiment are the same as for the v255 experiments in Dec & Sep 09 (and earlier). The frequency setup for this session is identical to December. As for December the setup for the ICRF observations is to be 2 IFs with different polarizations, rather than 2 IFs with a single polarization which was used prior to September 09 (this avoids recabling at

Hobart/Ceduna and significantly simplifies the setup changes). The times for the setup changes are given above.

The purpose of these observations is to obtain the fourth epoch for proper motion/parallax observations of the methanol maser sources NGC6334F and NGC6334I(N). Previous epochs were v255c (Aug08), v255d (Feb09) and v255g (Sep09). We will observe both masers and phase calibrators with dual polarization 2x16 MHz bandpasses, but the correlator output will be high spectral resolution around the masers (NGC6334F should show a strong peak at a sky frequency of around 6669.57 MHz during these observations) and standard continuum for the phase reference source. The idea is to have a mode which expands the number of suitable phase reference sources available for spectral line sources.

During the ICRF runs we have sometimes had to exclude certain antennas (particularly Parkes) from observations of some sources in order to get a good spread of azimuths and elevations.

The Shanghai Sheshan 25m antenna has a new 6 - 6.8 GHz receiver and will attempt to join v255i from 18:08 - 23:15 UT, recording to Mark 5. The data will be shipped to Hobart on eSATA hardbox disk, for test correlation of the Shanghai-Hobart baseline on hex and assuming its OK the Shanghai data will then be transferred electronically to Curtin.

Hobart, Ceduna :

The 4 x 16 MHz bandpass setup requires feeding two separate LOs into IFP#1 and #2 on the DAS/frequency translator. Unlike the sessions prior to September 09, we wont need to recable during the run though. For Hobart the LOs should be set to 468 MHz (IFP#1) and 810 MHz (IFP#2) for the 4 x 16 MHz setup and 810 MHz for the 2 x 16 MHz setup. For Ceduna, if you set the agilent to 11.1 GHz rather than 11.4 GHz, then you can use the same LOs as at Hobart.

Parkes, ATCA, Mopra :

Setup as for a 2p-4IF experiment (dual DAS with Huygens cable for entire experiment) with DAS1 tuned to the lower frequency and DAS2 to the upper frequency. To switch between single frequency and dual frequency setup you need to stop the recorder and change channel selection in cdisco as per the following table.

| | |
|----------------|------------------|
| v255i.5cm | Channels 5-8 |
| v255i.5cm-icrf | Channels 1,2,7,8 |

Observing comments for each antenna:

At Cd Ho Mp Pa

Observing Logs

[Parkes onsource flagging](#)

[ATCA onsource flagging](#)
[Mopra onsource flagging](#)
[Mopra Tsys \(plot\)](#)
[Parkes Tsys](#)

Weather

[ATCA Weather](#)
[Mopra Weather](#)
[Parkes Weather](#)

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