

v255j

Description	Proper motion and Parallax of Methanol Masers: A search for infalling ga
Antennas	At-Cd-Ho-Mp-Pa
Start	203 07:00:00
Stop	203 17:00:00
PI	S.P. Ellingsen

Setup v255j.5cm: nif=2

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 v255j.5cm-icrf: nif=4

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:

203 07:00:00 v255j.5cm
 203 07:10:00 v255j.5cm-icrf
 203 08:00:00 v255j.5cm
 203 11:32:00 v255j.5cm-icrf
 203 12:15:00 v255j.5cm
 203 16:14:00 v255j.5cm-icrf

Ftp: <ftp://ftp.atnf.csiro.au/pub/people/vlbi/v255/v255j>

Comments:

The basic method and frequencies for this experiment are the same as for the earlier v255 experiments (Mar 10, Dec & Sep 09 and earlier). The frequency setup for this session is identical to March. As for March 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 fifth 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), v255i (Mar 10). We will observe both masers and phase calibrators with dual polarization 2×16 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 6668.53 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.

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.

The level into IF#1 will change significantly between the two setups. Set the level into the DAS so that it is within range for both setups. Setup the system temperature measurement so that it works for both IFs for the v255j.5cm setup - it doesn't matter if the system temperature measurement doesn't work for the first IF during the ICRF observations as these are only to calibrate the delay. Please don't change the attenuation into the DAS when the setup changes as that may change the delay.

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.

v255j.5cm	Channels 5-8
v255j.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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Last update: **2015/12/18 16:38**

