

## v255v

<b>Description</b>	Proper motion and Parallax of Methanol Masers: A search for infalling ga
<b>Antennas</b>	At-Cd-Ho-Mp-Hh
<b>Start</b>	60 21:00:00
<b>Stop</b>	61 22:00:00
<b>PI</b>	S.P. Ellingsen

Setup v255v.5cm:

<b>Station Modes</b>	At Cd Ho Mp
<b>Channel 1</b>	IFP#1-L0 6642 - 6658 MHz USB RCP
<b>Channel 2</b>	IFP#1-HI 6658 - 6674 MHz USB RCP
<b>Channel 3</b>	IFP#2-L0 6642 - 6658 MHz USB LCP
<b>Channel 4</b>	IFP#2-HI 6658 - 6674 MHz USB LCP
<b>DAS 1 Skyfreq</b>	6658 MHz
<b>Bandwidth</b>	16 MHz
<b>DAS Mode</b>	vsop.pro ( <a href="#">telescope</a> )
<b>Station Modes</b>	Hh
<b>Channel 1</b>	6642 - 6658 MHz USB RCP
<b>Channel 2</b>	6642 - 6658 MHz USB LCP
<b>Channel 3</b>	6658 - 6674 MHz USB RCP
<b>Channel 4</b>	6658 - 6674 MHz USB LCP
<b>Bandwidth</b>	16 MHz
<b>DAS Mode</b>	Mark5

Setup v255v.5cm-icrf:

<b>Station Modes</b>	At Cd Ho Mp
<b>Channel 1</b>	IFP#1-L0 6300 - 6316 MHz USB RCP
<b>Channel 2</b>	IFP#1-HI 6316 - 6332 MHz USB RCP
<b>Channel 3</b>	IFP#2-L0 6642 - 6658 MHz USB LCP
<b>Channel 4</b>	IFP#2-HI 6658 - 6674 MHz USB LCP
<b>DAS 1 Skyfreq</b>	6316 & 6658 MHz
<b>Bandwidth</b>	16 MHz
<b>DAS Mode</b>	vsop.pro ( <a href="#">telescope</a> )
<b>Station Modes</b>	Hh
<b>Channel 1</b>	6300 - 6316 MHz USB RCP
<b>Channel 2</b>	6316 - 6332 MHz USB RCP
<b>Channel 3</b>	6642 - 6658 MHz USB LCP
<b>Channel 4</b>	6658 - 6674 MHz USB LCP
<b>Bandwidth</b>	16 MHz
<b>DAS Mode</b>	Mark5

### Mode changes:

60 21:00:00 v255v.5cm-icrf

60 22:53:00 v255v.5cm

61 02:55:00 v255v.5cm-icrf  
61 03:45:00 v255v.5cm  
61 05:27:00 v255v.5cm-icrf  
61 05:35:00 v255v.5cm  
61 07:00:00 v255v.5cm-icrf  
61 07:53:00 v255v.5cm  
61 10:53:00 v255v.5cm-icrf  
61 11:45:00 v255v.5cm  
61 14:55:00 v255v.5cm-icrf  
61 15:47:00 v255v.5cm  
61 18:54:00 v255v.5cm-icrf  
61 19:45:00 v255v.5cm

Ftp: <ftp://ftp.atnf.csiro.au/pub/people/vlbi/v255/v255v>

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## Comments:

At Cd Ho Mp: Dual frequency setup required. Will need special DAS setup

The purpose of these observations is to obtain the subsequent epoch for proper motion/parallax for G339.884-1.259, G339.681-1.208 and G339.682-1.207, as well as the first observations of: G287.371+0.644, G291.274-0.709 and G316.640-0.087, G316.811-0.057.

The maser emission is at approximately: 6668.54 (G287.37)

6669.21 (G291.27)

6669.39 (G316.64)

6669.96 (G316.81)

6670.08 (G339.884)

6669.83 (G339.68)

During the ICRF runs we have sometimes had to exclude certain antennas from observations of some sources in order to get a good spread of azimuths and elevations. Observing comments for each antenna:

### Hobart, Ceduna :

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 v255uv5cm setup. Please don't change the attenuation into the DAS when the setup changes as that may change the delay.

### Mopra :

Note the use of the dual sideband vsop profile. Only the lower sideband should be selected for transfer.

Note the use of the dual sideband vsop profile. Only the lower sideband should be selected for transfer. The basic method and frequencies for this experiment are the same as for v255u in November 2013 (and earlier: Aug 13, Jun 13, Mar 13, Mar 12, Nov 11). As for the earlier experiments for the ICRF observations it is 2 IFs with different polarisations. The times for the setup (mode) changes are given above.

## ATCA :

For the ATCA please phase-up antennas CA01 through CA05 for this experiment.

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. Use the feature in cdisco version 4 to automate the changes of channel selection as per the following table. v255v.5cm Channels 5-8  
v255v.5cm-icrf Channels 1,2,7,8

During phase-referencing observations, ATCA needs to be re-phased approximately every hour on the following sources: 1921-293

0537-441

J1101-6325

J1417-5950

The times have been identified with the AUTOPHASE\_DETERMINE command in v255v.key.

## HART:

Observation times for HART:

060\23:11 - 061\02:48

04:16 - 05:19

16:35 - 21:28 (with ~30 min breaks spread through)

## Observing comments for each antenna:

<a href="#">At</a>	<a href="#">Cd</a>	<a href="#">Ho</a>	<a href="#">Mp</a>	<a href="#">Hh</a>
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## Observing Logs

[ATCA antenna summary](#)

[Parkes onsource flagging](#)

[ATCA onsource flagging](#)

[Mopra onsource flagging](#)

[Mopra Tsys \(plot\)](#)

[Parkes Tsys](#)

## Weather

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

## Monica log information - EXPERIMENTAL:

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

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