

## v255p

<b>Description</b>	Proper motion and Parallax of Methanol Masers: A search for infalling ga
<b>Antennas</b>	At-Cd-Ho-Mp-Pa-Hh
<b>Start</b>	314 12:00:00
<b>Stop</b>	315 09:00:00
<b>PI</b>	S.P. Ellingsen

Setup v255p.5cm: nif=2

<b>Station Modes</b>	At Cd Ho Mp Pa Hh
<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> )

Setup v255p.5cm-icrf: nif=4

<b>Station Modes</b>	At Cd Ho Mp Pa
<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>	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

### Mode changes:

314 12:00:00 v255p.5cm  
 314 12:10:00 v255p.5cm-icrf  
 314 13:00:00 v255p.5cm  
 314 16:30:00 v255p.5cm-icrf  
 314 17:15:00 v255p.5cm  
 314 21:00:00 v255p.5cm-icrf  
 314 21:50:00 v255p.5cm  
 315 03:00:00 v255p.5cm-icrf  
 315 03:45:00 v255p.5cm  
 315 08:15:30 v255p.5cm-icrf

Ftp: <ftp://ftp.atnf.csiro.au/pub/people/vlbi/v255/v255p>

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## Comments:

The basic method and frequencies for this experiment are the same as for the earlier v255 experiments (Jul 11, Mar 11, and earlier). The frequency setup for this session is identical to v255o in July 2011. As for July the setup for the ICRF observations is to be 2 IFs with different polarizations. The times for the setup (mode) changes are given above.

The purpose of these observations is to obtain the third epoch for proper motion/parallax for Mon R2 and the fifth (hopefully final) epoch for proper motion/parallax observations of the methanol maser sources G329.031-0.198, G329.029-0.205 and G329.066-0.308.

The Mon R2 observations run from 12 - 21 UT and should show a modest peak at a sky frequency of 6668.25 MHz. The G329.03-0.20 run from 21 - 9 UT and should show a modest peak at a sky frequency of around 6669.2 MHz during these observations.

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.

## Observing comments for each antenna:

### Hobart, Ceduna :

The 4 x 16 MHz bandpass setup requires feeding two separate LOs into IFP#1 and #2 on the DAS/frequency translator. 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 v255p.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 :

For the ATCA phase-up only antennas CA01 through CA04 for this experiment. G329.031 and G329.029 are separated by about 30 arcseconds and the observation of G329.03-0.2 is at the mid-point of these two masers.

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 new features in cdisco version 4 to automate the changes of channel selection as per the following table.

v255p.5cm	Channels 5-8
v255p.5cm-icrf	Channels 1,2,7,8

## Parkes :

1305-1515 & 1836 - 1931 : Only one of the two target sources (Mon R2) above the horizon at Parkes (G188.95 has set), Parkes will miss about 50% of scans during these times.

## Hart :

Observing times for Hart :

1931 - 2150 : Mon R2 and then ICRF observations (misses perhaps 25% of ICRF sources)

0317 - 0345 : ICRF observations

0505 - 0900 : G329.03 observations followed by ICRF observations at end (misses perhaps 25% of ICRF sources)

## Observing comments for each antenna:

[At](#) [Cd](#) [Ho](#) [Mp](#) [Pa](#) [Hh](#)

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## 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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