VX014B is the second polarisation test. See VX014A for the details and the results from the first.

vx014b Setup:

Description	Pol test sched
Antennas	At-Cd-Ho-Mp-Pa
Start	56 01:00:00
Stop	56 11:00:00
PI	Richard Dodson
Channel 1	IFP#1-LO 6642 - 6658 MHz USB RCP
Channel 2	IFP#1-HI 6658 - 6674 MHz USB RCP
Channel 3	IFP#2-LO 6642 - 6658 MHz USB LCP
Channel 4	IFP#2-HI 6658 - 6674 MHz USB LCP
Skyfreq	6658.00 MHz
Bandwidth	16 MHz
DAS Mode	vsop.pro (telescope)

Ftp: ftp://ftp.atnf.csiro.au/pub/people/vlbi/vx014/vx014b

Comments:

Observing comments for each antenna:

At	Cd	Ho	Mp	Pa

—-

Observing Logs

Parkes onsource flagging
ATCA onsource flagging
Mopra onsource flagging
Mopra Tsys (plot)

ACTION 5a: Results of tests in Feb 09 (Richard/Tasso).

VT11: I tested whether any noticeable difference could be found between continuous CLCAL and CLCAL on a 1 minute average looking at a (single) strong source. Nothing detectable.

VX014B: I tested continuous CLCAL with a 1 minute average looking at multiple strong sources. Solutions are averaged over 1 minute, whether there was a source change or not. This can be bad if there are large slews between C coded sources (as here). See plot of 1934-638. Early solutions are bad, and the correction is not helpful. One can see the timescale of the corrections in this plot as well.

On the plus side this behaviour is good for phase referencing as it allows corrections which span the scans.

V255D/E: No continous CLCAL run.

V255D: See plot which shows the phases of the phase reference sources. A fair bit of wander is there, but it is not disastrous.

V255E: See plot of 1755-22 and plot of 1808-21. The former shows the calibrator I had included for correcting the phases. I believe Tasso did phase up on this occasionally? It shows a pretty stable solution. Compare it to the latter, one of the phase references.

Conclusions.

CLCAL continously, if the sources are suitable. If they are not one can get as good result with one nearby source visited hourly. Distance sources would not be good.

Solution rates as a function of Hour Angle. This would have helped to diagnose the problem, if it had been correlated in a reasonable time.

Solution rates as a function of Hour Angle. Apparently not showing the problem in the plot above. This should be the same data, but processed in AIPS on CUPPA. Any suggestions, Richard?

Results from LPCAL

VPLOT showing post and pre LPCAL cal corrections

Absolute (average) values of D-term corrections, for IF-1 (blue) and IF2 (red)

RMS values of D-term corrections, for IF-1 (blue) and IF2 (red), for the 6 calibrators

Plot showing the solutions for IF1. Different colours for the 6 calibrators

Plot showing the solutions for IF2. Different colours for the 6 calibrators Note that IF2 is not nearly as nice as IF1.

Polarisation map of one of the sources Others in the same place.