Parkes Observing

Overview

Parkes antenna control is via a command line program called atsnap. atsnap will run a simple schedule and can take commands to stow/unstow the antenna etc. IF setup is done seperately - normal observers would not normally worry about this. Attenuation is done via the "loGUI" software. The VLBI backend consists of two "LBA DAS" which sample and filter the IF and the LBADR recorder which captures the sampled data, formats it in software and writes to local or remote disk (or streams for eVLBI). The DAS setup is controlled via the "DAS GUI" and the recorder via "cdisko2". These are the same for ATCA, Parkes and Mopra and some documentation is available at:

https://www.atnf.csiro.au/vlbi/dokuwiki/doku.php/lbaops/observingnotes

All Antenna and VLBI control is from the joffrey:1 VNC. The joffrey :2 VNC is not used.

Antenna control

The antenna is controlled via a commandline program called atsnap, run on joffrey. All LBA schedules should be in the directory ~pksobs/lba. Assuming the antenna is unstowed you can simply run a schedule as:

```
> cd ~/lba
> atsnap vt999a.psn
```

where vt999a, in this example, is the name of the experiment.

Stowing

To stow the antenna, make sure atsnap is not running (^C if it is) and on a terminal on joffrey type:

```
> atsnap stow
```

Monitor in FROG that the antenna stows.

Unstowing

Check first on FROG the antenna really is stowed. If so, on a terminal on joffrey type:

```
> atsnap unstow
```

Monitor on FROG that the antenna moves out of stow position. The takes a few minutes - do not attempt to move the antenna until the unstow is complete. Note that atsnap does not return error

messages - you can only tell the unstow failed by looking at FROG.

Attenuation

Attenuation can be adjusted from "loGUI". If it is not running in one of the VNC windows you can start it from the "Observing Tools" menu at the bottom left of the VNC.

ALWAYS remember to click "refresh" on loGUI (bottom left of window) to be sure the settings are up to date.

Use the "C12att" attenuations and "C40att" to adjust attenuation. The C12 attenuators are in two pairs. Usually the left hand pair is connected to the VLBI backend and control each polarisation on both DAS/frequency chain. For some receivers the 3rd and 4th C12att are connected to the VLBI backend. The only way to know is ask (or be told). You can try changing the attenuation and see which has an affect but be sure to remember to set it back to the original value if it had no affect.

The four C40 attenuations control the two polariation of each DAS separately. Usually the most left hand C40 controls DAS1 IFP#1 (pol A), the next DAS1 IFP#2 (pol B) etc. However it is not unusual for there to be a swap between the two polarisaions. When you change the values just note which DAS input is affected.

You should preferably use the C12 attenuations to adjust levels but as these change the values for both DAS you may need to adjust the C40 to allow for DAS specific differences

Monitoring

You should regularly monitor the following every 10-15 minutes

  - Any message on portal chat
  - FROG shows no errors
  - atsnap is running
  - Tsys values from MoniCA look sensible
  - DAS IF level within range
  - Recorder still running
  - cdisko has not frozen

Troubleshooting

  - **cdisko freezes**: Try killing the GUI (via window manager or ^C fro starting terminal) and restarting. Killing the GUI should not interrupt the recording
  - **DAS IF power level is out of range**: Adjust attenuation in loGUI (see above)
  - **Recmon says recorder not connected**: See Recorder Notes

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