

SOE

Before the observations, email the operators with a brief description of what you will be using the time for and a list of requirements, for example:

- The band to be used (L, S, X or K)
- The number of receivers needed in the link (only for S or X-band observations)
- The starting RA and Dec in decimal degrees
- Things to watch out for during the track
- Things to do at the end.

Also say if you are going to be there.

Here's an example:

Hi everyone,

Here's the SOE for tomorrow's DSS43 GBRA track. Dave Jauncey and I will be at CDSCC for the start of the track and at least the first few hours.

Regards, Jim

SOE for GBRA track on day 320 0740 → 1805 Z

Experiment: Pulsar astrometry

L-band VLBI observations with the Australian Long Baseline Array: ATCA, Parkes, Mopra, Hobart, Ceduna, DSS-43

Recorder: Disk-based LBA recorder, data written to Apple Xraid at 256 Mbps

1. Startup

At the start of the track, please build a link with DSS-43 and two receivers. Spacecraft 50, pass 99.

In the NMC:CTRL Connection Control window:

```
ap d trk (to bring up the track display)
```

configure for X-band, Siderial, AC2, SRC tracking Pointing models:

```
3xpsk.ac2  
3xcsg.sem
```

Initial RA 291.31788

```
Dec -29.23116
```

Start the following connection block:

connection blocks -> APCcontrol

Start the E-log TDN

Receiver setup:

```
us d xmap
```

configure signal path for dual polarisation dichroic stowed

The antenna will be controlled through the PCFS. To bring up the PCFS display as well as the DAS sampler levels display and a plot of power-meter levels. In a terminal window type:

```
ssh ops@pcfs42  
(give the usual ops password)  
vncviewer -shared pcfs42:1  
(give the usual ops password)
```

This brings up a shared VNC display window that can be viewed from the RA lab too. Check that the DAS levels are in range and adjust attenuators at the block-0 rack if necessary.

In the oprin window within VNC, type:

```
schedule=v190eti
```

The schedule will start and the antenna will be commanded to the first target.

Please set up the two DCCs (one for each polarisation) to record SNT through a modulated 0.5 K diode, swithing at 20 Hz and logging every 30 sec.

The recorder can be controlled from the PC in front of the block-0 rack. I'll start it and it should continue to run without intervention.

2. Summary of the observations

0800 - 0900 UT: Network-wide fringe-check 0900 - 1735 UT: Main observations (summary at the end)

3. During the observations

Please make note of any unusual events in the E-log, e.g. bad weather, high winds, tracking problems

Keep an eye on the schedule above and make sure the antenna moves to the positions commanded.

Please make sure the DAS levels stay within range (they should) and adjust attenuation is needed.

About every 30 mins, check the terminal in front of the block-0 rack to make sure the recorder is still running. You should see the "Last block" value increase every 10 sec and the missed 1 PPS value should stay at zero. The Apple Xraid should also show activity. If not, please call me.

4. After the observations.

At 17:35, please send the antenna to stow and in the PCFS oprin window, type:

terminate

The VNC window can then be closed.

Please email the E-log to me at Jim.Lovell[at]csiro.au

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