

# Antenna Startup

The antenna pointing models, subreflector rotation, first source coordinates etc are different depending on the observation. Below is an example.

- NMC
  - Link
    - Build link with antenna and receiver, spacecraft 50 (VLBI), pass 0, two receivers.
  - antenna startup
    - in NMC:CTRL Connection Control:
      - AP D TRK (to show the track display)
        - Check for:
          - \* delut ~ +229 ms
          - \* models for encoder and position should be 3SPIG.AC1 and 3SCIB.SEM respectively
        - ap band s
        - ap move r=240
        - ap semn 3spig.ac2
        - ap semn 3scib.sem
        - ap radec 9.63649 -24.94850
        - ap mode ac2
        - ap d sts (check all green. click on antenna to see brakes status)
        - ap trk (start the antenna)
        - (make safety page)
        - ap resm trk
    - start three connection blocks
      - connection blocks → APCcontrol (Note PID)
    - start the E-log TDN
      - TDNs → **log?**
      - move to 'logs' workspace
    - receiver config
      - us d smap
      - us d xmap
      - (double-click on dichroic to move it IN)
      - (configure with double-clicks)
      - D1 D CNF 3
        - (select SC 99 and S band and [apply])
        - make carrier 2280 MHz
        - if fail to pick up correct LNA:
          - D1 set uwv reset
          - d1 set uwv srl2o2
      - D2 D CNF 4
        - (select SC 99 and S band and [apply])
        - make carrier 2280 MHz
        - if fail to pick up correct LNA:
          - select connection "none"
          - select connection DSS43SO2
      - if still failing
        - D1 set uwv reset

- d1 set uwv srl2o2
- configure noise diode
  - d1 d prf 3 and d2 d prf 4
  - click on REC button in CNF windows
  - select 12.5K and frequency = on, apply
  - then enable/disable, check in each IF
  - to modulate
  - \* 0.25 K, 20 Hz, 5s, enable
  - repeat for D2

## Boresighting

Manual boresighting is probably the quickest method. You will need to enter offset commands at the NMC and observe the effect with xplot or the squarelaw sampler plot. The idea is to move the antenna to approx the positive half-power point in cross-El, observe the amplitude, then move to the negative half-power point and observe the level again. If the levels are not the same, move closer or further away until they ballance. The offset position is then the average of the two values. This is then repeated for the Elevation offsets. The NMC command for moving to an offset is:

```
ap po <axis> <offset>
```

where <axis> is xel or el for cross-el and El respectively, <offset> is the offset in milli-degrees.

## Setting levels

Once the receivers are configured correctly, check the levels of the PCFS (with v read) and on the DAS. If necessary, adjust the attenuation to bring them within range.

From:

<http://www.atnf.csiro.au/vlbi/dokuwiki/> - **ATNF VLBI Wiki**

Permanent link:

<http://www.atnf.csiro.au/vlbi/dokuwiki/doku.php/lbaops/tidnotes/antennastartup>

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