

Checking Antenna Spectra

This is typically performed in either `swlevel 2` or `swlevel 3`, with the methodology differing between the modes. This is a sample of commands used while in `swlevel 3`,

```
user1@lcu$ # Initialisation
user1@lcu$ swlevel 3
user1@lcu$ rspctl --bitmode=8
user1@lcu$
user1@lcu$ # Beamforming the zenith to use RCUs
user1@lcu$ # LBA mode 3
user1@lcu$ beamctl --antennaset=LBA_OUTER --band=10_90 --rcus=0:191 --subbands=0:487 --
beamlets=0:487 --anadir=0,0.7853982,AZELGEO --digdir=0,0.7853982,AZELGEO
user1@lcu$ # HBA mode 5
user1@lcu$ beamctl --antennaset=HBA_JOINED --band=110_190 --rcus=0:191 --subbands=0:487 --
beamlets=0:487 --anadir=0,0.7853982,AZELGEO --digdir=0,0.7853982,AZELGEO
user1@lcu$ # HBA mode 7
user1@lcu$ beamctl --antennaset=HBA_JOINED --band=210_250 --rcus=0:191 --subbands=0:487 --
beamlets=0:487 --anadir=0,0.7853982,AZELGEO --digdir=0,0.7853982,AZELGEO
user1@lcu$
user1@lcu$ # Shutdown
user1@lcu$ swlevel 0
```

After initialisation, `rspctl --stat1 --select rcuN/rcuM/rcuA/rcuB` can be run in a separate shell (or the same shell if the `beamctl` commands are run in the background) and will plot the SST data for visual inspection, for a given range of RCUs. Using the `beamctl` method, RCUs not provided to a beam are not plotted by default.

If an antenna spectrum is looking suspicious, the RCUs used for the `beamctl` commands can be used to limit the range of antennas to make it easier to try down the misbehaving antenna.

`swlevel 2` method, courtesy of Pearse Murphy,

```
user1@lcu$ # Initialisation
user1@lcu$ swlevel 2
user1@lcu$
user1@lcu$ # RCU Warming, LBA, HBA Lo, HBA Hi
user1@lcu$ rspctl --mode=3
```

```
user1@lcu$ rspctl --mode=5
user1@lcu$ rspctl --mode=7
user1@lcu$
user1@lcu$ # Shutdown
user1@lcu$ swlevel 0
```

Revision #3

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