

RtFC Correlator Setup

The realtime fringe checking runs on “pam0” at Parkes (called “pkpam” if accessing from within Parkes network). It calls the DiFX software correlator to process the data.

Environment settings

The following environment variables need to be set (or added to existing paths)

	Example
PERL5LIB	/home/vlbi/difx/share/perl/5.10.0:/home/vlbi/difx/lib/perl/5.10.0:/home/vlbi/evlbi/RtFC
PATH	/home/vlbi/difx/bin:/home/vlbi/evlbi/RtFC
PGPLOT_DIR	/usr/local/gnu/x86_64/pgplot-5.2.2-1
RTFC_CONTROL	Optional, defaults to localhost
RTFC_EOP	Optional, defaults to \$HOME/.eops
RTFC_CORRHOST	Optional, defaults to localhost
RTFC_NTHREAD	Optional, defaults to 1

All these will be set if you add

```
source ~/vlbi/RtFC/setup.csh
```

into your .cshrc file. This is done by default for the vlbi account on Parkes.

Manual Startup

Log onto pam0 (at least) 3 times. Run the following in separate terminals (and in the following order). Give each process time to start before starting the next.

```
→ > control.pl → > ui.pl
```

To run the corr process, you need to first change to a writable directory with lots of space. The corr.pl program needs the vex schedule files so it can the work out the correlation parameters (source position, frequency etc). A typical startup would be:

```
cd /home/vlbi/fringe/Oct10/v131az
corr.pl v131az.skd
```

Easy Startup

Usually fringe testing is from from a VNC session on pam0. Start an xterm then run the command:

```
→ > rtfc_corrwin.csh
```

Alternatively, if you log onto pam0 with X11 forwarding enabled (test by trying to start xeyes), then run `rtfc_corrwin.csh`

Run `control.pl` and `ui.pl` in the appropriately marked xterm.

Before you run `corr.pl`, you must “cd” to the the correct directory by hand and run `corr.pl` telling it which vexfiles to read.

Generally you want to use better antenna positions than are the default in the vexfile, including selecting which ATCA reference antenna you are using (strictly the pad position of the reference antenna). Run this before `corr.pl` as:

```
→> fixpos.pl -atca W104 vt999.vex
```

If you have Mark5B antenna included which have been scheduled as Mark5a in the vexfile then you need to run “addMark5B.pl”:

```
→> addMark5B.pl vt999.vex Ww Pa Ka
```

Note than the channel order of Mark5B stations may be wrong in the vexfile. This requires manually editing of the vex file.

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