

hops

The Haystack Observatory Postprocessing System (HOPS) is a software package designed to manipulate data generated by the MkIV or DiFX VLBI correlator. It is written in C for Unix computers, and emphasises quality-control aspects of data processing. It sits between the correlator and an image-processing package, and performs basic fringe-fitting, data editing, problem diagnosis, and correlator support functions.

More information about HOPS is available on [the Haystack HOPS web page](#).

Installation

The HOPS package can be built as part of the normal installation process if you include the `-withhops` flag on the command-line of `install-difx` ([See DiFX Installation](#)).

It may also be installed independently of the DiFX build by following the instructions in the file `README.difx.txt` in the source directory (`trunk` or `2.1`).

Usage

Following installation, you will need to adjust your `PATH` and other environment variables to find the HOPS tools. A script `hops.bash` should have been built and installed when you installed the tools.

Once you source this script (which `hops.bash`) via

```
source hops.bash
```

the HOPS tools will then be at the head of your `PATH`. You can get help about the environment with

```
hops.bash -help
```

and help on the individual tools with

```
vhelp
```

To use HOPS on DiFX-correlated data, you first need to use [difx2mark4](#) to convert the native DiFX output into the MkIV data format. This will create an experiment directory hierarchy under the experiment number. The HOPS environment variable `DATADIR` should be set to the parent of this directory.

About the Source

This installation of HOPS is a *vendor branch* to the DiFX SVN repository offered as a convenience to the DiFX community, and as such is not the master source for the code. Thus changes to the HOPS code in the DiFX SVN repository should not be made casually, or without consultation with Haystack (gbc@haystack.mit.edu) or they will be lost.

Integration of difx with hops

Since HOPS was originally written for the Mk3 and Mk4 hardware correlator systems, it was necessary to write some supporting software to allow it to process the output of the difx correlator. The diagram below shows how the new difx dataflow compares to the old dataflow through the Mk4 correlator.



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Last update: **2020/09/16 02:14**