FAQ

Here, we have compiled answers to frequently asked questions, for your convenience.

under construction

Preparation

How do I get to Effelsberg

Observing at Effelsberg.

What receivers/instruments do you got?

Please have a look into our RX list.

How can I get my sources into the system (prepare catalogs)?

There are two ways to prepare catalogs. For historical reasons, you can bring a catalog in the old VAX format and use a python script to convert to the new format. The other option is to use the new `catalog`ME user interface. With `catalog`ME you can create, edit, and visualize your catalogs. It also allows import from csv-Formats. Details can be found here.

Is it possible to prepare observing scripts?

Absolutely! This is best done using the ObsInp software. If you want to prepare scripts prior to being at Effelsberg, you should contact us in advance. (Usually, scripts are so easy to generate, that it will be sufficient to do it 1-2 hours before your observations start.)

Setup the instrument

What do I need to do for continuum observations?

What do I need to do for spectroscopy?

As for every observation, you will first need to choose the correct Frontend. This includes setting the center RX frequency and choosing an intermediate frequency (narrowband, broadband, or the so-called VLBA IF). The latter is done by choosing a `version` for the Frontend.

Then, the backend (usually the XFFTS) must be configured. This involves choosing the correct bandwidth at the XFFTS (by loading a certain FPGA core), and use the MultiFiBa for leveling. A full description of the necessary steps can be found here.

Observing

Previewing the data

I did continuum maps. Is there a way to preview them?

Actually, there are even two ways. Observers familiar with the 100-m often use the Toolbox in combination with NOD2/3. This involves a bit of handcrafting, so if you're new or really just need a quick preview, have a look at our new Online Plotter, which in fact can be used as an Offline Plotter, as well 😉.

How can I have a look into my spectral data, to check if everything is ok?

Again, you could use the Online Plotter for a preview, but most people will prefer to use `Gildas/Class` for this task. Our class pipeline runs on `observer2` and `observer4`, so for a timely access log-in to this machine. Files will be located in `/data/Class`. See "reduction of spectroscopic measurements" for details.

Obtaining the data

Where is the data stored?

Raw data files (in FITS format) are originally stored in `/daten/Raw` on be4, but this directory is NFS-mounted on most user machines (e.g., `observer2` and `observer4`. The latter runs the `Class` pipeline to produce the spectroscopy files in `Gildas` format. So, if you only want these, you should use `observer4` to read the data located in `/daten/Class`.

data_storage_and_archive

How do I copy them to my place?

The preferred method is to use `scp` to copy it via ethernet. If you must, the operators can also plug your USB-stick into one of the observer machines to copy things over.

Are the data already calibrated?

No! (see below)

Calibrating and analyzing the data

What steps are necessary to calibrate my data?

The FITS files contain the Raw data (pure counts), while the "reduced" spectra and continuum scans contained in the `Class` files are only partly calibrated by the pipeline. In fact, the pipeline removes the gain factor ("bandpass") from the data using the position-switch or frequency-switch technique, but the result is in units of the noise diode's signal, T_cal. You have to use calibration sources to measure T_cal. For quick'n'dirty calibration you can use values from our RX list. Furthermore, depending on observing frequency you will need to correct for elevation-dependent gain efficiency and atmospheric opacity. Details are discussed in a calibration memo by A. Kraus (on request) and partly in A&A 540, A140, 2012.

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