

# 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 catalogME user interface. With catalogME 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 C<sub>l</sub>ass 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,  $T_{\mathrm{cal}}$ . You have to use calibration sources to measure  $T_{\mathrm{cal}}$ . 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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