Available Backends

The observatory offers a number of backends for various observing modes. Currently, the electronic division of the MPIfR is deploying the new "Effelsberg Direct Digitization" (EDD) system.

Within this, the RF signal is digitized directly in the receiver (without any mixing), and transported to the backend via Ethernet with high data rate. The signal processing is realized in software and allows to handle several observing modes (even simultaneously). Currently, modes are available for continuum/polarimetry, spectroscopy, pulsar observations and VLBI.

For more details, please see the paper of Ewan Barr.

Still, a number of hardware backends are available. If you are uncertain about which receiver can be combined with the EDD or the conventional backends, please do not hesitation to contact us at **eff-support[at]mpifr-bonn.mpg.de**.

For Continuum Observations

- BEACON (Backend for advanced continuum observations)
- Several receivers are equipped with polarimeters (cf. Receivers for the Effelsberg 100-m Telescope)
- 8-Bank polarimeter for the 18/21cm- and for the 11cm-receiver

For Spectroscopy

- XFFT spectrometer (2x 65536 channels, 2500, 2000, 500, 300, 100, 50 MHz Bandwidth - not all modes are available with all receivers)
- WFFTS - an Array spectrometer especially for the broad-band receivers (28x65536 channels)

A description of the FFT spectrometer and how they work can be found in the paper of Klein et al.

For VLBI

- DBBC-Terminal (FS9 type, mostly used for EVN, global and geo VLBI)
- RDBE-Terminal (VLBA type, for HSA and VLBA+Eb)

Both terminals are equipped with MK5 recorders. More details can be found here.

For Pulsar Observations

Please contact the pulsar group for information!