Bonn DiFX correlator report March 2018

DiFX Correlator status and operations

Capabilities

- All VLBI observations are processed using the DiFX software correlator.
- The DiFX release being used presently is the latest release 2.5.1; geodesy uses 2.4.
- 15 Mark5s and 8 Mark6s can be used for playback from disk modules. In addition, data can be played back from presently 11 RAID systems. Nine RAID systems have been combined into a Bee-GFS parallel cluster file system of capacity ~1.2 PB.
- RAID storage for correlated data is 57 TB.
- All Mark5s can playback all flavours of Mark5 data (A/B/C).
- Mark6 playback is realized through FUSE (mk6fuse).
- All Mark5 systems are running SDK 9.4.
- JIVE5ab is installed for auxiliary tasks like copying of modules, e-transfer etc.
- E-transfer bandwidth into the correlator is 2x1Gbps.
- E-transfer is used as the default for On, Mh, Ys, Ef and the KVN stations.
- Data is archived on the MPIfR archive server in raw DIFX format, FITS, and MK IV (if desired). FITS (default) or MK IV formatted data is made available to the PIs.
- The new HPC cluster easily allows at least 3 correlations in parallel without significant loss of speed.

    A more detailed overview of the correlator capabilities can be found at:
    http://www.mpifr-bonn.mpg.de/771785/DiFX-CORRELATOR

Recent Activities

- First time correlation of GMVA + phased ALMA from Spring 2017 has been finished.
- First time correlation of EHT + phased ALMA from Spring 2017 has been finished.
- Correlation of the geodetic CONT17 (legacy network) experiment was carried out by the MPIfR correlator and finished in Feb 2018.
- Development of a processing and calibration pipeline for GMVA and EHT data is ongoing.

Operations

- No backlog exits for geodetic correlation.

- For the correlation of RadioAstron data the backlog is 7 experiments.

March 2018, H.Rottmann