

Bonn correlator report

November 2020

Helge Rottmann, MPIfR



Correlator status and operations

Capabilities

Architecture:

- DiFX software correlator version 2.6.2

Playback units:

- 15 x Mark5 (SDK 9.4)
- 10 x Mark6

Storage:

- Raw data: 2.1 Pbyte on BeeGFS parallel filesystem
- Correlated data: 132 TB (RAID 6)
- Archive: MPIfR tape library (mirrored, min. storage period 10 years)

E-transfer:

- 2 x 1Gbps symmetric bandwidth
- JIVE5ab 2.9.0 (default)
- Tsunami

Data products:

- FITS (default)
- Mark4/HOPS

Hardware

- Cluster with 68 compute nodes (1360 cores)
- Allows for >3 parallel correlations without significant loss of performance

A more detailed overview of the correlator capabilities can be found at:

<http://www.mpifr-bonn.mpg.de/771785/DiFX-CORRELATOR>

Recent Activities /Status

GMVA

- 2020 session I: released to PIs ([details](#))
- 2020 session II: pre-session fringe tests finished ([f202a](#)). Currently transferring data from stations.

EHT

- No observations in 2019 and 2020.
- 2018 session: Production correlation finished.

RadioAstron

- GS042: finished correlation ([details](#))
- GG081F - GG081L: in progress ([details](#))
- Transfer of correlated data products (FITS) to archive in Moscow complete for all released experiments.

Geodesy

- No backlog for standard IVS correlations
- Geodetic correlations performed in the current reporting period:

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- 28 x R1 experiments
- 21 x Intensive experiments
- 2 x T2 experiments
- 5 x OHIG experiments
- 1 x VGOS 24hr experiment
- 1 x VGOS Intensive
- Various VGOS tests