EHTC 2017/2018
DiFX processing at MPIfR

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EHTC 2017 Correlation

- Data of 2 bands x aggregate 128 Gbit/s 2 PByte on Mark6s
- Correlation at Haystack and Bonn

- Long story of data release revisions: rev1, rev2, rev3, rev4, **rev5**, rev7
- Driven by data issue findings mainly by EHTC CE WG and GMVA Pis
- Numerous improvements since rev1 to DiFX, PolConvert, QA2 data by Geoff Crew, Ivan-Marti Vidal, ALMA QA2 team

EHTC 2017 Processing at Bonn

- Correlator performance
  - Correlation time on DiFX cluster: 3-5 times realtime
  - PolConvert and release packaging: realtime, thanks to Geoffs parallelization
- Status of processing
  - Recently completed Rev5 for handing off to the EHTC CE WG
  - Final re-correlation (rev7) and PolConvert later after CE WG feedback
- Correlation EHTC April 2018 pending
  - Data of 4 bands x aggregate 128 Gbit/s ~3 PByte

EHTC 2017 Correlation Experience

- Curiously, polarization labels on Mark6 modules nearly “random”
  - Sticker labels often indicated the opposite polarization
  - R2DBE VDIF pol.block labels not always consistent between sessions
  - Added polswapDiFX.py to re-label after correlation (done in GMVA)
- Unexpected logical swap of Mark6 phys slots 12<->34 due motherboard

- PolConvert and its wrappers have much improved
- Two correlators, greater care to match DiFX environment and settings
- Beneficial to have EHT CE WG for data quality checking rather than PI

- DiFX and PolConvert in very good shape for EHT/GMVA+ALMA 2018