

EVN TOG video meeting

April 29th, 2021

Recorders and Flexbuffs

- Any known problems?
- To allow to record more observations at 4 Gbps the CBD has decided that every stations should **Provide 500 TB of disk space at the stations + 500 TB at JIVE by the end of 2021**
- Please contact JIVE before buying new Flexbuffs for JIVE, to sort out technical details and specifications

DBBC3

- More DBBC3s become available (station reports) by the end of the year.
- The hardware, software, and firmware have seen significant improvements. DBBC3 was used reliably in the last EHT session (64 Gbps) and produced good results during GMVA observations at 4 Gbps in DDC mode using 16x64 MHz BBCs.
- A general DDC Firmware is available: DDC V125 U which is fully compatible with current EVN modes.

EVN Technological roadmap

- Driven by the EVN Vision report that outlines the scientific goals for the next years (VLBI20-30, <https://arxiv.org/abs/2007.02347>)
- Based on this document the most important improvements would come from
 - Higher bandwidth, increased frequency coverage/flexibility
 - More antennas
 - Higher cadence, more observing time
 - Wide field
 - Phased array feeds
 - Short baselines
 - Polarization improvements.
 - Large FoV archive, raw data storage.

EVN Technological roadmap

- To reach this, the following recommendations have been made:
 - All EVN stations to purchase a DBBC3-L2H2 as soon as possible (or a compatible digital backend).
 - All EVN stations to purchase more storage space.
 - Equip stations with wide-band receivers: e.g. C/X 4-9 GHz, Triple-Band (22/43/86 GHz), BRAND (1.5-15 GHz).
 - Actively support new stations with advice and possibly with equipment.
 - Upgrade internet connections to 10 Gbps for eVLBI.
 - Actively monitor RFI.

EVN Wiki page updates

Receiver frequency ranges:

https://deki.mpifr-bonn.mpg.de/Working_Groups/EVN_TOG/Frequency_ranges_for_2%2F%2F4_Gbps

Disk inventory:

https://deki.mpifr-bonn.mpg.de/Working_Groups/EVN_TOG/Disk_Inventory

Recorder/Flexbuff status (2 pages):

https://deki.mpifr-bonn.mpg.de/Working_Groups/EVN_TOG/Mark6%2F%2FFlexbuff_status

https://deki.mpifr-bonn.mpg.de/Working_Groups/EVN_TOG/Recorders_EVN_status

2 Gbps and 4 Gbps status:

https://deki.mpifr-bonn.mpg.de/Working_Groups/EVN_TOG/2Gbps

https://deki.mpifr-bonn.mpg.de/Working_Groups/EVN_TOG/4Gbps

eVLBI status:

https://deki.mpifr-bonn.mpg.de/Working_Groups/EVN_TOG/e-VLBI_Status

EVN Spare parts

https://deki.mpifr-bonn.mpg.de/Working_Groups/EVN_TOG/EVN_spare_parts