

RECOMMENDATIONS

In order to move towards a practical implementation of the goals of the VLBI20-30 Scientific Roadmap, we propose the following actions (in no particular order):

1. All EVN stations to purchase DBBC3-2L2H units (~ 50 keuro) as soon as possible, or backends with similar capabilities.
2. All EVN stations to purchase more storage. The ambition to increase the EVN storage pool to enable full 4 Gbps operations by the end of 2021 should be considered just a step towards 8 Gbps.
3. Call an EVN-wide meeting to discuss the possibility to roll out broadband C – X receivers (~ 240 - 350 keuro), as a short-term alternative to waiting for BRAND.
4. All stations capable of high-frequency observations to purchase or develop KASI-style multi-frequency systems (~ 1.1 Meuro), as well as DBBC3-6L6H units (112 keuro).
5. Actively support the various aspiring new stations, with advice and, if possible, equipment. Intensify collaborations with MeerKAT and newly built telescopes coming online. In particular, offer help to turn Nkutunse into an operational VLBI element. Support the development of the Westerbork Innovation Center.
6. Continue a close collaboration with the SKA office into the construction phase.
7. Formally endorse the concept of EVN-light, find out how much time would actually be available per station, and investigate the scheduling possibilities.
8. Investigate the potential of GPU and cloud correlation before the next major upgrade of the SFXC cluster. Stations should have at least 10 GE connections to the correlator in order to make 8 Gbps real-time operations possible, but preferably 20 GE. JIVE should look at increasing the current 100 Gbps to 200 Gbps, by the next upgrade of SFXC.
9. Decide on criteria to retain the raw data of a few experiments, and make media available for its storage.
10. All EVN stations to agree on an RFI monitoring scheme.
11. Every country with an EVN station in Region 1 should have a member in the CRAF expert committee.
12. Set up an EVN-wide technical meeting to decide on RFI mitigation measures and their implementation.

APPENDIX A

The following tables summarise the information on potential technological improvements and the science topics that would benefit, and their ranking as perceived by the PIs of the science cases. Red means essential, blue nice to have, black means no response was given.