

Towards a Global VLBI Alliance

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Why a Global VLBI Alliance?



- VLBI is a truly collaborative effort
- There are now several VLBI networks established and running
 - With their own characteristics
 - Each is recognised under a unique brand: EVN, EAVN, VLBA, LBA, GMVA, LOFAR, EHT, IVS ...
- Often, VLBI networks cooperate, also observe together
- Some radio telescopes belong to more than one VLBI network
 - E.g. Chinese telescopes in EVN and EAVN, Eb(+Ar) in EVN and HSA, etc.
 - Also applicable to new instruments (e.g. Thailand 40m)
- It is convenient to have a permanent forum
 - · where the network representatives can meet
 - where the VLBI users can discuss and present their current issues and future needs
 - also as point of contact for collaboration with third-party instruments

Why a Global VLBI Alliance? (II)

To share information in a timely and structured way between VLBI networks

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- Strategic developments (also to exploit *complementarity*)
- Science vision
- Technology paths
- · Proposal types, deadlines and evaluation
- Logistics
- Scheduling
- · And keep inventory of the developments
- For (non-expert) users and other stakeholders to have a clear and visible entry/contact point to the VLBI facilities
 - GVA web
 - Extended user support (also among networks)
 - Support to new facilities and groups (e.g. in Africa, Latin America)
 - Education and outreach of VLBI
- Also to coordinate joint observations (but not only)
 - In particular with third parties (multi-messenger)

GVA participant networks

- Very Long Baseline Array (VLBA, USA)
- European VLBI Network (EVN/JIVE)
- East Asian VLBI Network (EAVN)
- Long Baseline Array (LBA, Australia)
- Global mm-VLBI Array (GMVA) observer











JIVE

GMRT

How to set a Global VLBI Alliance?

As a Working Group in IAU B4

https://www.iau.org/science/scientific bodies/commissions/B4/

News Science Publications Administration Training in Astrocomy Virginities (Inc.) Home | Science | Scientific Bodies | Commission B4 Structure + Commission B4 Radio Astronomy B4 - Commission B4 Radio Astronomy Description The B4 Commission bas the aim to bring together scientists and engineers who carry out observational and theoretical reasonable in radio astronomy and who develop and operate the ground and space-based facilities that are used to explore the Universe at radio everletemy. The primary purpose of this Commission will be to occretate the unique role of Radio Astronomy as part of our grobal multi-wavelength capability in administration. Universe in used to explore the international level, The importance of results obtained in the radio-band (e.g., magnetic fields, atomic and molecular spectral lineal and this multi-wavelength approach implies that Radio Astronomy need to be adequately represented in global multi-wavelength astronomy. Commission Web Page Commission Working Groups Commission Working Groups Commission Working Groups Commission Working Groups Commission B + WG Goola VLB Allance International B +

Proposed structure:

- GVA Director's Forum (GVAD): VLBI network directors or representatives (2 per network) to discuss any aspect
 of the global cooperation. By invitation.
- Science Forum (GVAS): evaluates and fosters the unique and complementary contribution of VLBI to astrophysical research. Open to the whole IAU, members are active scientists, not necessarily linked to any of the VLBI networks in the GVA.
- Technical R&D Forum (GVAT): discusses opportunities and coordinates the development of new instrumentation or procedures.
- Operations and Logistics Team (GVAO): facilitates and coordinates observations scheduled with several VLBI networks, or with participation of third-party instruments (e.g. multiwavelength/multimessenger). By invitation.
- Communication and outreach Team (GVAC): coordinates activities and tools to increase the scientific and societal impact of VLBI. By invitation.
- The GVAS, GVAT, GVAO and GVAC, all report to the GVAD.

Timelines



- The GVAD is currently in the process to establish the working group in IAU
- The GVA teams will be established asap (GVAO, GVAC)
- All astronomers will be invited to join the GVA science forum
- The GVA technical forum will start by invitation to VLBI network representatives, and then may be open to other interested parties
- Stay tuned! Please check: http://www.gvlbi.org/