

44th Directing Board Ersatz Meeting II – Minutes

Location: 2-hour Zoom meeting
Date: 7 July 2021
Note taker: Dirk Behrend
Version history: 4 August 2021

Attending Board members: Rüdiger Haas (Chair), James Anderson, Dirk Behrend, Johannes Böhm, Patrick Charlot, Alet de Witt, John Gipson, David Hall, Hayo Hase, Nancy Kotary, Chet Ruzsczyk, Nadia Shuygina, Yu Takagi, Oleg Titov, Gino Tuccari, Pablo de Vicente, Stuart Weston.

1. Welcome and approval of agenda

Rüdiger Haas welcomed the attending Board members. The Board approved the agenda for the ersatz meeting.

2. ITRF2020 submissions

The IVS contribution to the ITRF2020 was submitted to the ITRS Center of the IERS and was under evaluation. There are still some issues with small network sessions in the IVS combined solution which need to be worked out. The Board supports the idea of recognizing the contributions from the participating stations, correlators, and analysis centers, for instance, by giving certificates to the VLBI solution contributors. A small team consisting of John, Rüdiger, Nancy, and Dirk was tasked with looking into this.

3. IVS Web presence and press activities

The IVS website has a couple of new pages under the Network Stations tab: the Local VLBI-derived Vector Ties (https://ivscc.gsfc.nasa.gov/stations/vector_ties.html) compile information on interferometric connections between two or more radio telescopes at the same site (VLBI tie) such as papers and presentations. Currently, materials are available for local VLBI ties at Onsala and Kokee Park. A companion page on Local Tie Surveys (https://ivscc.gsfc.nasa.gov/stations/survey_ties.html) provides reports about local geodetic surveys made available by Network Stations (initial report by Warkworth).

The Outreach Office plans to extend the outreach website at *vlbi.org* with pages explaining VLBI and IVS to the layman. Further, a poster about IVS is being planned.

4. New Data Ingest at IVS Data Centers

The IVS Data Centers (BKG, CDDIS, OPAR) are implementing a new ingest procedure using stricter quality control for the file name, compression type, and file format. The new process will go into effect on August 2, 2021. For more information on the details of the convention requirements, please see https://ivscc.gsfc.nasa.gov/products-data/DataCenter_File_Conventions.pdf.

5. Membership of VTC and CTE

The VTC topics and activities have concentrated on amplitude calibration, short integration time, new frequency schemes, VGOS compatibility tables, and source structure corrections. The sub-group on source structure looked into improving the VGOS scheduling for studying source structure without a major impact on the determination of the geodetic parameters using simulations (done with VieSched++). Two recommendations came out of this study:

- 1) There should be a more even distribution of observations among the sources.
- 2) The minimum number of stations per scan should be three. [In the future, a four-station minimum may be requested.]

A report about the study is planned for the next Directing Board meeting on September 30.

Both the VTC and the CTE will look internally into their respective official membership and recommend changes to be confirmed by the Board.

6. IVS Representative on IAU Commission A2 “Rotation of the Earth”

The Board confirmed that Oleg Titov continues to be the IVS Representative.

7. Network and data DOIs

Takagi-san and Glenda Coetzer (HartRAO, member of GGOS WG on DOIs) began work on data DOIs. Axel Nothnagel agreed to assist as adviser. The first step was to start the creation of an inventory for IVS-specific data and product types and IVS networks following the strategy of the GGOS WG on DOIs. Once the inventory is complete, it is planned to select one item and establish the procedure of assigning a DOI.

8. VGOS frequencies

For purposes of frequency protection, it is required to know at which frequency bands VGOS will observe in the future, that is, the start and stop frequencies of all individual channels. The commissioning frequencies were a compromise solution based on constraints at the time and are not optimal. Geodetic VLBI is basically unknown to the frequency management agencies. In

mid-2022 final frequencies should be provided to the ITU-R “World Radio Conference” for possible protection consideration. A final frequency scheme based on scientific considerations may also help stations upgrade to full VGOS compliance; a supportive document would be very helpful. The Board agreed that a white paper describing the current state, outlining the needed improvements for given scientific goals, and providing evidence of achievability via simulation work would address the documentation need. Rüdiger agreed to prepare an outline of the white paper for the next Board meeting.

9. IVS VLBI Training School 2022

The Fourth VLBI Training School will be held prior to the General Meeting in Helsinki from March 24–26, 2022.

10. IVS GM 2022 planning

The Twelfth IVS General Meeting is planned to be held during the week of March 27 – April 1, 2022, in Helsinki, Finland. Depending on the pandemic situation, the meeting will be held in person, online, or in a hybrid format; the final decision will be taken before the end of 2021. The First Announcement was slated to be distributed in mid-July. The Program Committee will be established via email discussion.

11. IVS EOP format proposal

Claudia Flohrer (BKG) suggested to add a header line to the existing format. The header line will have a number of keywords and is marked as a comment line.

12. How to proceed with the IVS Infrastructure Development Plan 2030

The Infrastructure Plan foresees a Combination Center for UT1–UTC sessions. The combined Intensive series needs to be based on three or more Analysis Centers regularly submitting Intensive solutions, ideally using different analysis software packages. A sufficient number of contributing ACs should already be available (e.g., GFZ, GSFC, Onsala, Vienna). A Combination Center for IVS Intensives seems possible at BKG; however, such an effort needs extra funding. The Board agreed that a Letter of Request is in order. Rüdiger will prepare such a letter.

13. Miscellaneous

For the upcoming Analysis Workshop, a topic for the agenda should be to identify PIs for the different session types.

14. Planning of further meetings

The next Board meeting will be held via Zoom on 30 September 2021 @ 11–13 UT.