

Report of the Scientific Council of the Bureau Central de Magnétisme Terrestre

June 13, 2025

The Scientific Council (SC) of the Bureau Central de Magnétisme Terrestre (BCMT) received the BCMT Activity Report for period 2023-2025 on May 12, 2025. An online meeting of the SC with the BCMT staff then took part on May 26, 2025. The executive summary of the activities was presented by V. Lesur, followed up by presentations on individual observatories, variometer stations, instruments, data flows, and space weather activities by V. Lesur, A. Chambodut, B. Heumez, V. Maury, and P. Coïsson. The BCMT executives raised two specific issues to be addressed by the SC: 1) possible organizational changes of the French Polar Institute (Institut Polaire Français Paul-Émile Victor, IPEV) could lead to loss of expertise in providing logistical support to isolated magnetic observatories in subantarctic and Antarctic territories; 2) continuity and future of DLT and PHU observatories in Vietnam, where an increase of anthropogenic noise has been causing data quality degradation. A closed session of the SC followed.

Commendations

The SC commends the staff at the Institut de Physique du Globe (IPGP) and the École et Observatoire des Sciences de la Terre (EOST) for

- their dedication to ensuring the best possible continuation of measurements on all the geomagnetic observatories and magnetometers under the responsibility of the BCMT;
- effective reaction to the DDoS attack on the BCMT website in January 2025 and prompt implementation of a secured solution;
- development of the variometer station network, which now comprises 4 stations with quasi real-time data availability;
- ongoing efforts in streamlining the data flows from IPGP and EOST, and their integration in the national and international infrastructure (FormaTerre, Epos-FR, WDC, Intermagnet, Supermag);
- development of a new Sudden impulse/Storm commencement detection tool for space weather applications.

Acknowledgements

- The SC thanks the INSU for the ongoing support of the BCMT.
- The SC thanks IPGP for support of the BCMT and ongoing support for observatories (CLF, DLT, EDA, IPM, KOU, LZH, MBO/SOK, PHU, PPT, TAM).
- The SC thanks EOST for support of the BCMT and ongoing support for observatories (AMS, CZT, DMC, DRV, PAF, TAN).
- The SC thanks the Centre National d'Études Spatiales (CNES) for ongoing support (the KOU observatory).
- The SC thanks the IPEV for support of the southern Indian Ocean observatories (AMS, CZT, PAF) and Antarctic observatories (DMC, DRV).
- The SC thanks the Institut de Recherche pour le Développement (IRD) for their support of the SOK observatory in Senegal.

Recommendations

- **The SC stresses the importance of long-term sustained logistical support to remote magnetic observatories in subantarctic and Antarctic territories, and has communicated its position to the director of INSU.**
- **The SC recommends continuous operations of at least one observatory in Vietnam. In the long-term perspective, possibilities for an alternative location should be explored in cooperation with local scientific community with high priority.**

The SC recognizes the extremely high importance of the magnetic observatory data time series and related services provided by the BCMT. The activities are of strong national interest, and in particular the remote geomagnetic observatories operated in challenging locations are invaluable contributions to the global network and the international community.

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