

BCMT Scientific Council meeting, 30 October 2013: observations and recommendations

The Scientific Council had three private sessions to discuss the information provided by BCMT staff ahead of the meeting, and in the presentations and responses given to questions asked during the meeting. At the third closed session a set of findings and recommendations was drawn up and presented by the Chair at the final open session as a preliminary report to the BCMT Executive Director. The following observations and recommendations are based on the material in that report, with some modifications made as a result of discussions carried out through email correspondence between Council members following the meeting.

- The Scientific Council **thanks** the representatives of the BCMT component institutes for the quality of their presentations and for providing clear answers to the questions put by the Council members. The Council appreciates the time and effort spent by BCMT staff in their preparations for the meeting.
- The Council is **pleased** that the reports demonstrated that actions had been taken in response to the recommendations made from the 2011 meeting, with positive results.
- The Council **welcomes** the production of the BCMT Strategic Plan 2014-2018, including clear mission and vision statements, and the opportunity for Council members to provide comments on it in advance of the meeting.
- The Council **approves of** the assignment of a clear priority order to the projects listed within each theme in the Strategic Plan.
- The Council **recommends** that the objectives stated in the plan should be more obviously measurable and tied to a timeline for delivery so that success or failure can be unambiguously judged.
- The Council **welcomes** the creation of the BCMT web site giving links to information on the BCMT partners and to their data and data products.
- The Strategic Plan covers a five-year period. The Council **recommends** that the Executive Director BCMT identifies those areas where high priority items have a strong dependence on individuals who may retire during the term of the Strategic Plan and works with the management of the relevant institutes to develop a succession plan.
- The Council welcomes the plans to overcome the problems of flooding at Chambon-la-Forêt observatory and **strongly recommends** that these plans are followed through as soon as possible to ensure that the data quality and continuity from one of the world's premier observatories is maintained.
- The Council **strongly supports** the proposal to transfer magnetic field records from IRD to the new archive facility (to be built) at Chambon la Forêt observatory and **urges** IRD to locate and catalogue the material to reduce the risk of parts of it being lost before the transfer takes place.
- The Council **welcomes** the investigations into maximising the performance of magnetic recording sites where there may be little technical support and harsh environmental conditions, and notes the careful work carried out using the excellent facilities for thermal calibration of instruments at Chambon la Forêt observatory.
- The Council notes that work on vector and scalar magnetometers has progressed more slowly than hoped since 2011, and **welcomes** the high priority given to the development of a three-axis low-noise fluxgate magnetometer in the new Strategic Plan, which will be of interest to the international magnetic observatory community.

- The Council **commends** the BCMT for the progress made in achieving real-time transmission, with acceptable latency, from its observatories, which is an important contribution to INTERMAGNET and to space weather services.
- The Council confirms that real-time transmission remains an important goal for the BCMT, and **recommends** that the mid-latitude observatories in the Indian Ocean are given high priority for improvements in performance. This would, for instance, benefit the ISGI/SIIG *am* index project.
- The Council notes with interest the presentation on ionospheric measurements using GNSS receivers and acknowledges that space weather science can be supported by a range of measurement types, and co-location of other sensors with magnetometers may be possible and advantageous. However, the Council **recommends** that such developments are considered carefully in the light of the BCMT mission, which has a strong focus on magnetic observatory data.
- A proposal to relocate Bangui observatory to Cameroon had been welcomed at the 2011 Council meeting. However, new information was provided on a site in Benin currently used for gravity and GNSS measurements, with good local support. The Council **recommends** that the possibility of using the site in Benin should be carefully evaluated on logistical and scientific grounds.
- The Council recognises the visibility BCMT gains through the role its staff have played for many years in the INTERMAGNET programme. The Council **recommends** that BCMT continues to exercise leadership in INTERMAGNET.
- The Council **commends** the progress made in establishing a new repeat station network in France, based on observations on runways at 'medium-sized' airports. The results presented provided good evidence of data and scientific value.
- The Council agrees that there may be opportunities to extend this mode of operation throughout Europe but, however, **recommends** that the BCMT *does not* pursue this as a high priority.
- The Council **reaffirms** the value of ISGI/SIIG products to both solid earth and space weather research, and its role in the World Data System and **notes** the continued endorsement of its activities by the International Association of Geomagnetism and Aeronomy (IAGA).
- The Council **welcomes** the proposal to safeguard ISGI/SIIG operations through a transfer to EOST. The Council recognises that this would place an additional demand on EOST resources and asks that plans include an adequate level of support to maintain and, ideally, develop the service. The Council also **acknowledges** the support given to ISGI under current arrangements with the Institut Pierre Simon Laplace and the Université Versailles Saint Quentin.
- The Council **recommends** that algorithms to derive indices should be described at the ISGI/SIIG website and that software used to derive indices should be open-source and accessible.
- The **recommends** that as the current funding and governance arrangements for ISGI/SIIG as a member of the WDS is reviewed. In particular whether the current practice of review by an IAGA-appointed review committee is still appropriate.
- The relationship with IRD, as a member of the BCMT, is changing and there is a new agreement for joint responsibility between IPGP and IRD for M'Bour. The Council **recommends** that the BCMT should give good visibility to the partnership arrangement with IRD to reinforce its value to scientific research.
- There has been a recent announcement of a major investment to enable BRGM to develop a geological reference model for France, and this is likely to include a new aeromagnetic survey. The Council **encourages** BCMT to be proactive and offer to

work in an advisory role to BRGM, and to lead the French scientific community in geomagnetism, to gain the maximum research value from any survey programme. (This follows on from a similar recommendation of the 2011 meeting.)

- The Council **encourages** BCMT to take the initiative in making contact with INSU and CNES to try to ensure that geomagnetism is considered at an early stage in any plans to establish new bodies supporting long-term observations.
- During the meeting Arnaud Chulliat announced he would be leaving IPGP in February 2014. The Council **commends** Dr Chulliat for the leadership he has provided as Director of the BCMT, and wishes him success in his future career.
- The Council recognises that IPGP faces a difficult task in filling the position of Executive Director BCMT, vacated by Arnaud Chulliat, and **urges** the Director IPGP to make an appointment as soon as possible.
- The Council **welcomes** the commitment shown by INSU, IPEV, CNES and CEA in providing essential funding and other support for BCMT operations.