

Foreword - II

Geomagnetic observatories, which are the repositories of long time series of geomagnetic variation data, play a crucial role in global field modeling, space weather, secular variations as well as records of local characteristics of the field behaviour. IAGA Observatory workshops, which focus on Geomagnetic Observatory Instruments, Data Acquisition and Processing are held once in two years at different Magnetic Observatories of the world, where Absolute and Variation instruments are compared and scientific applications of the resultant data are presented and discussed. These Workshops present an opportunity for instrument developers, observers and data users to come together to implement best practices for highly accurate absolute measurements and calibration and comparison of instruments and plan future directions of improvements in all related aspects. The Workshops are indeed a unique concept where one- half the duration is dedicated to hands-on measurement and calibration sessions, while another half is devoted to scientific deliberations regarding improvements in observations and their applications.

This volume records the 16th in the series of IAGA Observatory Workshops, jointly organised by the National Geophysical Research Institute, Hyderabad and the Indian Institute of Geomagnetism, Mumbai, and held for the first time in India, at the Hyderabad Magnetic Observatory. This marked the occasion of its Golden Jubilee, and so the Workshop included a series of Special Sessions. It is wonderful to be able to recognise and celebrate the effort that goes into maintaining a high-quality, long-running geomagnetic observatory. Observatories, the data they record, and the careful calibration, processing and analysis that are performed on them are the ‘backbone’ of IAGA’s science. Without them, we cannot produce our magnetic models such as the International Geomagnetic Reference Field, the indices that characterise the state and activity of the external magnetic field, the space weather forecasts and alerts that are becoming routinely issued by a number of agencies around the world, and we cannot undertake scientific research to understand and model the sources and generating mechanisms of the field, and the interaction between the various sources. In an increasingly technology-dependent world, where space weather has the potential to impact on societal well-being, the importance of our observatory network cannot be under-estimated. Those that run them are largely the ‘unsung heroes’ of our science, and with this Foreword, I would like to pay tribute to their commitment and dedication. Observatory Workshops are an opportunity for practitioners to come together, share best practice and new techniques, and spend some time in the company of others with the same professional interests. I know that the 16th Workshop was very successful and highly regarded by the participants, and I thank everyone involved in organising and running it.

Prof Kathy Whaler

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