



GEOLOGICAL SOCIETY OF INDIA

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Foreword - I

Geomagnetic observatories, which are the repositories of long time series of geomagnetic variation data, play a crucial role in global field modeling, space weather studies, studies of 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.

The XVI IAGA Workshop, 2014 was jointly organized by the National Geophysical Research Institute (CSIR-NGRI), Hyderabad and the Indian Institute of Geomagnetism (IIG), Mumbai, in the premises of CSIR-NGRI and its Choutuppal campus where about 90 scientists from 31 different countries participated. Instruments from 30 observatories were brought for calibration and measurements. This was the first time such a workshop was held in India. The Golden Jubilee (1964-2014) of the Hyderabad Magnetic Observatory (CSIR-NGRI) was commemorated by this workshop.

Six scientific sessions were held during three days with 45 oral and 35 poster presentations. The major topics covered Golden Jubilee of HYB & Long data series, MAGNIO, Observatory Instruments and Techniques, Observatory Data Acquisition and Processing, Scientific Applications of Observatory data and Repeat Stations, Results of Measurement sessions. The seventh and concluding session on the last day was organised as a panel discussion on 'Magnetic observatories of the future and Observatory networks and IAGA's supporting role'.

This special volume of the Journal of the Indian Geophysical Union presents 18 articles categorised into three major disciplines, which had been core areas of deliberation during the IAGA Workshop: Magnetometers and Measurements, Observatory Data and Practices, Applications.

My appreciation goes to the scientists and officers who were responsible for the establishment and continuance of the Hyderabad Magnetic Observatory and conducted research on its high quality data. I compliment the IAGA scientists and researchers and commend the organising team led by Dr. Kusumita Arora for a very successful Workshop and a well planned special volume.


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