



## **CHALLENGES OF GEOMAGNETIC OBSERVATORY ESTABLISHMENT, MANAGEMENT AND DATA QUALITY – THE GFZ POTSDAM (GERMANY) CONTRIBUTIONS AND EXPERIENCES**

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*Invited talk*

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Observatory data are the basement for the international scientific research. Valuable results can be achieved only from a suitable network of observatories and if the data are precise and faultless. The Helmholtz Centre Potsdam – German Research Centre for Geosciences contributes by modernizing of existing observatories or by the establishment of new ones to the improvement of the international observatory network. Regions of special scientific interest, for instance the region of the South Atlantic Anomaly, were especially considered. This required to establish observatories at remote places, which often created special challenges.

Besides the increasing of the number of observatories it is necessary to emphasise issues of data quality, which is based on modern and excellent instruments and a careful data processing. Observatory data quality is not an implicitness, but it is a challenge.

The observatory data base, which is the basement of the international research, can be improved by the combination of quantity and quality. Quantity stands for the increase of the number of observatories, considering regions of special interest. Quality stands for the improvement of the methods of data quality validation.

The paper presents the GFZ Potsdam contributions on the establishment, management of observatories and data quality validation. Special challenges are shown.

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