

Long-term Geomagnetic Data Series in the Indian Longitudinal Chain

Veenadhari Bhaskara, Mahendra Doiphode, Rakesh Nimje, Shyamoli*

Mukherjee, & Ramesh Durbha Sai

WDC–Geomagnetism, Mumbai

veenaiig@gmail.com

The World Data Centre for Geomagnetism (WDCG), Mumbai was the first World Data Centre in India and was recently inducted into the new ICSU World Data System as a Regular Member. It is currently located at the historic Colaba Geomagnetic Observatory, one of 12 magnetic observatories operated by the Indian Institute of Geomagnetism (New Panvel, Navi Mumbai) ranging from the dip equator to the latitude of Sq focus in the Indian longitudinal chain. WDCG has a long series of geomagnetic records from Indian, as well as international geomagnetic observatories, and is providing its vast magnetic data to the scientific community with the help of WDC–Geomagnetism, Kyoto.

Apart from its regular geomagnetic data exchanges with other geomagnetic data centres, WDCG has initiated long-term preservation and migration methods to ensure that its data are available for future scientific reference. WDCG has recently taken on a data conservation drive by applying specialized curative techniques to preserve its valuable Colaba-Alibag magnetograms and data volumes for the long term. Digital imaging of these records has also been completed. Data media migration is furthermore a timely and prioritized activity of the Centre; data storage must be updated as per technology upgrades to avoid data losses.

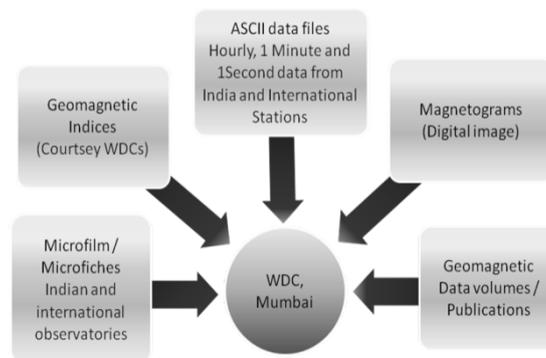


Figure 1. Data holdings



Indian Institute of Geomagnetism



ICSU
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WDCG has also recently upgraded its IT infrastructure and communications media to keep up with the latest advancements in technology, and plays an active part in the global scientific community. In particular, IIG has incorporated modern equipment and state-of-the-art digital fluxgate magnetometers to record high-resolution variations of the three magnetic field components of the Earth. The Centre has moreover implemented various IT technologies to improve the performance of the services it offers and facilitate data accessibility, and hosts a web portal to provide online data services, an inventory of its data holdings, and downloading of its one-hour and one-minute datasets for IIG stations. Figure 1 gives an outline of the current data holdings at WDCG.

The Centre's website is designed to be user friendly such that it is easy to generate plots of geomagnetic variations for available online datasets, as well as view real-time plots of all IIG stations for the present date. It also provides both old and current magnetograms, data volumes, microfilms, and digital ASCII data files. In addition, metadata details are displayed. Some of the Data Services provided by WDCG are available for scientific use at <http://www.wdciig.res.in>.