

TOWARDS A METADATA STANDARD FOR GEOMAGNETIC OBSERVATORY DATA

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Digital records of geomagnetic observatory data have been in use for several decades, but are we currently saving enough information about our observatory data for future generations? Appropriate metadata about an observatory's location, instrumentation and data processing history are essential to understanding an observatory's scientific data and can prove vital when re-examining historical data. Yearbooks are currently the best resource for this information, but their use is in decline and the information within is difficult to disseminate. Setting standards for the content and format of observatory metadata are required to preserve this information and aid interoperability between data providers and users. With better metadata, for example, the discovery that Eskdalemuir hourly mean values from 1911-1931 held at the World Data Centre were 2-hour running means instead of the original hourly values might have been uncovered earlier.

The World Data Centres for Geomagnetism at Edinburgh, Boulder and Kyoto have been working to establish a framework for metadata standards for geomagnetic observatory data. We will describe the conclusions from an examination of current standards, including those from the International Organization for Standardization (ISO) and Federal Geographic Data Committee (FGDC), how they could apply to geomagnetic observatories and the advantages and difficulties in this approach. We will show the level of metadata currently held by our WDCs and the result of recent efforts to populate these records. We will discuss lessons learned and look forward to new approaches to this issue.

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