

## **PERMANENT GEOMAGNETIC FIELD OBSERVATIONS AT CONCORDIA STATION, DOME C, ANTARCTICA**

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Recordings of the Earth's magnetic field variations are continuously performed at the Concordia Geomagnetic Observatory, at Dome C, in the inland Antarctic continent since 2005. The observatory is jointly operated by INGV (Italy) and EOST (France).

The observatory, located above more than 3000 m of layered ice, is unaffected by crustal field contaminations and it lays inside the Southern polar cup, close to the South Geomagnetic pole. It provides an important contribution to the auroral and polar cup ionosphere studies, besides the valuable input to the global internal field models from an area of the planet scarcely covered by observation points.

According to the Intermagnet standard, a triaxial and a scalar magnetometer are in operation for continuous three-component and scalar field strength recordings at 1-second sampled rate. Absolute measurements are carried out regularly along the year even during the dark months and the very harsh ambient conditions. All the fulfilled requirements make Concordia dataset and important reference for the future Swarm satellite mission.

We report some results since the opening of the observatory and we discuss the validity and quality of the entire dataset in comparison of the nearest Antarctic observatories and preliminary results compared to global and regional models.

Concordia Magnetic observatory, Antarctica, acquisition, second data

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