

Geomagnetism deals with the dynamics of the Earth's magnetic field. The main field is created by physical processes in the outer core; but observations can occasionally be dominated by intense and rapid changes during geomagnetic storms that are caused by space weather.

Electromagnetic induction into the Earth is the main principle behind magnetotelluric (MT) research, where the observation of electric and magnetic fields at the surface allows for imaging the electrical conductivity of the rocks in the Earth's crust and mantle.

The GEOMAGNETIC OBSERVATIONS TCS takes advantage of the enormous amount of high-resolution data and large datasets, which were made possible with the beginning of the digital era, to strengthen the European collaboration on geomagnetic observations.

With the modernisation of geomagnetic data archival and distribution and the creation of new services for magnetotelluric data and geomagnetic models, the GEOMAGNETIC OBSERVATIONS TCS aims to consolidate the geomagnetic community and break down barriers to data access.

Services

4 COMMUNITY PORTAL;
12 DDSS (Data, Data Products, Software and Services) Geomagnetic data, Geomagnetic models, Geomagnetic indices and events, Magnetotelluric data and electrical conductivity models.



Accurate and integrated geomagnetic data is vital to the well-functioning of navigation systems, the interpretation of tectonic plates' movement, and the accuracy of European mapping agencies, among other important applications.

The GEOMAGNETIC OBSERVATIONS TCS provides usable and easy access data within the EPOS infrastructure, thus establishing links with different disciplines in solid Earth Science.

EPOS, the **European Plate Observing System**, is a multidisciplinary, distributed research infrastructure that facilitates the integrated use of data, data products, and facilities from the solid Earth science community in Europe. EPOS ensures the long-term access to Solid Earth science data and services, with the goal of answering some of the most pressing societal questions concerning geo-hazards and those geodynamic phenomena relevant to the environment and human welfare.

