

The Geomagnetic Stations Network of Mexico (REGMEX): First Light

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Abstract:

The magnetic field provides essential information for a number of geophysical studies and applications. In the particular case of Space Weather, the regional manifestations of the magnetic field are essential for monitoring space weather and the associated phenomena that impact infrastructure and technologies essential to our society. Examples are geomagnetic storms, geomagnetically induced currents or ionospheric disturbances, which can be monitored in real time through the registers of geomagnetic stations.

For this reason, the Space Weather National Laboratory of Mexico (LANCE), in collaboration with the Magnetic Service (SM) at the Geophysics Institute-UNAM, have set the objective of developing a network of geomagnetic stations in Mexico (REGMEX). Once completed, the REGMEX network will consist of 5 stations that, together with the Teoloyucan Magnetic Observatory, will record in real-time the magnetic field of almost the entire Mexican territory. Additionally, the network will have a data management system controlled by two mirror servers, one located at Autonomous University of Nuevo Leon (Nuevo León, Monterrey) and the other at UNAM (Coeneo, Michoacán); both LANCE headquarters.

To date, despite the obstacles of the last year due to the COVID pandemics, the first geomagnetic station of the network has been started up in the facilities of the MEXART Observatory of the Institute of Geophysics of UNAM (Coeneo, Michoacán, Mexico). In this work, we will present the installation process of the Coeneo geomagnetic station, and the route plan for the development of our network.

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References:

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