RJPHY Research Journal of Physics

OPEN ACCESS

News & Comments

New Geomagnetic Field Anomaly and Pole Reversal

Stanley I. R. Okoduwa

The magnetic field of Earth is due to the convection that takes place in the molten iron-rich outer core. It protects against detrimental particle radiations, by working as a shield.

Scientists have observed a steady and rapid decline in the field strength over the last 2 centuries. Now scientists assumed a magnetic polarity reversal due to the emergence of a cryptic area in the South Atlantic, where there is an abrupt fall in the strength of the geomagnetic field.

But recently a team of scientists from Lund University and Oregon State University concluded that as of now, the changes aren't unique, and a reversal may not happen after all.

To make this conclusion, the team analyzed the information about the magnetic field from burnt archaeological objects, volcanic samples, and sediment drill cores. Examples of such objects include clay pots, lava deposits in the lakes and seas, etc., as these objects are considered time capsules by geologists, and are said to store information on the magnetic field of the past.

Through the application of a new modelling technique, the team was able to reconstruct the 9,000 years old magnetic field by indirect observations from different periods and places.

KEYWORDS

magnetic fields, planet earth, magnetization, earth core, atmospheric science, geology, earth, earth science, geomagnetic reversal, palaeomagnetism, pole flipping