



UNIVERSITÀ
DI TRENTO

Dipartimento di
Fisica



PhD Program in Space Science and Technology - SST

Earth: a magnetic planet at risk

Specific Seminar – Curriculum 2

October 17, 2024, 10.00 a.m.

Speaker:

Prof. Angelo De Santis – INGV Associate of Research Emeritus and Professor PhD courses of Sapienza University on Earth Magnetism & Natural Disasters

Abstract:

Earth's magnetic field is intricately linked to the dynamics of the planetary interior. Throughout its history, our planet has experienced numerous geomagnetic polarity reversals, where the magnetic poles have switched places. But what about the present? Is today's geomagnetic field typical or unique? How likely is it that we are on the verge of another reversal? And if such a reversal were to occur, what would the consequences be for the environment and life on Earth? This seminar offers a comprehensive overview of Earth's geomagnetic field, exploring its key characteristics, its historical patterns, its current state, and the potential for future polarity flips. The current state of the geomagnetic field appears to be particularly distinct, making it a crucial area of study as we seek insights into its possible future behaviour.

Short bio:

Angelo De Santis received the Doctoral degree in Physics from the “La Sapienza” First University, Roma, Italy, in 1984 and his National Qualification as full professor in Geophysics in 2012. Former Director of Research of INGV (Istituto Nazionale di Geofisica e Vulcanologia), 1999-2021, he is now Emeritus.

Former President of the Earth Magnetism and Rock Physics Division of the European Geoscience Union (2015-2019).

He has been professor of Solid Earth Geophysics and Geophysics at Chieti-Pescara University, in 1999-2019. He was also professor at La Sapienza University of Applied Geophysics to Energy Resources. He teaches at “La Sapienza” First University and Roma Tre Univ. on Earth Magnetism and on Natural Disasters in the framework of the joint PhD course in Earth Science.

His current research interests include geomagnetism and seismology, fractals and chaos, geophysical signal detection related to seismic activity, geomagnetic signal processing and statistical analysis based on satellite data, remote sensing, space environment research, and earth system studies.

Online attendance:

<https://meet.google.com/aoe-gazn-qdx>

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