Understanding the processes that operate in the Earth’s interior, and how these control phenomena ranging from earthquakes and volcanic eruptions to the formation of natural resources requires a research approach that combines a vast range of spatial and temporal scales.

This multi-scale nature of the processes that operate Earth is reflected in a huge diversity of methods and infrastructures employed in Earth Science research laboratories. Data produced within these laboratories are of crucial importance for understanding how Earth works and has evolved, for locating and safely exploiting of geo-resources, and for evaluating and protecting against the full range of geo-hazards that the Solid Earth can throw at us.

The Thematic Core Service (TCS) Multi-scale Laboratories, will, for the first time, structure and harmonize the available and emerging laboratory data at all relevant scales, to create efficient, organized services that support lab-based research on solid Earth processes and make the vast amount of data produced in Europe available to all Earth scientists, to industry and to society, in usable form.

Major solid Earth Science laboratory centres and specialists will form a coherent and organized network fostering new collaborations, new synergies, innovation and exchange for better research.

**CONTACT**

@ wp16@epos-ip.org

🌐 www.epos-ip.org/tcs/multi-scale-laboratories
SERVICES

FIND & SHARE DATA

Analogue models of tectonic processes:
- analogue models of geologic processes
- analogue material properties
- visualizing and data analysis tools
- animation/movie of models

Paleomagnetic and magnetcic data:
- directional data
- magnetostratigraphic data
- magnetic susceptibility
- paleointensity data

Experimental data on rock properties:
- rock and fault properties
- capacity of rock systems for geo-storage
- crustal and upper mantle rheology
- volcanic ash and melts properties

Analytical data on rock properties:
- major element composition
- isotope geochemistry
- geochronology
- mineral composition

ACCESS THE LABS

We are developing a TRANS-NATIONAL ACCESS POLICY defining harmonized and optimized access rules to European multi-scale laboratory centres.

An open search will be conducted on a regular basis to select hosting facilities and applicants for Trans-national Access activities on the basis of their scientific records and research proposals.

The calls will be advertised in the EPOS website.
Find the newest and most advanced laboratory in the EPOS Portal!

Take advantage of the opportunity to be selected to perform your experiments at key EPOS Multiscale laboratory centres.

NEW OPPORTUNITIES

Get in touch to discuss your research proposal!
Synergy, collaboration and innovation

USE CASES

TCS SPECIFIC

- Are you planning to run an analogue model but you are not sure on which materials to use?

- Do you want to share your experimental data on rock physical properties?

- Are you trying to constrain the evolution of a curved orogenic belt and you need paleomagnetic data?

MULTIDISCIPLINARY

Model natural or induced earthquake rupture

- Data on fault friction
- Data on real earthquakes

Study eruption style and assess volcanic hazard

- Analogue models on magma propagation
- GPS and InSAR data

Understand Earth processes, e.g. the interaction between climate and tectonics

- Magnetic data
- Rock properties measured in cores