MULTI-SCALE LABORATORIES

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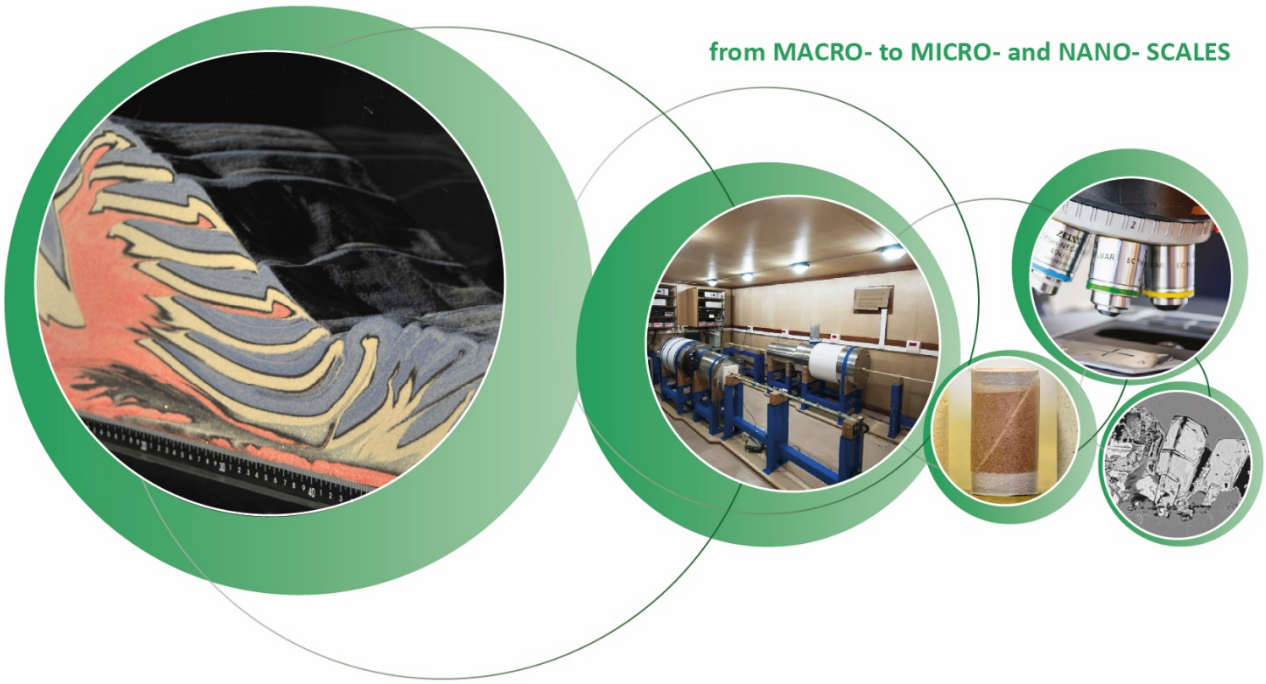
OVERVIEW

The EPOS Thematic Core Service Multi-scale laboratories (TCS MSL) includes a wide range of world-class laboratory infrastructures. The length scales encompassed by the infrastructures included range from the nano- and micrometer levels (electron microscopy and micro-beam analysis) to the scale of experiments on centimeter sized samples and to analogue model experiments simulating the reservoir scale, the basin scale and the plate scale.



OBJECTIVES

The mission of the EPOS TCS MSL is to create a unique point for collaboration and exchange by:

1. Creating a coherent and well-organized network of solid Earth Science laboratories.
2. Implementing dedicated Data Services and controlled vocabularies that will guarantee *F*indability, *A*ccessibility, *I*nteroperability, and *R*eusability (*FAIR*) of laboratory data with other solid Earth Science data.
3. Developing a Trans-national Access (TNA) program, that will increase European state-of-the-art solid Earth science laboratories attractiveness for researchers and contribute to increased researchers mobility, cooperation and exchange.

IMPACT

Laboratory facilities are an integral part of Earth science research. The diversity of methods employed in such infrastructures reflects the multi-scale nature of the Earth system and is essential for the understanding of its evolution, for the assessment of geo-hazards and for the sustainable exploitation of geo-resources.

The EPOS Multi-scale laboratories welcomes new labs! – contact us via:

@ multi-scale-labs@epos-ip.org

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

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EPOS MULTI-SCALE LABORATORIES

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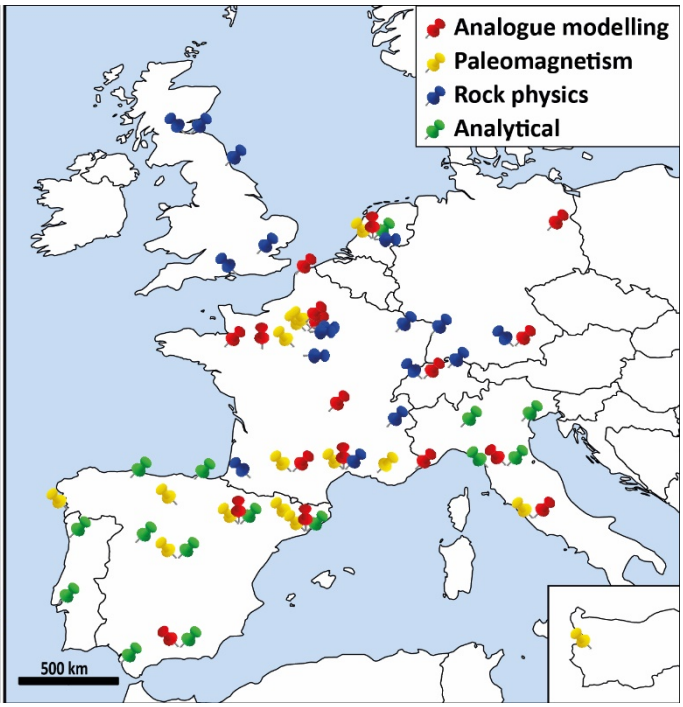
Analogue models of tectonic processes:
a) analogue models of geologic processes
b) analogue material properties
c) visualizing and data analysis tools
d) animation/movie of models

Paleomagnetic and magentic data:
a) directional data
b) magnetostratigraphic data
c) magnetic susceptibility
d) paleointensity data

Experimental data on rock properties:
a) rock and fault properties
b) rock system capacity for geo-storage
c) crustal and upper mantle rheology
d) volcanic ash and melts properties

Analytical data on rock properties:
a) major elements composition
b) isotope geochemistry
c) geochronology
d) mineral composition



FIND & SHARE DATA

Experimental data from laboratories provides the backbone for scientific publications, but are often available only as supplementary information to research articles.

To make this data *FAIR*, the TCS MSL has developed an online portal that brings together DOI-referenced data publications from research data repositories related to the TCS MSL context;
https://epos-msl.uu.nl/

ACCESS THE LABS

PHYSICAL ACCESS

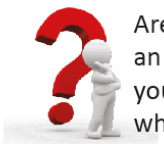
Visit the lab and perform your experiments with high-quality equipment.

REMOTE SERVICE

Get your samples analyzed by expert laboratory operators.

Access to EPOS Multi-scale laboratories is a unique opportunity to create new synergy, collaboration and innovation, in a framework of trans-national access rules.

HARMONIZATION AND USE-CASES



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

Do you want to explain to your students how mountain forms with a hands on activity?

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

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