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Session 05

The structure of the central Mediterranean: insights from seismological and geophysical data

Conveners:

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The mountain chains of the Central Mediterranean (the Apennines, the Alps, Dinarides, Albanides, Hellenides) are shaped and modeled by the complex tectonic processes induced by the relative movements and collision of several different microplates. The intense onshore and offshore seismic activity puts at risk the rich cultural heritage characterizing the entire region. A better understanding of the lithospheric and crustal structures coupled with the knowledge about the interaction between different tectonic units is the key to unravel the processes governing the distribution of the seismic activity. In the last years, seismological field projects (e.g., AlpArray and its complementary seismic experiments) collected new top-quality seismological data thus bringing new insight into the Alps-Apennines-Carpathians-Dinarides orogenic system. One of the aims of this session is to present the research stemming from these field projects thus encouraging future research proposals to extend this desirable approach to other parts of the circum-Mediterranean region.

We aim to collect contributions from the Earth Science community to highlight new and recent results identifying and bringing on key open questions related to the structure and dynamics of the tectonic plates in the central Mediterranean. We also aim to shed light on still unresolved questions about collision vergence and the relative motions of the plates. We welcome disciplinary and multidisciplinary works based on geophysical imaging, seismotectonics, geodesy, geodynamics, gravimetry, tectonics, and structural geology, from the crust to the upper mantle. Contributions focused on other regions that have some similarity and analogy with the central Mediterranean area, are also welcome.