

# **A NEW 3D MODEL OF THE IONIAN SLAB GEOMETRY AND OF THE CENTRAL MEDITERRANEAN MOHO**

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The Central Mediterranean is a geodynamically complex area resulting from the interaction between the European and African plates. This process caused strong lateral variation in lithospheric thickness and thus strong variation in the Moho topography.

In this work we propose a new 3D Moho map for the Central Mediterranean, obtained from the interpolation of different data as: 2D velocity models (Scarascia et al., 1994; Chironi et al., 2000; Nicolich et al., 2000; Cassinis et al., 2005; Dellong et al., 2018; Agius et al., 2022), gravimetric profiles (Chironi et al., 2000; Dellong et al., 2018) and interpreted seismic reflection profile (Finetti et al., 2005; Civile et al., 2008; Catalano et al., 2013; Fedorik et al., 2018; Tugend et al., 2019; Sulli et al., 2021).

In order to optimize the geometry of the Ionian slab, we used the hypocenters of the seismic events extrapolated from different databases. In particular, we collected relocated seismic events from 1981 to the present.

We obtained a new constrained 3D Moho map for the Central Mediterranean that presents a strong lateral variation. Furthermore, the Ionian slab is quite different with respect to the model proposed by DISS (2021) and its geometry has been adapted to the hypocenters of the deepest seismic events (>40 km deep). In particular it was verticalized starting from about 200 km depth and the width was changed depending on new available data.

This model will allow a better understanding of the structure of the upper mantle and of the complex geodynamics of the area.