

## EXTRUSION TECTONICS IN THE CENTRAL MEDITERRANEAN

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The central Mediterranean is an intricate geological puzzle in which extensional and compressional processes have developed in a short time span, from the Tortonian up to the Quaternary times. Stretched areas, crustal underplating and a thrust belt system forming tight arc-shaped structures are, in fact, the peculiar features of this region. Nevertheless, geophysical and structural data allow us to distinguish distinct crustal domains separated by large strike-slip faults whose kinematic evolution was strictly controlled by the N-S collisional processes occurring between the African and European plates. The main recognizable crustal domains of the area are represented by :

- 1) the Pelagian block that exhibits a normal continental crust affected by small rifting processes (Strait of Sicily Rift Zone),
- 2) the stretched areas of the southern Tyrrhenian and Ionian domains characterized by a thinned continental or oceanic crust,
- and 3) the orogenic belt represented by the Apennines and Maghrebian thrust system and by the Calabrian arc that shows a complex interaction between the crusts of different domains.

The structural pattern of different crustal blocks, the kinematics of the strike-slip fault boundaries together with a careful analysis of the timing of deformation, suggest that the Neogene to Quaternary tectonics of the central Mediterranean is the result of the lateral extrusion of the Calabrian arc towards East as a response of the progressive N-S impingement of the continental indenter of the Pelagian domain. Rates of deformation also suggest how this process may have triggered asthenospheric domal uplift in the stretched areas of the southern Tyrrhenian sea, which brought a faster lateral extrusion of the Calabrian arc.