



## **Quaternary evolution of the Scorciabuoi Fault (Southern Italy): inferences for the recent activity of the area**

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Geological, stratigraphic and structural analyses carried out in a broader area surrounding the Scorciabuoi Fault (Basilicata, Southern Italy) allow to document the Quaternary evolution of the area and the role played by this structure as a oblique-lateral ramp during thrusting (Early-Middle? Pleistocene). However, based on both remote sensing techniques and detailed field investigations, four fill terraces have been recognised and mapped along the Sauro Valley showing differential cumulative, pre-vaillingly normal, displacements across the fault. These terraces are genetically correlated with as many high-stand sea-level periods likely between 80 ka and Present. The inferred Late Quaternary long-term slip-rate of the Scorciabuoi Fault ranges between 0.5 and 1.0 mm/a. Numerical simulations based on a crustal elastic deformation model also contribute to separate and tentitively quantify the regional uplift-rate (ca. 1.0-1.4 mm/a). Additionally, while morphotectonic investigations document the long-term behaviour of the fault, several electrical resistivity tomographies and palaeoseismological excavations provide evidence for a very recent (latest Pleistocene-Holocene) tectonic activity. The seismogenic potential of this structure is also discussed in the framework of the Southern Apennines.