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GEOLOGICAL RESULTS of the CRUSTAL SIRIPRO TRANSECT in CENTRAL SICILY

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To shed light on the structures of the crust and the Moho, a high penetration seismic profile was acquired in the frame of the SI.RI.PRO. (SIsmica a RIflessione PROfonda) project. The seismic transect was chosen and planned in agreement with the proposal of the Italian deep seismic project (CROP) for the region of Sicily.
The profile starts near Termini Imerese on the Tyrrhenian coast, crosses the northern Sicily chain and the Caltanissetta area in central Sicily, and ends on the southern coast near the outcrop of the Iblean plateau, the foreland of the Sicilian fold and thrust belt.
Acquisition, processing and preliminary interpretation of the seismic profile (Accaino *et al.* 2011), suggested an integrated and multidisciplinary geological and geophysical approach.
The results resolve features such as (1) the main orogenic wedge, (2) the very steep, NW–SE-trending regional monocline suggesting inflection of the foreland crust, (3) the deep Caltanissetta synform imaged, for the first time, to about 25 km, and (4) the top of the crystalline basement and the inferred crust–mantle boundary.