ILP Marseille 2013 The Circum-Mediterranean basins and analogues 16-18 October 2013

SOME CONSIDERATIONS on the RESULTS of the CRUSTAL SIRIPRO PROFILE in CENTRAL SICILY

R. CATALANO*, V. VALENTI, C. ALBANESE, M. GASPARO, MORTICELLI, A. SULLI, G. AVELLONE, L. BASILONE

Department of Earth and Marine Sciences, University of Palermo, Via Archirafi 22, 90123, Palermo, Italy

*Corresponding author (e-mail: raimondo.catalano@unipa.it)

The crust under central Sicily, from the Tyrrhenian margin to the coastline of the Sicily Channel, has been investigated by the multidisciplinary (SI.RI.PRO.) research project.

The SI.RI.PRO. transect confirmed that the NNW-dipping, autochthonous Iblean platform of SE Sicily and its basement extends all the way into central Sicily. Further NW, towards the NNW end of the transect, a large uplift involves the Iblean platform and its underlying basement. The associated gravity anomaly is interpreted as the southern wedge edge of the Tyrrhenian mantle that splits the subducting Iblean–Pelagian (African) continental slab from an overlying synformal stack of allochthonous thrust sheets.

Among the several considerations: a) SIRIPRO confirms, following earlier paleomagnetic studies on the contrasting thrust sheets rotations, that overall the higher, more northern allochthonous thrust sheets of Sicily were emplaced prior to the lower units; b) the palinspastic restorations remain approximate, because the allochthonous units that underwent varying clockwise rotations in Sicily need a semi-quantitative balanced 3D reconstruction.

Integrating them with analogous reconstruction required for all major counter-clockwise rotated units of southern Apennines will probably lead to the understanding of the paleogeographical reconstruction problems.