The back-arc tyrrhenian basin opening history, new insights from a recent geophysical data acquisition

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ABSTRACT
In 2010 and 2015 two geophysical surveys were carried out in the Tyrrhenian basin within the framework of a Spanish-German-Italian projects MEDOC and the CHIANTI, respectively. During the MEDoC survey a total of 17 Multichannel seismic (MCS) lines for a total length of 2.808 km and 5 long Wide-Angle Seismic (WAS) profles were collected, crossing the Tyrrhenian basin from side to side. the data were acquired with the Spanish R/V Sarmiento de Gamboa in coordination with the Italian R/V Urania. The WAS data were also recorded by several land stations installed in Corsica and Sardinia (Fig. 1). The CHIANTI survey was carried out by the R/V Sarmiento de Gamboa and two long Wide-Angle Seismic profles, CHIANTI-WAS 2 and CHIANTI WAS 4 (Fig. 1), were collected. CHIANTI-WAS 2 is WNW-ESE trending and crosses the deepest part of the Tyrrhenian Basin, from the Vavilov Basin to the Marsili Basin. The CHIANTI - WAS 4 is oriented almost N-S and crosses the whole Vavilov Basin, from the Campanian margin till the Sicilian margin.