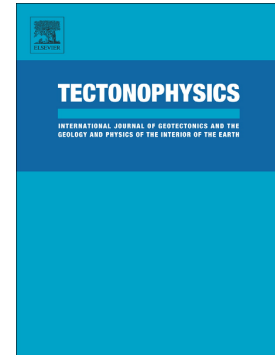


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**Crustal structure of the SW Iberian passive margin: The westernmost remnant of the Ligurian Tethys?**

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**Abstract**

At present, the SW Iberian margin is located along the convergent Iberia-Nubia plate boundary. In Mesozoic times, the margin was located at the triple junction of the Ligurian Tethys, Central Atlantic and Northern Atlantic. The characterization of its crustal structure has allowed us to propose a configuration for this triple junction and to determine the role that this transform margin played within the plate kinematic system. In this paper we present an integrated study based on the interpretation of a 2D regional multichannel seismic survey consisting of 58 profiles, tied with onshore geology and exploratory wells, and on gravimetric modeling performed over four NW-SE trending profiles.

Integrated interpretation of MCS data combined with 2D gravity modeling reveals a complex pattern in the southward crustal thinning of SW Iberia and supports the possible presence of oceanic crust under the Gulf of Cadiz. The tapering of Iberian crust is characterized by steps with rapid changes in the thickness

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