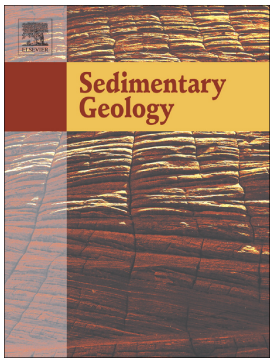

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Evidence for extended Hercynian basement and a preserved Jurassic basin-margin tract in Northern Calabria (Southern Italy): the Longobucco Basin

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ABSTRACT

In the Longobucco Basin (northeastern Calabria, Southern Italy) a Mesozoic succession covers the Hercynian basement, documenting the evolution of a continental margin during the Early Jurassic extensional tectonic phase correlated with the Western Tethys rift. The basin evolved from continental red beds around the Rhaetian/Hettangian boundary to shallow marine and eventually deep-sea siliciclastic turbidites in the late Pliensbachian/Toarcian, to dominantly pelagic deposits (Middle Jurassic onwards). Around the Sinemurian/Pliensbachian boundary, following a prominent phase of normal faulting, sedimentation took different paths in either hangingwall-block or footwall-block settings. This study, based on geological mapping, focuses on the southwestern boundary of the Longobucco Basin and in particular on the mutual relationships existing between the deeper-water basin-fill units (Fiume Trionto and Fosso Petrone Formations), the basement, and the shallow-water limestone of the Caloveto Formation which forms a narrow strip running parallel to the rift shoulder. The contacts among the above mentioned units are generally all stratigraphic