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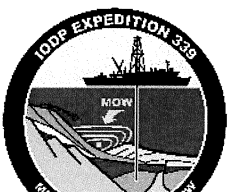
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ABSTRACT BOOK

**Mediterranean - Atlantic Gateways
(Neogene to present)**



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An updated chronostratigraphic framework for the lower Guadalquivir Basin; tectono-sedimentary implications

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The Guadalquivir Basin (GB) in southern Spain is an ENE-WSW elongated trough developed during the Neogene and Quaternary as the foreland basin of the Betic Cordillera. Here we gather chronostratigraphic data produced by different techniques (e.g., biostratigraphy, magnetostratigraphy, astronomical tuning) in the westernmost part of the basin (the so-called lower Guadalquivir basin) over the last few years, which has resulted in a more accurate chronostratigraphic framework for the sedimentary filling of this part of the basin. Magnetostratigraphic, biostratigraphic and astrochronologic data of marine sediments studied in outcrops and boreholes have restricted the onset of deposition in the basin to Late Tortonian (~8 Ma), shortly after and in response to lithospheric flexure induced by thrusting at the external units of the Betic Cordillera. Marine sedimentation continued through the Messinian and the Early Pliocene, consisting mainly of a shelf-talus system that received sediment supply from the East and resulted in the progressive filling of the basin toward the WSW. Such sedimentary system continues nowadays in the offshore part of the basin in the Gulf of Cádiz, and is the main sediment feeder of the contourite system of the gulf. Magneto-biostratigraphic data indicate that the basin underwent continentalization near the Early-Late Pliocene boundary (~3.7 Ma), after which sedimentation was mainly driven by the activity of alluvial systems sourced in the Sierra Morena towards the NNW. The occurrence of a major sedimentary hiatus between 1.6 and 0.3 Ma suggests the bypass of sediments towards the present-day offshore part of the basin in the Gulf of Cádiz, possibly in response to a post-tectonic erosional rebound of the basin. Later sedimentation under transitional conditions attest for sediment accumulation associated only with high-amplitude sea-level oscillations of the latest Quaternary. Our results indicate that the lower Guadalquivir basin underwent different paleogeographic scenarios whose configuration might bear important implications for better understanding the evolution of the Atlantic-Mediterranean connection and of sediment supply to the contourite system of the Gulf of Cádiz.