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Origin and propagation of sedimentary sequences throughout the Escanilla fluvial routing system (South Pyrenean foreland basin)

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During middle Eocene, the Escanilla fluvial system transported and deposited material from East to West in the southern Pyrenees foreland basin. The paleogeography and sedimentology of the source to sink system is well established. The temporal framework is made of scattered low resolution magnetostratigraphies, and a robust temporal framework in the most distal (Olson) and most proximal (Sis) parts of the system. We built a new high resolution magnetostratigraphy from the middle part of the system, the Lascurarre section. The correlation of Lascurarre with the high resolution magnetostratigraphies and the integration of these data with other available chronological constraints results into a robust complete temporal framework from source to sink.

Sedimentological analyses of the Lascurarre section allow recognizing a set of sedimentary sequences throughout the record. Here we present the result of the analyses, and discuss the relative weight of the different forcing. Particularly, we elucidate the role of tectonics in relation to subsidence distribution patterns, and also the distinct expression of climate. Eventually, we identify and explore the signal propagation mechanisms of climate aberrations and of quasi-regular orbital variations along the routing system.