



## **Geological limits evidenced offshore Algeria from new swath bathymetry and seismic data (MARADJA cruise)**

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We present new results on the geomorphology and subsurface structures of the Algerian margin from Oran to Algiers deduced from the MARADJA 2003 cruise data. We use high resolution swath bathymetry and 6- and 24- channel seismic reflection data in order to give a broad description of this portion of the margin. We can divide the study area into three zones, respectively from east to west : offshore Dellys - Cherchell, Cherchell - El Marsa, and El Marsa - Oran. We map the offshore boundary between the external zones, part of the African plate, and the internal zones, relics of the so-called “Alkapecca block”, which is assumed to belong to the former European plate and is found onshore in the Kabylies, the Algiers massif, Mt Chenoua, Cape Tenes, and much further west in the Moroccan Rif. We identify major changes in the morphology that could correspond to transitions in the lithology, and thus, underline an important geological boundary, i.e. the internal/external zones limit. We also study the slope breaks in the seafloor, and interpret them as parts of a large transpressional zone that shaped the Algerian margin during the Neogene. West of Algiers, many identified structures are not active anymore in the present-day NW-SE compressional system, especially the SW-NE oriented ones and some former EW strike-slip faults. These results are used to discuss the geodynamical models proposed during the last few decades to explain the complex evolution of this margin.