



## **Dating the onset of the Zagros foreland basin and its subsequent deformation in Lurestan (Iran): New magnetostratigraphic and biostratigraphic data**

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The timing of the deformation in the Zagros fold-and-thrust belt is poorly constrained because of the lack of accurate dating of syntectonic sediments. Two foreland clastic formations are studied by the way of magnetostratigraphy and biostratigraphy: the Amiran and Agha Jari - Bakhtyari formations. Amiran Fm. represents the first massive clastic arrival in the Zagros basin. Sediment composition indicates that the Amiran Fm. was deposited in response to the Late Maastrichtian emplacement and erosion of ophiolitic tectonic slices. It consists in an alternance of turbiditic sandstones and dark very fine sediments, which cover the carbonates of the Gurpi Fm. with a sharp contact. Deposits show a progressive shallowing from deep marine sediments to discontinuous reefal limestones (Taleh Zang Fm.) and to red continental sandstones and conglomerates with radiolaritic composition (Kashkan Fm.). Preliminary results of magnetostratigraphy indicate an uppermost Maastrichtian - early Paleocene age for the Amiran Fm. that is consistent with the age of the obduction event and the formation of the Imbricate Zone. The transition from passive margin to the foreland basin setting occurred thus at the end of the Maastrichtian time. After this early tectonic event, the Zagros basin remained mostly tectonically quiet until the continental collision and the formation of the Zagros Fold Belt. Reliable magnetostratigraphic sections on the fluvial Agha Jari Fm. indicate that the folding in the front of the Push-e Kush Arc (Lurestan) was initiated at 8.1-7.2 Ma, more than 55 Myr after the ophiolite em-

placement.