



## **New insights into the tectono-morphic evolution of the Western Meseta (Morocco, NW Africa) based on low-temperature thermochronology.**

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Several studies consider the Western Meseta (Morocco, NW Africa) to be a metastable domain from the Hercynian to the Alpine orogenies. The Moroccan Meseta is morphologically constituted of Paleozoic antiforms with many syn- and late orogenic granitic bodies in their inner parts inherited from the Hercynides. Geochemical analyses show a common source for the granitic rocks and coupled U-Pb and Rb-Sr geochronology on zircons yield ages of crystallization around 320-270 My and 240My for the syn- and late orogenic granite respectively.

In order to better quantify the exhumation of the granites in this area since their emplacement, we have performed low-temperature thermochronology on apatites from these intrusive bodies. The sampling was realized on three of the main granitic “boutonnieres” of the Meseta: the Jbilet, Rehanma and the Zaer Massifs. Apatite fission-track and (U-Th)/He data suggest an important up-lift phase during the Eo-Cretaceous/early Cretaceous time (160-130 Ma). This exhumation phase seems to have affected the three igneous bodies equally.

Moreover, structural field data obtained in this study combined with data from several other studies confirm the hypothesis of an important geological event affecting the entire region during the transition period between Late Jurassic and the Early Cretaceous.

To better define the extension of this event, further low-temperature thermochronology will be performed on samples from the Anti-Atlas (North African Craton).