

## **Magnetostratigraphy of the Central Atlantic Magmatic Province (CAMP) in Morocco**

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The origin of the Triassic-Jurassic (Tr-J) mass extinction is still a matter of debate: proponents of the idea that continental flood basalts of the Central Atlantic Magmatic Province (CAMP) are responsible for the crisis are opposed by those who favor an extraterrestrial origin linked to the impact of meteorite. Principal limitations reside in the difficulty to date and correlate CAMP lavas with the marine realm turnover. One argument widely used to suggest that CAMP lavas pre-dated the Tr-J boundary in Morocco is based on the presence of two brief magnetic reversals in the intermediate units of the Tiourjdal and Oued Lahr sections (Morocco) that were correlated to the E23r chron from the Newark basin and to the SA5n.2r/3r and SA5r chrons of the Saint Audrie Bay. However the primary origin for these negative (reverse) magnetic components is questionable since no field or reversal test was provided to constrain the primary character of the remanence as well as because the small number of samples. Here we have conducted a detailed paleomagnetic and magnetic mineralogy study of the interbedded limestones of the Tiourjdal section and of other CAMP lavas sections where the intermediate unit is complete, namely the Tizi El Hajaj, Jbel Imzar and Aït Ourir sections, to better constrain the origin and stratigraphic location of these negative magnetic components. We show that the interbedded limestones of the Tiourjdal section were entirely remagnetized by chemical processes via acid and oxidizing hydrothermal fluids generated by eruptions of CAMP lavas. In addition, magnetostratigraphic data of the Tizi El Hajaj, Jbel Imzar and Aït Ourir sections show that the entire intermediate unit encompassed a positive (normal) magnetic interval. A good quality paleomagnetic pole for the CAMP lava in Morocco is then provided (Plat=60.0°; Plong=241.6°; A95=2.6; N=99) that is now in better agreement with its trans-Atlantic counterpart.