



Preliminary rock- and paleo-magnetic data of the Central Atlantic Magmatic Province (CAMP) in South Portugal

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Abstract

The Central Atlantic Magmatic Province (CAMP) is one of the major large igneous provinces worldwide and has been extensively studied in United States and Morocco. However, little attention has been given to the CAMP lavas from the south of Portugal for which geochemical data has been recently published. The latter can play a key role in the paleogeographic reconstruction of CAMP lavas at a global scale, and also be useful for geochronological purposes. Here we present a detailed rock- and paleo-magnetism study of the Portuguese CAMP lavas. Our results show that, despite severe superficial alteration, rocks preserved their primary magnetic mineralogy that consists in titanomagnetite assemblage. After cleaning by alternating field and thermal treatment, a characteristic remanent magnetization is isolated at $D=356.0^\circ$, $I=43.7^\circ$ ($\alpha_{95}=3^\circ$, $N=100$) after tilt correction. The dispersion parameter is higher for tilt corrected directions ($K=22.95$) than for in-situ directions ($K=38.47$) suggesting a pre-tectonic origin for the magnetization. Position of the corresponding Virtual Geomagnetic Pole is close but significantly distinct to the referenced Messejana dyke, which allows complementing and testing previous/new paleogeographic reconstructions of Iberia at 200 Ma.

Keywords: CAMP, Iberia, Jurassic, paleomagnetism, rock magnetism.