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Abstract

Paleomagnetic study of the Great Foum Zguid dyke (southern Morocco): A positive contact test related to metasomatic processes

[P. F. Silva](http://europa.agu.org/?view=results&q=author:%22P.%20F.%20Silva%22)

[B. Henry](http://europa.agu.org/?view=results&q=author:%22B.%20Henry%22)

Laboratoire de Paleomagnetism, Institut de Physique du Globe de Paris, Centre National de la Recherche Scientifique, Saint‐Maur, France

[F. O. Marques](http://europa.agu.org/?view=results&q=author:%22F.%20O.%20Marques%22)

Instituto Dom Luiz, Universidade de Lisboa, Lisbon, Portugal

[P. Madureira](http://europa.agu.org/?view=results&q=author:%22P.%20Madureira%22)

Centro de Geofísica, Universidade de Évora, Évora, Portugal

[J. M. Miranda](http://europa.agu.org/?view=results&q=author:%22J.%20M.%20Miranda%22)

Instituto Dom Luiz, Universidade de Lisboa, Lisbon, Portugal

When a paleomagnetic pole is sought for in an igneous body, the host rocks should be subjected to a contact test to assure that the determined paleopole has the age of the intrusion. If the contact test is positive, it precludes the possibility that the measured magnetization is a later effect. Therefore, we investigated the variations of the remanent magnetization along cross‐sections of rocks hosting the Foum Zguid dyke (southern Morocco) and the dyke itself. A positive contact test was obtained, but it is mainly related with Chemical/Crystalline Remanent Magnetization due to metasomatic processes in the host‐rocks during magma intrusion and cooling, and not only with Thermo‐Remanent Magnetization as ordinarily assumed in standard studies. Paleomagnetic data obtained within the dyke then reflect the Earth magnetic field during emplacement of this well‐dated (196.9 ± 1.8 Ma) intrusion.

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