Geophysical Research Abstracts
Vol. 19, EGU2017-16236-1, 2017
EGU General Assembly 2017

A new regional geomagnetic field model for the last 3000 years in Europe based on the R-SCHA-2D technique

José Carlos Pérez Fuentes (1,2), F. Javier Pavón-Carrasco (1,2), Saioa A. Campuzano (1,2), Miriam Gómez-Paccard (2), María Luisa Osete (1,2)

(1) Dpto. de Física de la Tierra, Astronomía y Astrofísica I, Universidad Complutense de Madrid (UCM), Madrid, Spain (josecper@ucm.es, fjpavon@fis.ucm.es, sacampuzano@ucm.es, mlosete@fis.ucm.es), (2) Instituto de Geociencias (IGEO) CSIC, UCM, Madrid, Spain. (mgomezpaccard@igeo.ucm-csic.es)

Recent years have seen a significant improvement in the archaeomagnetic and volcanic catalogues of palaeomagnetic measurements, with directional measurements growing as much as 40% in number, and intensity measurements growing by 25%. The higher density of palaeomagnetic data in Europe compared to the rest of the globe allows for the development of regional models covering only this area, with the benefits of higher spatial resolution and the removal of influence of outlier data measured elsewhere. In this work, an updated regional geomagnetic field model, covering the last three millennia in Europe, is presented. The model has been derived using the R-SCHA-2D technique, which allows for the modelling of gradient fields (such as the geomagnetic field) over the surface of the Earth, applying physically meaningful regularization as necessary.