



## **First archaeointensity catalogue and intensity secular variation curve for Iberia spanning the last 3000 years**

Alberto Molina-Cardín (1,2), Saioa A. Campuzano (1,2), Mercedes Rivero (1,2), María Luisa Osete (1,2), Miriam Gómez-Paccard (2), José Carlos Pérez-Fuentes (1,2), F. Javier Pavón-Carrasco (1,2), Annick Chauvin (3), Alicia Palencia-Ortas (1,2)

(1) Dpto. de Física de la Tierra, Astronomía y Astrofísica I, Universidad Complutense de Madrid (UCM), Madrid, Spain. (amcardin@ucm.es, sacampuzano@ucm.es, merivero@ucm.es, mlosete@fis.ucm.es, josecper@ucm.es, fjpavon@ucm.es, ali@ucm.es), (2) Instituto de Geociencias (IGEO) CSIC, UCM, Madrid, Spain. (mgomezpaccard@igeo.ucm-csic.es), (3) Géosciences Rennes, Université de Rennes1, Rennes, France. (annick.chauvin@univ-rennes1.fr)

In this work we present the first archaeomagnetic intensity database for the Iberian Peninsula covering the last 3 millennia. In addition to previously published archaeointensities (about 100 data), we present twenty new high-quality archaeointensities. The new data have been obtained following the Thellier and Thellier method including pTRM-checks and have been corrected for the effect of the anisotropy of thermoremanent magnetization upon archaeointensity estimates. Importantly, about 50% of the new data obtained correspond to the first millennium BC, a period for which there was not possible to develop an intensity palaeosecular variation curve before due to the lack of high-quality archaeointensity data. The different qualities of the data included in the Iberian dataset have been evaluated following different palaeomagnetic criteria, such as the number of specimens analysed, the laboratory protocol applied and the kind of material analysed. Finally, we present the first intensity palaeosecular variation curve for the Iberian Peninsula centred at Madrid for the last 3000 years. In order to obtain the most reliable secular variation curve, it has been generated using only selected high-quality data from the catalogue.