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A comparison of archaeomagnetic secular variation curves from western Europe and global geomagnetic field models

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An archaeomagnetic secular variation curve for the Iberian Peninsula is now available, spanning the last 2 thousand years. It shows broad agreement with the curves available for France and Germany. Analysis of the Iberian, French and German curves indicates that secular variation in western Europe is characterised by three cusps or major directional changes. When compared with secular variation curves for Japan and southwestern USA (derived from data from global archaeomagnetic databases), these features appear to be regional in character.

The Iberian curve has been compared with the predictions of global geomagnetic field models. Some differences between the model predictions can be seen, even in the dipolar terms. Despite this, they agree reasonably well with the Iberian curve. Extending the archaeomagnetic database to include new data is necessary to increase the accuracy of global models.