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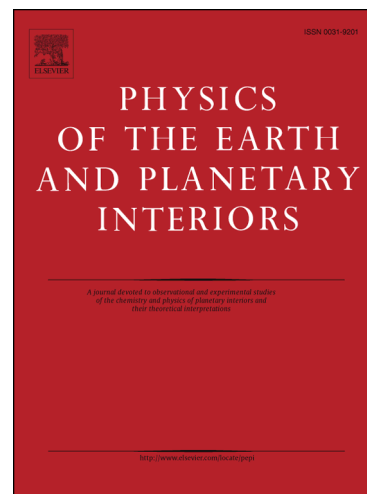
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New archeointensity data from Novgorod (North-Western Russia) between c. 1100 and 1700 AD. Implications for the European intensity secular variation

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Abstract

Reconstructing the secular variation of Europe's geomagnetic field over the past millennium is challenging because of the lack of recently acquired archeomagnetic data from Western Russia. In this paper, we report on nine new archeointensity values obtained from groups of brick fragments sampled in Novgorod (North-Western Russia) and its vicinities. These fragments were collected from churches whose precise ages range from the beginning of the 12th century to the end of the 17th century AD. All the archeointensity measurements were carried out using the Triaxe experimental protocol, which takes into account the thermoremanent magnetization (TRM) anisotropy effect. Intensity determinations were performed using fast and slow cooling rates for laboratory-TRM acquisition. The results confirm that the Triaxe protocol overcomes the TRM cooling rate dependence. The new data shows that geomagnetic field intensities in North-Western Russia have decreased in the past millennium. Comparisons were made with other data previously obtained in Western Europe, the Balkans and Russia, as well as with intensity values expected in Novgorod from global

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