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A systematic inclination shallowing in lava flow records from the last four centuries

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The main objective of this work is to carry out a statistical evaluation of the archaeomagnetic and volcanic data with direct measurement of the geomagnetic field for the last 400 years. The paleomagnetic data have been compared with the historical geomagnetic predictions given by the GUFM1 model which spans from 1590 to 1990. The results show a statistical agreement between archaeomagnetic data and directions given by the geomagnetic field model. Whereas, when comparing the volcanic data with the model predictions, a marked inclination shallowing is observed. Here, we show how this inclination shallowing is statistically presented at world-wide scale for the last 400 yr with a mean inclination deviation of around 3º lower than the historical geomagnetic field model predictions.