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Geomagnetic field intensity variations in Western Europe during the past 800 years as inferred from architectural bricks sampled in Tuscany, Italy

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We present new archeointensity data obtained from the analysis of several groups of architectural brick sampled in and around Pisa (Italy), dated from the past 800 years. The ages were determined by archeological and historical constraints and, in a few cases, by inscriptions on the buildings themselves. The samples were analyzed using the intensity protocol developed for the Triaxe magnetometer which implies continuous magnetization measurements at high-temperatures. Both anisotropy of the thermoremanent magnetization and the cooling rate effects were taken into account for the intensity determinations. The mean intensity values obtained are of high quality with standard deviations usually of less than 5% of the corresponding means. The new results agree very well with our previous data obtained in France and in Belgium, thereby confirming the occurrence of rapid geomagnetic field intensity fluctuations in Western Europe over the past 800 years - these variations being marked by two intensity maxima, the first during the XIVth century and the second around AD 1600.