



Updating the French archeomagnetic directional database for the past two millennia

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Research in archeomagnetism began in France during the 1930's with the pioneering work of Emile Thellier. Combining instrumental and methodological developments, together with the patient establishment of a collaboration with archeologists, Thellier's activity led to the construction of the first directional secular variation curve in France spanning the past two millennia. After Thellier's retirement, Ileana Bucur continued this work, enriching the French archeomagnetic database up to more than 200 directional data, among which 120 dated results were used to construct in 1994 a revised version of the French directional secular variation curve, which is still considered as a reference today. Since 1994, the acquisition of archeomagnetic directional data has been continuously pursued at IPGP and the present study aims to update the French archeomagnetic dataset for the past two millennia. We have sampled about 400 burned structures from more than sixty different archeological sites mostly located near Paris, in the Ile-de-France region. Domestic kilns here represent approximately 2/3 of those structures, which were found in ancient agricultural settlements generally dated to the High Middle Ages. More than one hundred structures were dated using archeological constraints, such as the typo-morphology of ceramics, coins or archives, with enough precision and accuracy to be considered for improving the French reference directional secular variation curve over the past two millennia. We will discuss the present status of the French archeomagnetic directional database, which thus contains more than 600 data, 90% of which are defined with an a95 of less than 2°. We will also illustrate its increasingly potential as a dating tool for archeological purposes.