

Archeointensity-based dating method: Examples from France and the Near-East

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While directional variations in the geomagnetic field are now widely used in archaeological practice in France to date fired structures found in situ after their abandonment, such as ceramic kilns or domestic ovens, the dating method based on geomagnetic field intensity variations is still under development. The reference intensity variation curve in France remained very fragmentary until very recently, thus limiting the possible applications towards dating. However, over the past decade, the acquisition of a large number of new archeointensity data has considerably refine our knowledge of these fluctuations from the early Middle Ages to the present day (~1500 years). Large and rapid fluctuations have been revealed. In particular, the period of the early Middle Ages is framed by a rapid increase in intensity in the 6th century and a rapid decrease in the 10th century. These two time intervals therefore seem particularly favorable for the use of archeointensity for dating purposes. To illustrate this potential, we present the archeointensity study of two Medieval ceramic productions, from workshops located in Bourges (Cher) and in Chaudry (Oise).

In our laboratory, other archeointensity studies have focused on the Near East with a large set of new data acquired in Syria for the Bronze period, between c. 3000 and c. 1000 BC, allowing the construction of a regional average intensity variation curve. This curve also offers new chronological constraints, which will be illustrated by several examples of archaeological contexts.

Mots-Clés : Archeomagnetism, field intensity, dating method, chronology, ceramic production

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