



New archeomagnetic intensity data from Western Russia

Natasha Salnaya (1), Yves Gallet (2), Stanislava Akimova (1), Ilya Antipov (3), and Olga Glazunova (4)

(1) Institute of Physics of the Earth RAS, Moscow, Russian Federation (natasavi@inbox.ru), (2) Institut de Physique du Globe de Paris, Paris, France, (3) Saint-Petersburg State University, Saint-Petersburg, Russian Federation, (4) Institute of Archeology RAS, Moscow, Russian Federation

We recently started a new archeomagnetism research program for Western Russia. The main objective of this project is to recover the geomagnetic field intensity variations in Western Russia over the past two millennia, in order to compare these variations with those already known from Western and Eastern Europe. We sampled several ensembles of baked brick fragments precisely dated by historical constraints between the XIIth and XIVth centuries AD from the archeological site of Novgorod, south of St Petersburg, and between the XVIIth and XVIIIth centuries AD from the Monastery of New Jerusalem located close to Moscow. Most fragments, with a magnetic mineralogy dominated by magnetite, are suitable for archeointensity experiments. For some fragments from Novgorod, the magnetization is carried by a mixture of magnetite and another mineral of high coercivity and low unblocking temperature. The unblocking temperatures are close to 200°C. This mineral, most probably a form of hematite with Al substitutions, is therefore similar to that previously reported from archeological fired-clay artifacts originating from Europe and South America. Archeointensity experiments were conducted using the experimental protocol developed for the Triaxe magnetometer. We will present our first archeointensity results and a preliminary comparison with available European results, mostly from France and Bulgaria.