

## PRELIMINARY ARCHAEO-MAGNETIC STUDY IN THE ARCHAEOLOGICAL SITE OF GRAKLIANI (REPUBLIC OF GEORGIA)

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We present a preliminary archaeomagnetic study carried out in the archaeological site of Grakliani (Republic of Georgia). Samples were taken during two different samplings (2018 and 2019) from nine combustion structures (ovens and possibly altars) and from different pottery fragments with a good age control. The age of all these samples varies between the 12<sup>th</sup> century BC and the 1<sup>st</sup> century BC, a broad period with scarce reliable archaeomagnetic data in the region.

We have performed an archaeomagnetic and archaeointensity study on these samples at the paleomagnetic laboratory of the University of Burgos (Spain) and at the paleomagnetic laboratory Fort Hoofddijk in Utrecht University (The Netherlands). We carried out directional studies including both thermal demagnetization and stepwise alternating field as well as rock magnetic analyses, consisting in the measurement of IRM acquisition curves, hysteresis loops, *backfield* curves and high temperature thermomagnetic curves. Archaeointensity determinations were carried out with the Thellier-IZZI and Thellier –Coe protocols. They included additional experiments for anisotropy correction of the archaeointensity results.

So far, we have obtained a mean direction for each combustion structure and archaeointensity results for five combustion structures and five pottery fragments of different ages in the studied time range, which provide new full vector and intensity data of the Earth's magnetic field variations in the Caucasus. Additional archaeointensity determinations in two other combustion structures are still in progress.

Keywords: archaeomagnetism, archaeointensity, magnetic properties , anisotropy of thermoremanence, geochronology