

Middle Neolithic Period: New archaeomagnetic and thermoluminescence data from a pottery kiln at Magoula Imvrou Pigadi, SW Thessaly, Greece

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Abstract: Neolithic settlements are widespread all over Greece, however the higher concentration appears in the Plain of Thessaly (Central Greece) among which the well known settlements of Dimini and Sesklo are located. Even if the archaeological study of the Neolithic settlements has started since the beginning of the 20th century, the archaeomagnetic investigation of in situ burnt structures is still very poor. Only few directional data from this period are available. The Magoula (Tell) Imvrou Pigadi is located in the southwestern edge of Thessaly plain and is one of the most outstanding tell because of its significant height. In the southwest part of the settlement a burnt area was found and is well defined by two parallel walls. Seventeen (17) oriented samples have been collected from these fired deposits. The archaeomagnetic study indicates that few samples are not in situ and therefore they can not be used for the determination of the archaeodirection. The magnetic cleaning disclosed the presence of one stable component of magnetization. Rock magnetism experiments have been performed in pilot samples suggesting the dominance of low coercivity magnetic minerals such as magnetite. The new directional results are compared with the available data from neighbouring countries as well as recent compilations and global models. Thermoluminescence dating has been performed in selected samples confirming the use of the kiln in the Middle Neolithic Period. However the age of few samples are underestimated, suggesting a younger age of Late Neolithic. The latter age determination has to be examined in details since it gives new insights for the use of the kiln.

Keywords: (Middle Neolithic, archaeomagnetism, thermoluminescence dating, Greece).