

Abstract Submitted
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Archaeomagnetism for the Middle Neolithic Period in Central China¹ NICOLAS SANTIAGO, DePaul University, SHUHUI CAI, LISA TAUXE, Scripps Institution of Oceanography, University of California, San Diego, WEILIN WANG, LIPING YANG, Shaanxi Provincial Institute of Archaeology, YONGXIN PAN, CHENLONG DENG, HUAFENG QIN, RIXIANG ZHU, University of Chinese Academy of Sciences — The Earth's geomagnetic field is a basic physical field with a history of 3.5 Ga. This is a window to the evolution of life on the Earth, which is important for uses such as shielding part of cosmic radiation. This study is an attempt to create a time sequence in which the geomagnetic field can be recorded through history. With a clear depiction of what the geomagnetic field has done, it is possible to detect the evolution history of the geomagnetic field and its benefit to learning the living environment on the Earth. The materials used contain magnetic particles that can record information from the field when they are subjected to high temperatures, then cool down. This study is part of a larger project, 'Archaeomagnetism in China'. The aim is to recover the history of the geomagnetic field over the past 10,000 years in Eastern Asia. The samples come from Yang-guan-zhai, located in China. Through repeating the process in which the samples gained their natural remanent magnetization in the laboratory, we can obtain the intensity of the ancient field. After a detailed archaeointensity study, we can expect to establish a paleointensity variation between 4000-3500 BCE in this area. This will improve the regional model of the geomagnetic field in Eastern Asia.

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