

Title: Rock-magnetic and archaeomagnetic investigations on archaeological artefacts from Parad, Purna River Basin, Maharashtra

Presented by: Pradnya Mohite

Abstract:

The present study aims to improve the overall understanding of Indian geomagnetic field variation in the past by providing new high-quality archaeointensity results [1-3]. Detailed rock-magnetic investigations are carried out on archaeological artefacts collected from Parad, Purna River Basin, Maharashtra. Rock-magnetic studies reflect the magnetic mineralogy and their grain size which shows ferrimagnetic (magnetite) and antiferromagnetic (hematite) components in varying concentration and grain size of single domain and pseudo single domain states are dominantly found in all samples. The reversible thermo magnetic behaviour reflects no mineralogical transformations during reheating. It is also inferred that all Parad samples having stable remanence and are suitable for reliable ancient geomagnetic field intensity investigation

References-

- [1] Venkatachalapathy R., Mohamed Asanulla R., Manoharan C. & Radhakrishna T. 2013. **Rock magnetic and geomagnetic field intensity studies on Megalithic archaeological pottery samples from Tamilnadu, India.** Quaternary International, 298, 57–67, <https://doi.org/10.1016/j.quaint.2013.02.028>
- [2] Basavaiah N., Deenadayalan K., et al. 2019. **Last 3000 years of geomagnetic field intensity from India: new reference palaeointensity data from two east coast archaeological sites and archaeomagnetic dating insights.** Journal of Archaeological Science: Reports, 27, 101943, <https://doi.org/10.1016/j.jasrep.2019.101943>
- [3] K. Deenadayalan, P. B. Gawali, B. V. Lakshmi, Manish Rai. **Rock-magnetic and archaeomagnetic investigations on archaeological artefacts from Maharashtra, India.** Geological Society, London, Special Publications (2020), 497(1):9