

Understanding of India's past geomagnetic field intensity from Archaeomagnetic investigation

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Abstract:

Understanding the processes of the Earth's core involves examining variations in the geomagnetic field, monitored through observatories, satellites, and preserved historical evidence in sediments, volcanic rocks, and archaeological artefacts. Archaeomagnetic data serve as crucial indicators of past geomagnetic behavior. India's wealth of archaeological sites and historical richness provide an ideal backdrop for investigating long-term patterns in the ancient geomagnetic field. Nevertheless, the exploration of archaeomagnetism in the Indian region remains largely unexplored. This presentation offers an evaluation of archaeomagnetic research in India, comparing it with global studies. It outlines the methodologies employed for data collection, the geological and archaeological contexts, and their implications for India's geomagnetic field evolution. Additionally, it underscores the wider scientific and archaeological significance of this research, emphasizing the necessity of expanding and refining archaeomagnetic studies to gain a comprehensive understanding of India's ancient geomagnetic field dynamics.