

Archaeoastronomy as a Scientific Tool for Prehistoric and Protohistoric Research: Linking Earth, Sky, and Cultural Symbolism

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Abstract:

Archaeoastronomy provides a critical lens for understanding how prehistoric and protohistoric societies observed, interpreted, and incorporated celestial phenomena into their cultural, ritual, and practical practices. In contexts lacking written records, the study of skylscapes and astronomical alignments offers a unique pathway to reconstruct cosmologies, calendrical systems, and spatial organisation, revealing the symbolic and functional roles of celestial knowledge in early human societies.

This session invites contributions that explore the intersections of astronomy, archaeology, anthropology, and other scientific fields, combining robust analytical approaches with cultural interpretation. We welcome studies on monument and settlement orientations, landscape design, ritual architecture, and material culture, especially those that integrate quantitative analysis, GIS, 3D modelling, photogrammetry, or remote sensing. Research connecting environmental data, resource management, or temporal cycles with celestial observations is particularly encouraged, highlighting how early communities linked terrestrial and celestial domains in meaningful ways.

The session also addresses interpretive challenges in archaeoastronomy, including distinguishing intentional alignments from coincidental patterns, understanding cultural context, and critically evaluating historical or mythological sources. Comparative studies across regions or periods that examine shared patterns, symbolic meanings, or technological innovations are especially valuable, offering a broader perspective on the role of celestial knowledge in shaping human experience.

By bringing together scholars from diverse fields, this session aims to illuminate the interplay between earth, sky, and cultural symbolism in prehistoric and protohistoric societies, demonstrating how archaeoastronomy serves as both a scientific tool and a pathway to understanding the beliefs, practices, and worldviews of early humans.