

INDIAN INSTITUTE OF TECHNOLOGY KHARAGPUR

presents

INSTITUTE LECTURE

under SandHI Initiative

Astronomical Dating and Re-evaluating Ancient Indian Chronology

by

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Abstract

Chronology of ancient events of a civilization is very important in establishing the history of the nation in correct perspective. There are many scientific methods in dating ancient objects and structures. However, in many cases such ancient structures are not available for a number of reasons depending on natural causes. India represents the oldest continuing civilization in the world; but, unfortunately, its ancient history is one of the least understood and is plagued with many bitter controversies. As will be shown dating of ancient events is possible using the ancient literature without depending on the availability of any ancient structure. This is done using the description of the configurations of the stars, planets and the Moon given in ancient texts.

Both the approaches- using structural alignments and astronomical descriptions given in ancient texts- are called 'Archaeoastronomy'. Fortunately, India possesses the most ancient literature in the world – the Vedas, Vedangas, Upanishads and the Puranic literature which are quite rich in astronomical

descriptions. The lecture presents the basic principle of using the precision of the equinox along with the ancient Indian astronomy to approximately decide the era of various ancient texts and important events like Mahabharata. A few case studies will be presented using a planetarium software showing the motions of the stars and the influence of the precision of the earth's spin axis with a period of 26,000 years. *The presentation is suitable for general audience (including school children) without any special background knowledge in astronomy.*