

Seminar SAW : Mathematical practices in the context of the Astral Sciences

Abstract :

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How to compute planetary latitudes: an unusual mathematical approach in a Sanskrit commentary.

Planetary longitudes and latitudes are typically measured with respect to ecliptic coordinates, a natural choice since the planets' motion is roughly along the plane of the ecliptic. An interesting approach to computing planetary latitudes is set out by twelfth century scholar Āmarāja in his commentary on Brahmagupta's *Khaṇḍakhādyaka*. Among other mathematical details, his account involves second order interpolation of sines, which he carefully spells out in a specific example. We analyse the mathematical techniques he invokes and their appropriateness in reckoning planetary positions.