

**National Seminar on “Kerala School of Astronomy and Mathematics: Contributions and Contemporary Relevance” organized by Indira Gandhi National Centre for the Arts (IGNCA) in association with Amrita Darshanam, International Centre for Spiritual Studies, Amrita Vishwa Vidyapeetham, Amritapuri Campus, Kollam, Kerala, India.
4 – 5 November 2016**

ABSTRACT

11. Exposition on Planetary Models by Bhāskara, Mādhava and Nīlakaṇṭha Somayājī by Dr. Upadayaula K.V. Sarma, Amrita University

Āryabhaṭa (b. 476 CE) mentioned planetary motion in just 5 verses in his composition “Āryabhaṭīya”. Known for its aphoristic style of composition, the text Āryabhaṭīya has been commented upon by various astronomers of different times. Among them, the commentary by Bhāskara (c. 629 CE) is widely regarded by the scholarly world as the most important one, not only because of its antiquity but also because of the comprehensive analysis done by Bhāskara on several foundational issues concerning this branch of astronomy.

The commentary by Nīlakaṇṭha Somayājī (c. 1500 CE), one of the foremost astronomers of the Kerala school, is also an extensive one and is of great importance from the view point of tracing the evolution of astronomy in India from the time of Āryabhaṭa. This erudite commentary explains in great detail various mathematical techniques developed by Mādhava for solving and simplifying certain astronomical problems.

The present talk aims to cover some important aspects of the above mentioned commentaries concerning planetary models and also presents a critical study of a manuscript bearing the title “āryabhaṭīyagatakakṣyāpratimaṇḍalādīśloka-yuktiḥ” (the rationale behind the verses beginning with kakṣyāpratimaṇḍala in Āryabhaṭīya. This manuscript, which is in the form of a gloss on Āryabhaṭa’s planetary model, is ascribed to Mādhava (c. 1400 CE) based on our preliminary investigation.