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ABSTRACT

3 The Study of Lunar Motion in Indian Astronomy by Prof. Madhavan, Thiruvananthapuram

The Moon has been an object of study from the Vedic days. In Vedaṅgajyotiṣa we get a method for computing its position. In later days, at least from those of Āryabhaṭa, a geometric model was developed. In this model the Moon is supposed to move in circle called mandavṛtta, the centre of which also moves in a circle called kakṣyāvṛtta. The motion is uniform with the same angular velocity, but in opposite directions. Using the model, tables were developed to find the position of the Moon using Vākyas as evidenced by Cāndravākyas of Vararuci. To introduce more accuracy into this, Mādhava gave a method in Veṇvāroha. In Sūryasiddhanta the radius of the mandavṛtta varies and this makes the model different. It turns out to be a curve formed by two elliptical arcs. Various corrections were also introduced to make the computation accurate.

Though many changes have taken place from the days of Copernicus, the evolution of early theory is, nevertheless, interesting.