

Biographical Encyclopedia of Astronomers

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Bhaskara II

Born Vijjayapura (Bijapur, Karnataka, India), 1114

Died Ujjain (Madhya Pradesh, India), 1185

Bhaskara II was an Indian (Hindu) astronomer of the 12th century. The number "II" is added by modern historians to differentiate him from his namesake (Bhaskara I) of the 7th century. Bhaskara II is frequently called Bhaskarācārya (Master Bhaskara). He probably lived in Vijjayapura; his father was Maheśvara, who was also an astronomer. Bhaskara II composed several works on astronomy, most notably the *Siddhantaśiromaṇi* (1150), along with his own commentary, the *Vāsanābhāṣya* or Mitaksara, the *Karaṇakutūhala* (1183), and the *Vivarana* on the *Śiṣyadhīvrddhidatantra* of Lalla

Bhaskara II's grandson, Caṅgadeva, founded an institution for the study of the *Siddhantaśiromaṇi* that received an endowment in 1207 from the king, Soīdeva the Nikumbha. Bhaskara II's lineage produced several noted astronomers and astrologers who promoted these teachings.

Bhaskara II was a follower of the Brahma School of Brahmagupta, one of four principal schools of astronomy active during the classical period (from the late 5th to the 12th centuries). He was the last great figure of Hindu astronomy, preceding the introduction of Islamic astronomy in the 13th and 14th centuries

The *Siddhantasiromani* was written when Bhaskara II was 36 years old and forms a comprehensive treatise of mathematics and astronomy. It consists of two principal parts: (1) the *Grahagaṇitādhyāya*, which contains 12 chapters on the motions of the planets, problems of time and direction, lunar and solar eclipses, conjunctions, and so forth; and (2) the *Goladhyaya*, which contains 13 chapters, chiefly on the celestial sphere. This latter text also contains a discussion of the precession of the equinoxes. Here, Bhaskara II seemingly refers to a lost work of Manjāla, as Bhaskara II's theory of precession is not contained in any extant work of Manjāla.

The *Karaṇakutūhala* is a practical work of astronomy and consists of ten chapters that provide simplified rules and methods for solving astronomical problems

Bhaskara II's *Vivarana*, the commentary on the *Śiṣyadhīvrddhidatantra*, is a textbook belonging to the Ārya School of astronomy.

Selected References

Arka Somayaji, Dhulipala (trans.) (2000). *Siddhantasiromanih*. 2nd rev. ed. Tiru-pati, India: Rāstriyasamśkrtyavidyapitham.

Chattopadhyay, Anjana (2002). "Bhaskara II." In *Biographical Dictionary of Indian Scientists: From Ancient to Contemporary*, pp. 169-170. New Delhi: Rupa.

Dikshita, Sankara Balakrshna (1969). *Bharatiya Jyotish Sāstra* (History of Indian Astronomy), translated by Raghunath Vinayak Vaidya. Delhi: Manager of Publications (Government of India).

Pingree, David (1970). "Bhāskara II." In *Dictionary of Scientific Biography*, edited by Charles Coulston Gillispie. Vol. 2, pp. 115-120. New York: Charles Scribner's Sons.

—— (1978). "History of Mathematical Astronomy in India." In *Dictionary of Scientific Biography*, edited by Charles Coulston Gillispie. Vol. 15 (Suppl. 1), pp. 533-633. New York: Charles Scribner's Sons.