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(*b*. A. D.476).

Āryabhaṭa I clearly states his connection with Kusumapura (Pāṭaliputra, modern Patna in Bihar), which had been the imperial capital of the Guptas for much of the fourth and fifth centuries. The assertion of Nīlakaṇṭha Somasutvan (*b*. 1443) that Āryabhaṭa was born in the Aśmakajanapada (this presumably refers to the Nizamabad district of Andhra Pradesh) is probably the result of a confusion with his predecessor. Bhāskara I, as commentator on the *Āryabhaṭīya*, Āryabhaṭa I wrote two works: the *Āryabhaṭīya* in 499 (see Essay V), and another, lost treatise in which he expounded the *ārddharātrika* system (see Essay VI).

The *Āryabhaṭīya consists of three parts and a brief introduction: Daśagītikā*, introduction with parameters (ten verses); *Gaṇitapāda*, mathematics (thirtythree verses); Kālakriyāpāda, the reckoning of time and the planetary models (twenty-five verses); *Golapāda*, on the sphere, including eclipses (fifty verses). It was translated into Arabic in about 800 under the title *Zīj al-Arjabhar*, and it is to this translation that all the quotations in al-Bīrūnī refer, including those that led Kaye to conclude—mistakenly—that the *Gaṇitapāda* was not written by Āryabhaṭa I.

The *Āryabhaṭīya* has been commented on many times, especially by scholars of south India, where it was particularly studied. The names of those commentators who are known are as follows:

1. Prabhākara (*ca.* 525). His commentary is lost.
2. Bhāskara I (629). His Bhāsya is being edited by K. S. Śukla of Lucknow.
3. Someśvara (*fl.* 1040). His *Vāsanābhāsya* is preserved in two manuscripts in the Bombay University Library.
4. Sūryadeva Yajvan of Kerala (*b*. 1191). There are many manuscripts of his *Bhaṭaprakāśa*, in south India.
5. Parameśvara(*fl.* 1400–1450). His *Bhaṭadīpikā*, based on Sūryadeva's *Bhaṭaprakāśa*, was published by H. Kern (see below).
6. Nīlakaṇṭha Somasutvan (*b*. 1443). His *Bhāsya* is published in *Trivandrum Sanskrit Series* (see below).
7. Yallaya (*fl.* 1482). His *Vyākhyāna* is based on Sūryadeva's *Bhaṭaprakāśa;* there is one manuscript of it in Madras and another among the Mackenzie manuscripts in the India Office Library.
8. Raghunātha (*fl.* 1590). His *Vyākhyāna* is dealt with by K. Madhava Krishna Sarma, "The *Āryabhaṭīyavyākhyā of Raghunātharāja*—A Rare and Hitherto Unknown Work," in *Brahmavidyā*, **6** (1942), 217–227.
9. Kodaṇḍarāma of the Koṭikalapūḍikula, a resident of Bobbili in the Godāvarī district of Andhra Pradesh (*fl.* 1854). Besides an *Āryabhaṭatantragaṇita*, he wrote a Telugu commentary on the *Āryabhaṭīya* entitled *Sudhātaraṅga;* it was edited by V. Lakshmi Narayana Sastri, in *Madras Government Oriental Series*, **139** (Madras, 1956).
10. Bhūtiviṣṇu. There is apparently only one manuscript (in Berlin) and its apograph (in Washington, D. C.) of his commentary (*Bhāsya*) on the *Daśagītikā*.
11. Ghaṭāgopa. There are two manuscripts of his *Vyākhā* in Trivandrum.
12. Virūpākṣa Sūri. There is a manuscript of his Telugu commentary in Mysore.

There also exists a Marāṭhī translation of the *Āryabhaṭīya* in a manuscript at Bombay.

There are several editions of the *Āryabhaṭīya* That by H. Kern (Leiden, 1874) is accompanied by the commentary of Parameśvara. Kern's text and commentary were reprinted and translated into Hindi by Udaya Nārāyana Singh (Madhurapur, Etawah, 1906). A new edition of the text, with the commentary of Nīlakaṇṭha Somasutvan (who does not include the *Daśagītikā*), was published in three volumes: Vols. I and II by K. Sāmbśiva Śāstrī and Vol, III by Suranad Kunjan Pillai, in *Trivandrum Sanskrit Series*, **101, 110,** and **185** (Trivandrum, 1930, 1931, 1957). The text has also been published accompanied

by two new commentaries, one in Sanskrit and one in Hindi, by Baladeva Mishra (Patna, 1966). The *Gaṇitapāda* was translated into French by Léon Rodet, in *Journal Asiatique*, **7,** no. 13 (1879), 393–434; and into English by G. R. Kaye, in *Journal of the Asiatic Society of Bengal*, **4** (1908), 111– **141** . Complete English translations have been made by Baidyanath Rath Sastri (Chicago, 1925; unpub.); P. C. Sengupta, *Journal of the Department of Letters of Calcutta University*, **16** (1927), 1–56; and W. E. Clark (Chicago, 1930).

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