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Severus Sebokht [Sebokt, Sebukht, Seboht]

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Born **Nisibis, (Syria)**, ***circa* 575**

Died **Kennesrin (also called Qinnesrin or Qenneshrê), (Syria), 666/667**

Severus Sebokht was one of the leading figures of ecclesiastical, philosophical, and scientific culture of late antique Syria, although little definitive information is known about his life. Born in Persian territory at Nisibis, he left his teaching post in its famous school in 612 after a doctrinal dispute among the Nestorians. Later consecrated a bishop, he pursued a career in the Syrian Monophysite church within Byzantine jurisdiction, residing as a monk at the monastery at Kennesrin on the west bank of the Euphrates, one of the chief seats of Greek learning in western Syria. He continued to write until at least 665.

Like many of his contemporaries, Severus was bicultural, partaking of the Byzantine Greek influence on western Syrian intellectual circles while fully immersed in his own Syrian cultural milieu. He does, however, criticize the contemporary Greek tendency to assume intellectual superiority and asserts his own capabilities as a native Syrian, raising a strong polemical voice against the cultural hegemony of the Greek-speaking world over that of provincials. A leading figure in the teaching and commentary tradition of Aristotelian philosophy, especially in logic and syllogisms, Severus produced a *Discourse on Syllogisms in Prior Analytics* (638) and wrote commentaries on other philosophical texts. He translated Paul the Persian's commentary on **Aristotle**'s *De interpretatione* into Syriac. Severus also played an important role in the transmission of Indian intellectual concepts into Syria and ultimately into the Islamic world. In one famous passage, he praises the Hindu decimal concept and mentions for the first time in the Greek east the nine numerical symbols used in India.

It was in astronomical matters, however, that Severus was preeminent. Syrian astronomy was predominantly Ptolemaic, and Severus himself stands as an important figure in passing on Greek astronomical knowledge to Syrian scholars and thence to Islamic civilization. He was familiar with **Ptolemy**'s *Handy Tables*, and there is some indication that he translated the *Almagest* into Syriac; in any case, he most certainly taught it in the school of Nisibis and then later in western Syria. Similarly, Severus was an important link in the transmission of the Greek tradition of the astrolabe to the east. In several passages in his astronomical works, he positions himself firmly on the side of scientific methodology and opposes speculative astrology.

Severus made two major contributions to astronomy. The first, a *Treatise on the Astrolabe*, is based on a lost work by **Theon of Alexandria**, the contents of which Severus preserved in his own work.

Written in 660, it is in two parts. The first is a general description, including information about the following basic elements of the instrument – the disks, the spider, the diopter, the zones, and related aspects of the physical and mechanical parts. Instructions on its actual use comprise the second part of the work, divided into 25 chapters, of which two (12, 20) are missing. These chapters cover all the applications of the instrument – determining the hour of the day and night (1–3), finding the longitude of the Sun, Moon, and planets and the latitude of the Moon (4–6), checking the instrument (7–8), ascertaining the rising and setting times of various signs (9–10, 25) and the length of daylight during the course of the year (11), locating the geographical longitude and latitude of cities and establishing the differences of local noons (13–15), fixing the ascensions on the right sphere (16), finding latitudes of the observer and of each climate (17–18), estimating the longitude and latitude of stars and their first and last visibility (19, 21), observing the ecliptic and the declination of the Sun (22–23), and recognizing the five zones on the celestial and terrestrial spheres (24).

Severus's other astronomical work (generally entitled *Treatise on the Constellations*) was written in 660, subsequent to that on the astrolabe. Eighteen original chapters are extant. The work begins with five chapters forming a scientific critique of astrological and poetic claims about the origins and significance of the constellations. In them, Severus shows that the figures of the constellations are not arranged in the heavens through natural means but rather are a result of human imagination. Importantly, Chapter 4 features extracts from the *Phaenomena* of **Aratus** concerning many of the constellations. The remaining 13 chapters (6–18) are devoted to a scientific analysis of the heavens and the Earth. Here Severus enumerates the 46 constellations and their noteworthy stars and explains their various motions and their rising and settings. He also discusses the celestial geography of the Milky Way and the ten “circles” of the heavens, including the tropics, the equator, the meridian, the horizon, and the ecliptic. Three chapters (14–16) examine extensively the seven climatic zones, their location and extent, their relationship to the Sun, and the length of the days and nights in each, the latter in accordance with Ptolemy's *Handy Tables*. In the final two chapters, Severus treats the extent of the Earth and the sky and considers the populated and uninhabited regions of the Earth. In 665, Severus appended to this work nine additional chapters, designed to answer a variety of astronomical, cosmological, and mathematical questions posed by Basil of Cyprus, a visiting cleric. Included are treatments of the conjunctions of planets and of various points about climatic zones, the astrolabe, the determination of the date of Easter in April 665, and the date of the birth of Christ. In other passages extant in the manuscripts, Severus also writes on the phases of the Moon and on eclipses, in one case explaining lunar eclipses scientifically to dispel the popular idea that a dragon (*Ataliâ*) was responsible for such events.

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