Samarqandī: Shams al-Dīn Muḥammad ibn Ashraf al-Ḥusaynī al-Samarqandī

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Born **Samarqand, (Uzbekistan)**

Died **1302**

Shams al-Dīn al-Samarqandī, who lived in the 13th century, wrote books on *kalām* (theology), logic, mathematics, and astronomy; his works were taught for many centuries in the *madrasas* (schools) throughout the Islamic world.

Little is known about his life. After studying the standard curriculum in the basic religious sciences, Samarqandī mastered *kalām*, (logic, and geometry). His works in these fields cover the standard material of Hellenistic and Islamic knowledge, but they also contain contributions that are original both in content and method. One of the most striking features of his works is that they set forth the idea of a universe based upon geometrical forms. In this sense, he can be regarded as the founder of the movement that might be named "geometrical" *kalām* in the Islamic world.

In the field of theoretical astronomy, Samarqandī wrote a (commentaroy) *sharḥ* on **Naṣir al-Dīn al -Ṭūsī**'s *taḥrīr* (Recension) of **Ptolemy**'s *Almagest*. He also wrote a general astronomy book, no longer extant, reportedly entitled *al-Tadhkira fī ʿilm al-hayʾa*. Finally, he prepared the ʿ*Amāl al-taqwīm li-'l-kawakīb al-thābita*, which was a star calendar for the year 1276–1277. Unfortunately, most of Samarqandī's astronomical works have not been studied yet.

Samarqandī was most influential for his various textbooks, which provided a wealth of information about the content and methods of past scholars and greatly influenced future generations, who studied these books in various *madrasas*. His geometrical work entitled *Ashkāl al-taʾsīs* contains 35 propositions from Euclid's *Elements*; the first 30 propositions are strictly geometrical, while the last five deal with what has been called "geometrical algebra." Regarding the problem of the fifth ("parallels") postulate, he supported Euclid and considered the criticisms of earlier Islamic mathematicians to have been misplaced. The most important aspect of the book was Samarqandī's view that a study of geometry was a propaedeutic to the study of the forms of Platonic philosophy. It was used as a "middle-level" textbook for Muslim scholars in the *madrasas*, later most often with **Qāḍizāde**'s commentary. Samarqandī also wrote widely used textbooks in the fields of *kalām*, logic, rhetoric, and philosophy.

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