

Contribution ID: 13

Type: **not specified**

An Astronomical Summa of the Safavid Era: *Tashrīḥ al-Aflāk* by Bahā' al-Dīn al-ʿĀmilī

Friday 19 September 2025 14:50 (20 minutes)

The Lebanese born scholar Bahā' al-Dīn al-ʿĀmilī (953/1547-1030/1621), known as Shaikh Bahā'ī, was a key cultural figure of the Safavid court of Shah ʿAbbās I (995/1587-1038/1629). Among his most popular scientific works was *Tashrīḥ al-aflāk* ("Explanation of the Celestial Spheres"), which has survived in numerous copies to the present day. The author identifies this short work as a "summary" at several points, while excusing himself from presenting a full explication of the subject matter at hand. Indeed, the highly condensed presentation of the discussions in *Tashrīḥ al-aflāk*, the absence of many standard topics, such as the planetary anomalies, and many missing astronomical parameters (such as the angular motions for the various orbs) were likely what led the author to subsequently compose a commentary for the work. Bahā'ī's preoccupation with astronomy is reflected in the fact that he wrote commentaries, as well, on other works, including al-Mulakhkhaṣ fi al-hay'a al-basiṭa ("The Summary of plain hay'a,") by Maḥmūd Jaghmīnī (fl. early 13th century CE) and al-Tadhkira fi ʿilm al-hay'a ("Memoir on the Science of hay'a,"), by Naṣīr al-Dīn Ṭūsī (d. 672/1274). The present study examines *Tashrīḥ al-aflāk* in view of the influence of his predecessors, particularly Jaghmīnī and ʿAlī Qūshjī (d. 879/1474), while highlighting some of the unexpected features of the *Tashrīḥ al-aflāk*, as well.

Short Biography

A native of the San Francisco Bay Area, Kaveh Niazi received a Ph. D. in applied physics from the University of California, Berkeley, in 1995. Subsequent to working as an engineer in Silicon Valley, he returned to graduate school to receive a Ph.D. in the history of science from Columbia University, New York, in 2011. His research interests include the history of astronomy, Iranian history, and the intellectual history of the Ilkhan era. He published his graduate research on the astronomical works of Qutb al-Din Shirazi in 2014 under the title "Qutb al-Din Shirazi and the Configuration of the Heavens." He published his study of Nasir al-Din Tusi's *Risala-yi Mu'iniya*, which included a new edition of Tusi's work and the first English translation of an astronomical work in Persian, in 2022 under the title "A Princely Pandect on Astronomy." In 2024, "A Princely Pandect on Astronomy" was recognized with an honorable mention by the Parviz Shahriari Book Award for History of Mathematics, Science and Technology.

Keywords

Hay'a, al-ʿĀmilī, Shaikh Baha'i, Safavid

E-mail

kfniazi@stanford.edu

Affiliation

Stanford Online High School

Position

Math and science instructor

Primary author: Kaveh Niazi (Stanford Online High School)

Presenter: Kaveh Niazi (Stanford Online High School)

Session Classification: S.4.7. Astronomy in Practice: Instruments, Texts, and Cross-Cultural Dialogues

Track Classification: Individual papers