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Rudānī: Abū ‘Abdallāh Muḥammad ibn Sulaymān (Muḥammad) al-Fāsī ibn Ṭāhir al-Rudānī al-Sūsī al-Mālikī [al-Maghribī]

Salim Ayduz

Born Tārūdānt, (Morocco), circa 1627

Died Damascus, (Syria), 1683

Rudānī, also known as *al-Maghribī*, was a 17th-century scholar who lived in the Ottoman territories and was known for his work on astronomical instruments. In addition to astronomy, he was a poet and also wrote on mathematics, *hadith* (traditions of the Prophet), Qur’ān interpretation, and grammar. There is no information about Rudānī’s elementary education or about his family background. He received his education in the *madrasas* (schools) of Morocco and Algeria. Then he traveled to the east, visiting Egypt, Damascus, and Istanbul and receiving education from eminent scholars along the way. Eventually, Rudānī moved to the Ḥijāz in Arabia, where he became one of the most respected scholars in the area, and was appointed governor. But due to a conflict, he was exiled to Damascus.

In the field of astronomy, Rudānī wrote works on instruments, timekeeping, and the *qibla* (direction to Mecca). He sought practical solutions and ways to simplify the calculations. With these purposes in mind, Rudānī invented a sphere, called *al-jayb al-jāmi‘a*, which was a spherical device in which another sphere (painted blue) with a different axis was attached to it. This second sphere was divided into two parts in which the zodiacal signs with their sections and regions were drawn. The purpose of this device was to facilitate timekeeping with the use of this one instrument. The device, easily constructed, was a universal instrument (*i. e.*, it could be used for different longitudes and latitudes). Unfortunately, there is no existing sample of this device, but Rudānī wrote a book describing it, in Arabic, entitled *al-Nāfi‘a fī ‘amal al-jāmi‘a*. It was written in Medina in 1662 and contains 45 parts and a conclusion. Rudānī’s best-known work in the field of astronomy is *Bahja al-tullāb fī al-‘amal bi-’l-asturlāb*, a book written in Arabic on how to make and use an astrolabe. There are 13 extant copies of this particular work. Interestingly, Rudānī also wrote three other works on the same subject. Other astronomical works by Rudānī include one on prayer times and another on the calendar in rhyme.

Selected References

- Al-'Ayyāshī, Abū Sālim 'Abdallāh ibn Muḥammad (1899). *Riḥlat al-Shaykh al-Imām Abi Sālim al-'Ayyāshī*. Vol. 2, p. 30. Fez.
- Al-Kattānī, 'Abd al-Ḥayy ibn 'Abd al-Kabīr (1982). *Fihris al-fahāris*. Beirut, p. 317.
- Al-Muḥibbī, Muḥammad (1966). *Khulāṣat al-athar fī a'yān al-qarn al-ḥādī 'ashar*. Vol. 4, pp. 204-208. Beirut.
- Al- Zirikī, Khayr al-Dīn (1980). *al-A'lām*. Vol. 6, pp. 151-152. Beirut.
- Brockelmann, Carl. *Geschichte der arabischen Litteratur*. 2nd ed. Vol. 2 (1949): 610-611; Suppl. 2 (1938): 691. Leiden: E. J. Brill.
- Daḥlān, Aḥmad ibn Zaynī (1887). *Khulāṣat al-kalām fī bayān umarā' al-balad al-ḥarām*. Egypt, pp. 102-104.
- Ibn Sūdah, 'Abd al-Salām ibn 'Abd al-Qādir (1950). *Dalil mu'arrikh al-Maghrib*. Tetouan, p. 340.
- İhsanoğlu, Ekmeleddin, *et al.* (1997). *Osmanlı Astronomi Literatürü Tarihi (OALT)* (History of astronomy literature during the Ottoman period). Vol. 1, pp. 317-321. Istanbul: IRCICA.
- İzgi, Cevat (1997). *Osmanlı Medreselerinde İlim*. Vol. 1, pp. 118-119. Istanbul.
- Kaḥḥālah, 'Umar Riḍā (1985). *Mu'jam al-mu'allifin*. Vol. 11, p. 221. Beirut.
- Suter, Heinrich (1981). *Die Mathematiker und Astronomen der Araber und ihre Werke*. Amsterdam: APA-Oriental Press, p. 203 (no. 527).