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## Riḍwān al-Falakī: Riḍwān Efendi ibn ‘Abdallāh al-Razzāz al-Falakī

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**Born Cairo, (Egypt)**

**Died Cairo, (Egypt), 7 August 1711**

Riḍwān Efendi al-Falakī was an Egyptian-Ottoman astronomer known for his production of astronomical tables as well as various instruments and globes. He was also noted for the many students that he trained. There is little information on his birth, youth, and education. However, we know that Riḍwān al-Falakī studied in Cairo and received his astronomical education from distinguished scholars. Indeed, he never left Cairo except in 1680, when he visited Mecca for the *ḥajj* (pilgrimage). Besides writing on astronomy, Riḍwān al-Falakī wrote a number of books on mathematics and geometry. According to the sources on Ottoman astronomy, his works were so abundant that the drafts of his books were considered a camel's load. At the request of the timekeeper Ḥasan Efendi, in 1700 and 1701 he prepared spheres and astronomical devices upon which he marked the Arabic names of stars that he located through observation. Among Riḍwān al-Falakī's many students in astronomy, only Yūsuf al-Jamāli (the servant of Ḥasan Efendi) is known.

The titles of 17 of Riḍwān al-Falakī's astronomical works are known, most of which are extant. All were written in Arabic. Several works are adaptations of the work done at the Samarqand Observatory under **Ulugh Beg**. His *Zīj al-mufīd ‘alā uṣūl al-raṣad al-jadīd al-Samarqāndī*, or *al-Zīj al-Riḍwānī*, is an astronomical handbook with tables based on *Zīj-i Ulugh Beg* but adapted for Cairo's latitude. It consists of four parts in addition to an introduction and various tables. Riḍwān al-Falakī's *al-Durr al-farīd ‘alā al-raṣad al-jadīd* is possibly a commentary written on Ulugh Beg's *Zīj*; it contains an introduction, 12 sections, and a conclusion. *Asnā al-mawāhib fī taqwīm al-kawākib* is another work he adapted from *Zīj-i Ulugh Beg* for Cairo's latitude.

Riḍwān al-Falakī is also known for his works on timekeeping. Of these, probably the most extensive is *Dustūr uṣūl ‘ilm al-mīqāt wa-naṭījat al-naẓr fī taḥrīr al-awqāt*. Other treatises treat eclipses, lunar-crepuscular visibility, sundials, and Jupiter-Saturn conjunctions. For a listing of his works, see Ihsanoğlu *et al.* (1997), and Rosenfeld and Ihsanoğlu (2003).

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### Selected References

Al-Zirikli, Khayr al-Dīn (1980). *Al-A‘lām*. Vol. 3, p. 27. Beirut.

Bağdadlı, İsmail Paşa. *İḍāḥ al-Maknūn*. Vol. 1 (1945): 82, 447, 621; Vol. 2 (1947): 81. Istanbul.

——— (1951). *Hadiyyat al-‘Ārifin*. Vol. 1, p. 369. Istanbul.

Brockelmann Carl. *Geschichte der arabischen Litteratur*. 2nd ed. Vol. 2 (1949): 471; Suppl. 2 (1938): 487. Leiden: E. J. Brill.

Çakıroğlu, Ekrem (ed.) (1999). *Yaşamları ve Yapıtlarıyla Osmanlılar Ansiklopedisi*. Vol. 2, pp. 459-460. Istanbul: Yapi Kredi Yayinlari.

İhsanoğlu, Ekmeleddin *et al.* (1997). *Osmanlı Astronomi Literatürü Tarihi (OALT)* (History of astronomy literature during the Ottoman period). Vol. 1, pp. 377-384. Istanbul: IRCICA.

Jabartī, ‘Abd al-Raḥmān (1978). *‘Ajā’ib al-āthār fī al-tarājim wa-’l-akhbār*. Vol. 1, pp. 130-131. Beirut.

Kaḥḥālah, ‘Umar Riḍā (1985). *Mu‘jam al-mu’allifin*. Vol. 4, p. 165. Beirut.

King, David A. (1986). *A Survey of the Scientific Manuscripts in the Egyptian National Library*. Winona Lake, Indiana: Eisenbrauns, pp. 107-108.

——— (2004). *In Synchrony with the Heavens: Studies in Astronomical Timekeeping and Instrumentation in Medieval Islamic Civilization*. Vol. 1, *The Call of the Muezzin* (Studies I-IX). Leiden: E. J. Brill.

Rosenfeld, B. A. and Ekmeleddin Ihsanoğlu (2003). *Mathematicians, Astronomers, and Other Scholars of Islamic Civilization and Their Works (7th-19th c.)*. Istanbul: IRCICA, pp. 386-387.