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Farghānī: Abū al-‘Abbās Aḥmad ibn Muḥammad ibn Kathīr al-Farghānī

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Flourished **Central Asia and Baghdad, (Iraq), 9th century**

Farghānī's main claim to fame rests upon his widely circulated compendium of **Ptolemy's** *Almagest*, as well as on his writings on observational instruments. His name has also been associated with the Nilometer at al-Fuṣṭāṭ (near modern Cairo), as well as with the construction of an irrigation canal to supply the new city of al-Ja‘fariyya in Iraq built by Caliph al-Mutawakkil (reigned: 847–861). Not many biographical details are known. From his name, it appears that Farghānī was born in the vicinity of Farghāna in Transoxiana, probably about the beginning of the 9th century. He appears to have spent much of his career associated with the ‘Abbāsīd court in Baghdad.

Farghānī's compendium (*jawāmi‘*) of the *Almagest* was composed after the death of **Ma‘mūn** in 833 but before 857. It was quite popular in Arabic, as testified in part by the surviving manuscript copies. It was also the subject of two commentaries, the first by **Abū ‘Ubayd ‘Abd al-Wahīd ibn Muḥammad al-Jūzjānī**, a student of **Ibn Sīnā**, and the other by **Abū al-Ṣaqr ‘Abd al-‘Azīz ibn ‘Uthmān al-Qabīṣī**. We know that **Bīrūnī** wrote an extensive discussion of this work entitled *Tahdhīb fuṣūl al-Farghānī*, but it is no longer extant.

Farghānī's compendium was, perhaps, even more influential in its Latin translations. The first of these was by **John of Seville** about 1135. Printed Latin versions based on this translation were published in Ferrara (1493), Nuremberg (1537), and Paris (1546). The translation of **Gerard of Cremona** (made some time before 1175) was not printed until the 20th century, but it circulated in manuscript form throughout Europe. A Hebrew translation (before 1385?) of the Arabic text was prepared by Jacob Anatoli. This Hebrew version, together with the Latin version of John of Seville, was used by **Jacob Christmann** to prepare a new Latin translation, published in Frankfurt (1590). The Arabic text, together with a new Latin translation and notes (which cover only the first nine chapters), was published posthumously by Jacob Golius (Amsterdam, 1669).

Farghānī's treatise on the astrolabe survives in Arabic. (It appears not to have been translated into Latin.) It is a competent discussion of the mathematical principles of astrolabe construction directed toward serious scholars at an “intermediate” level, according to a statement in the introduction. This treatise also seems to have been somewhat influential, since a “supplement” (*Tatmīm ‘amal al-aṣṭurlāb*) was composed by Aḥmad ibn Muḥammad al-Azharī al-Khāniqī (flourished: 1350). An anonymous summary (*Tajrīd*) is also extant. Farghānī is also credited with a discussion of the construction of hour lines on horizontal sundials (*‘Amal al-rukhāmāt*), but it

seems not to be extant

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