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## Kharaqī: Shams al-Dīn Abū Bakr Muḥammad ibn Aḥmad al-Kharaqī [al-Khiraqī]

Y. Tzvi Langermann

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*Flourished* **Marw (Merv near Mary, Turkmenistan)**

*Died* **1138/1139**

Kharaqī is the author of two works on *hay'a*, a genre of the Arabic astronomical literature that placed its main emphasis on explaining the physical structure of the Universe. The shorter of these, *al-Tabṣira fī 'ilm al-hay'a* (Conspectus of the science of astronomy), achieved considerable popularity. Altogether, about a dozen manuscripts survive (including several copied into Hebrew letters). Two commentaries were written, one by the Yemeni Jew Alu'el ben Yesha', the other anonymous; and a Hebrew translation has been identified. Only a few manuscript copies of the longer work, *Muntahā al-idrāk fī taqāsīm al-aflāk* (The utmost attainment in the configuration of the orbs) survive. Neither work has been published or even been the subject of a close study.

Kharaqī's work constitutes an important stage in the physical investigations of Islamic astronomers. He acknowledges the work of predecessors such as **Ibn al-Haytham** who had put their minds to this task. Yet, Kharaqī proclaims, people still do not know how the stars carry out their motions. It is like knowing that a person went from one city to another, but not knowing whether he went by foot or on horseback. His own work aims to rectify the matter. Although no specific advances can yet be credited to al-Kharaqī, his writings were an influence upon **Naṣīr al-Dīn al-Ṭūsī**.

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