

# Biographical Encyclopedia of Astronomers

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Umawi: Abū 'Alī al-Hasan ibn 'Ali ibn Khalaf al-Umawi

Born Cordova, (Spain), 1120

Died Seville, (Spain), 1205/1206

Abū al-Hasan al-Umawi, known as al-Khatib (the preacher), was an expert in Islamic religious sciences and the Arabic language. He wrote several treatises, among which are two on Arabic ethnoastronomy: *Kitāb al-Lu'lu' al-manzūm fi ma 'rifat al-awqat bi-'l-nujum* (Book of the Pearl in the Necklace on the Knowledge of Time by Means of the Stars) and *Kitāb al-Anwā'* (Book about the Anwa). The book belongs to a genre that aims to compile astronomical and meteorological materials from traditional Arabic lore within the framework of the *anwa'*, periods of 13 days defined by the risings and settings of certain asterisms (lunar mansions) located along the lunar ecliptic, which account for the complete solar year. Umawi's main source is the *Kitāb al-Anwa wa-'l azmina* by another Cordovan, Ibn 'Āṣim (died 1013), who had compiled materials taken from philologists of eastern Islam from the 8th century onward.

As a religious scholar, Umawi expanded on and completed Ibn 'Āṣim's chapters on the procedures of Arabic folk astronomy that could help determine the times of prayers (*mīqāt*) or find the direction of Mecca (*qibla*). The treatise contains a method for determining night hours based on the appearance of asterisms in the *anwa* system—this chapter seems to be related to Umawi's other astronomical treatise mentioned above—two series of shadow lengths cast by a gnomon to determine prayer times (one of them written in a numerical notation, the *Rūmī* ciphers, found only in Andalusia and North Africa), and a long fragment on the possibility of observing Canopus (*Suhayl*) from Muslim Spain, a star used to determine the direction of Mecca. The author seems to be aware of more sophisticated forms of astronomy, as he mentions two unusual sundials: the *mīzān fazārī* and the *mukhūla*.

There are two possible reasons for Umawi's interest in continuing a tradition that by his time was two centuries old: First, the rulers of the period, the Almohads, used to train their sons in the observation of the asterisms of the *anwa'* system; and second, the Almohad mosques, unlike those built by their predecessors, the Almoravids, were often directed toward the rising of Canopus. About a century later, this treatise was used by the famous Moroccan astronomer Ibn al-Banna' as a source for his *Kitāb fi al-anwa'* (Book on the *anwa*). Only the second treatise has come down to us, albeit in fragmentary form (preserved in El Escorial Library, MS 941).

*Miquel Forcada*

## Alternate name

al-Khatib al-Umawi al-Qurtubi

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