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Abū al-Ṣalt: Umayya ibn ‘Abd al-‘Azīz ibn Abī al-Ṣalt al-Dānī al-Andalusī

Mercè Comes

Alternate name

Albuzale

Born Denia, (Spain), circa 1068

Died Bejaïa, (Algeria), 23 October 1134

Abū al-Ṣalt was an accomplished, though not innovative, astronomer whose most important works dealt with instruments. These were read both in the Islamic world and in Europe. He may further be considered a polymath, having also written works in medicine, philosophy, music, history, and literature.

Abū al-Ṣalt's father died while he was still a child. In Denia he studied under al-Waqqashī (1017/8-1095/6), a well-known poet, mathematician, historian, philosopher, grammarian, lexicographer, jurist, and traditionalist, who had emigrated from Toledo. Later, it seems that Abū al-Ṣalt also studied in Seville before leaving al-Andalus for Alexandria and Cairo.

Abū al-Ṣalt arrived in Alexandria, accompanied by his mother, in 1096, during the reign of the Fatimid ruler al-Musta‘lī ibn al-Mustanṣir, in the epoch of the powerful minister al-Afḍal ibn Amīr al-Juyūsh Shāhanshāh. Al-Afḍal accepted Abū al-Ṣalt in his court immediately because of their common interest in astronomy. Around 1106/1107, Abū al-Ṣalt fell into disgrace and was imprisoned, apparently due to an incident that was recorded by Ibn Abī Uṣaybi‘a. The story goes that a ship with a cargo of copper sank near the port of Alexandria. Abū al-Ṣalt persuaded al-Afḍal that he would be able to refloat the ship; he devoted a great deal of effort and money to this objective and the ship was eventually hoisted by using intertwined silk ropes. Unfortunately, however, the ropes broke as soon as the ship started to emerge from the water; the ship sank again and nothing could be done to recover it. Al-Afḍal was furious and sent Abū al-Ṣalt to jail, where he remained in prison for 3 years and 1 month between 1107/1108 and 1111/1112. According to other versions, however, his disgrace was because of the fall of his friend and patron Mukhtār Tāj al-Ma‘ālī. In any case, during his stay in the jail Abū al-Ṣalt devoted himself to his writings and a great deal of his work dates from this time, mainly because he was confined to the building of the library.

On his release, Abū al-Ṣalt left Egypt and, according to some sources, went to Mahdiyya, capital of the Zīrids, on his way back to al-Andalus. He arrived in Mahdiyya in the year 1112/1113 and was welcomed by the educated king Yaḥyā ibn Tamīm al-Ṣanhājī. He settled in Mahdiyya, as a panegyrist and chronicler of the court. He devoted himself to music and pharmacopoeia, and in that city his son ‘Abd al-‘Azīz was born. During his stay in Tunis, Abū al-Ṣalt traveled to the Sicilian court of Palermo on several occasions, apparently in his role as a physician, under the patronage of the Norman king Roger. He died, probably of dropsy, in Bejaïa on 23 October 1134. He was buried in the *Ribāṭ* of Monastir (present-day Tunisia).

Abū al-Ṣalt's works on astronomy, mathematics, music, and optics were quoted by several Hebrew authors such as Samuel of Marseille and Profiat Duran (15th century). Part of his scientific work was translated into Latin and into Hebrew. Thanks to these translations made in the Iberian Peninsula and in southern France, he became well known in Europe. Abū al-Ṣalt appears to have composed an encyclopedic work on the scientific disciplines of the quadrivium, to which some of his known treatises on these sciences would have belonged. This work was divided in four sections devoted to geometry, astronomy, arithmetic, and music, following **Aristotle's** well-known scheme that was also used by most medieval Arabic and Hebrew authors. The title of this work, only known in its Hebrew translation, is *Sefer ba Haspaqah* (probably *Kitāb al-kāfī fī al-‘ulūm* in Arabic). Several Arabic sources consider him an excellent lute player and credit him with the introduction of Andalusī music to Tunis, which eventually led to the development of the Tunisian *mālūf*. Abū al-Ṣalt was also a well-known poet and a prolific writer on history, medicine, and philosophy.

The king of Mahdiyya was particularly interested in the study of medicinal plants and was keen to discover an elixir able to transmute copper into gold and tin into silver. With this aim in mind he founded a school of alchemy, where Abū al-Ṣalt taught.

Abū al-Ṣalt's most important works on astronomy are: (1) *Risāla fī al-‘amal bi-’l-aṣṭurlāb* (On the construction and use of the astrolabe); (2) *Ṣifat ‘amal ṣafiḥa jāmi‘a taqawwama bi-hā jamī‘ al-kawākib al-sab‘a* (Description of the construction and Use of a Single Plate with which the totality of the motions of the seven planets can be calculated). In this work, he describes the last, and least interesting, of the three known Andalusian equatoria, which may have been the link with the eastern Islamic instruments of this kind; however, it does seem that **Abū Ja‘far al-Khāzin** had already described an equatorium in 10th-century Khurāsān; (3) *Kitāb al-wajīz fī ‘ilm al-hay‘a* (Brief treatise on cosmology); (4) a compendium of astronomy that was strongly criticized by Abū ‘Abd Allāh of Aleppo, one of the most important astronomers of the court of al-Afḍal; (5) *Ajwiba ‘an masā’il su‘ila ‘an-ha fa-ajāba* or *Ajwiba ‘an masā’il fī al-kawn wa-’l-ḥabī‘a wa-’l-ḥisāb* (Solution to the questions posed, or answer to questions on cosmology, physics, and arithmetic); and, according to Ibn Khaldūn, an *Iqtīṣār* (Summary) of **Ptolemy's** *Almagest*.

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