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Nasţūlus: Muḥammad ibn 'Abd Allāh

Mònica Rius

Alternate name

Basţūlus

Flourished 10th century

Nasṭūlus is credited with constructing two astrolabes. The first, dated 927/928, is considered the oldest surviving astrolabe (though not the first ever constructed). This elegant instrument is preserved in the Kuwait Museum of Islamic Art. It has a single plate (for latitudes 33° and 36°) on the back of which are four quadrant scales and a shadow scale. The throne bears the inscription, "Made by Nasṭūlus (or Basṭūlus) in the year 315." The second astrolabe, of which only the *mater* is still extant, bears no date but was probably constructed around 312 hijra (925). It is preserved in the Museum of Islamic Art in Cairo; the inscription "Made by Nasṭūlus" appears on the throne. It contains the earliest and only geographical list to appear on an instrument before *circa* 1100. The purpose of the gazetteer on the *mater* is evidently to show which plates should be used in different cities. Most of the latitudes included are derived from <code>Khwārizmī</code>'s geographical table, although the remainder may have been taken from other early sources such as <code>Battānī</code> (*circa* 910). Although no original plate has survived, the instrument has various Mamluk additions, dated 1314.

We know almost nothing about this astronomer, and even his name remains in doubt. Some historians have interpreted the manuscripts to refer to someone with a Greek name, perhaps $B\alpha\tau\dot{\nu}\lambda_0\zeta/\beta\alpha\theta\dot{\nu}\lambda_0\zeta$ or $A\pi\dot{\nu}\alpha_0\zeta$. However, it is unclear whether he is a Muslim or Christian. King claims that he was a Muslim based on the testimony of the 10th-century astronomer <u>Sijzī</u>, who states that a certain Muḥammad ibn 'Abd Allāh (clearly a Muslim name), known as Naṣṭūlus, was the first person to design the astrolabe with a crab-shaped rete. Sijzī adds that Naṣṭūlus also invented the hours drawn on the face of the alidade and the operation with the azimuth on the back of the astrolabe. This statement was later repeated by <u>Bīrūnī</u> in his *Istī'āb*, in which he adds that Naṣṭūlus was one of the people who worked on instruments for determining eclipses. On the other hand, M. Hinds suggests Naṣṭūlus might refer to the Christian sect of the Nestorians, and Kunitzsch points out that the form Naṣṭūrus was attested in 10th-century Egypt, and was used by Christian men. Naṣṭūlus would then be just another form of Naṣṭūrus.

Selected References

Ibn al-Nadīm (1970). The Fihrist of al-Nadīm: A Tenth-Century Survey of Muslim Culture, edited and translated by Bayard Dodge. 2 Vols. New York: Columbia University Press, Vol. 2, p. 671.

King, David A. (1978). "A Note on the Astrolabist Nasṭūlus/Basṭūlus." Archives internationales d'histoire des sciences 28: 117-120. (Reprinted in King, Islamic Astronomical Instruments, IV. London: Variorum Reprints, 1987.)

——— (1990). The Earliest Islamic Astrolabes (Tenth to Eleventh Centuries). Preprint, pp. 16-22.

——— (1995). "Early Islamic Astronomical Instruments in Kuwaiti Collections." In *Kuwait - Arts and Architecture—A Collection of Essays*, edited by Arlene Fullerton and Géza Fehérvári, pp. 76-96. Kuwait. Oriental press, UAE.

——— (1999). "Bringing Astronomical Instruments Back to Earth: The Geographical Data on Medieval Astrolabes (to ca. 1100)." In *Between Demonstration and Imagination: Essays in the History of Science and Philosophy presented to John D. North*, edited by Lodi Nauta and Arjo Vanderjagt, pp. 3-53, esp. pp. 9, 10, 11, 22, 29, 35, 39. Leiden: E. J. Brill.

King, David A. and Paul Kunitzsch (1983). "Nasṭūlus the Astrolabist Once Again." Archives internationales d'histoire des sciences 33: 342-343. (Reprinted in King, Islamic Astronomical Instruments, V. London: Variorum Reprints, 1987.)

Maddison, Francis and Alain Brieux (1974). "Basţūlus or Nasţūlus? A Note on the Name of an Early Islamic Astrolabist." Archives internationales d'histoire des sciences 24: 157-160.

Sezgin, Fuat (1978). Geschichte des arabischen Schrifttums. Vol. 6, Astronomie, pp. 178-179. Leiden: E. J. Brill.