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Bar Ḥiyya: Abraham Bar Ḥiyya Savasorda

Y. Tzvi Langermann

Born **Barcelona, (Spain), 1070**

Died **1136**

Bar Ḥiyya is credited with writing the first works in Hebrew on astronomy and mathematics. He held several official positions in Barcelona, although that city was under Christian control. Bar Ḥiyya was fluent in Arabic, the leading language of science at the time. In response to requests from his Jewish coreligionists in Provence, Bar Ḥiyya produced a series of Hebrew texts in astronomy and mathematics, the first of their kind to be written in that language. He also created an entirely new Hebrew technical terminology. His *Ṣurat ha-Aretz* (Form of the earth) is a representative of a nontechnical exposition of astronomy genre that was immensely popular in the medieval period, especially among the Hebrew reading public. Bar Ḥiyya also compiled a set of tables, known as *Luḥot ha-Nasi* (Nasi being one of the titles borne by Bar Ḥiyya) or the Jerusalem Tables. These tables are for the most part based upon the tables of **Battānī**. However, some manuscripts (for example, Chicago, Newberry College, MS. Or 101) have appended to them a set of short essays and accompanying tables. These addenda have never been properly studied; one of them, which investigates the differences between the tables of **Ptolemy** and Battānī, may be of particular interest. Bar Ḥiyya's tables were later used by **Abraham ibn 'Ezra**; some manuscripts, such as the one just mentioned, bear tables of Ibn 'Ezra as well as some glosses by students of the latter.

Selected References

Goldstein, Bernard R. (1980). "Star Lists in Hebrew." *Centaurus* 28: 185-208. (Publishes lists of astrolabe stars from Bar Ḥiyya's tables.)

Langermann, Y. Tzvi (1999). "Science in the Jewish Communities of the Iberian Peninsula." In *The Jews and the Sciences in the Middle Ages*. Aldershot: Ashgate. (General assessment of Bar Ḥiyya's work and impact, with full references to publications of his texts in Spanish or Catalan by J. M. Millás-Vallicrosa.)

——— (2000). "Hebrew Astronomy: Deep Soundings from a Rich Tradition." In *Astronomy Across Cultures*, edited by Helaine Selin, pp. 555-584. Dordrecht: Kluwer Academic Publishers. (Discussion of utilization of Bar Ḥiyya's tables by Ibn 'Ezra and his students.)