

From: Thomas Hockey et al. (eds.). *The Biographical Encyclopedia of Astronomers*, Springer Reference. New York: Springer, 2007, p. 540

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science+business media

http://dx.doi.org/10.1007/978-0-387-30400-7_665

Ḥusayn, Hasan and Muḥammad

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Ḥasan Ḥusayn

Flourished **Isfahan, (Iran), second half of the 17th century**

Muḥammad Ḥusayn

Flourished **Isfahan, (Iran), second half of the 17th century**

Ḥasan Ḥusayn and Muḥammad Ḥusayn were two instrument makers in Isfahan, Iran, and were somehow associated with the various better-known makers of fine astrolabes and other instruments that grace many a museum the world over. Their two names, however, are new to the literature. They made European-style inclined sundials fitted with compass dials; two instruments made by each one of them are of particular historical interest because the horizontal bases for the sundials are engraved with world maps. These are fitted with complex mathematical grids that preserve direction and distance to Mecca at the center. The former (discovered in 2001) is more carefully engraved than the latter (discovered in 1995), and a third example, unsigned and now missing sundial and compass (known since 1989), may also be by Ḥasan Ḥusayn. The underlying mathematics and the geographical data used for some 150 localities on each map are entirely within the Islamic tradition; the former is attested in Arabic treatises from 10th and 11th centuries, and the latter is taken from a 15th-century source. Indeed, Muslim interest in projections preserving direction and distance to the center goes back to **Ḥabash al-Ḥāsib** and **Bīrūnī**, each of whom wrote on the astrolabe with a melon-shaped ecliptic on the rete. However, we are still looking for a 17th-century or earlier Arabic or Persian treatise on the construction of the map-grids, or indeed for any new information on the school of instrument makers from which these remarkable objects stem.

Selected References

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