

Glen Van Brummelen. « Taking latitude with Ptolemy: Jamshīd al-Kāshī's novel geometric model of the motions of the inferior planets ». *Archive for History of Exact Sciences*, 60, 2006, pp. 353-377.

Benno Van Dalen



Édition électronique

URL : <https://journals.openedition.org/abstractairanica/30922>

DOI : 10.4000/abstractairanica.30922

ISSN : 1961-960X

Éditeur :

CNRS (UMR 7528 Mondes iraniens et indiens), Éditions de l'IFRI

Édition imprimée

Date de publication : 15 mai 2008

ISSN : 0240-8910

Référence électronique

Benno Van Dalen, « Glen Van Brummelen. « Taking latitude with Ptolemy: Jamshīd al-Kāshī's novel geometric model of the motions of the inferior planets ». *Archive for History of Exact Sciences*, 60, 2006, pp. 353-377. », *Abstracta Iranica* [En ligne], Volume 29 | 2008, document 312, mis en ligne le 15 septembre 2008, consulté le 31 août 2023. URL : <http://journals.openedition.org/abstractairanica/30922> ; DOI : <https://doi.org/10.4000/abstractairanica.30922>

Ce document a été généré automatiquement le 31 août 2023.

Tous droits réservés

Glen Van Brummelen. « Taking latitude with Ptolemy: Jamshīd al-Kāshī's novel geometric model of the motions of the inferior planets ». *Archive for History of Exact Sciences*, 60, 2006, pp. 353-377.

Benno Van Dalen

- 1 This article describes the remarkable model for planetary latitude presented in the *Ḥāqānī Zīj* by Ġiyāṭ al-Dīn Jamshīd al-Kāshī (d. AD 1429), who is particularly well-known for his leading role in Ulugh Beg's observatory at Samarkand and his exceptional computational skills. al-Kāshī designed a three-dimensional model for the planetary latitudes that allowed their calculation with much more precision than Ptolemy's two-dimensional model with separate treatment of the three latitude components for Venus and Mercury. In al-Kāshī's model the epicycle is embedded in a sphere (in the same way in which the ecliptic, equator and inclined orbits of the planets are embedded in the heavenly sphere), and the latitude components correspond to certain movements of that sphere. The author reproduces al-Kāshī's method of calculating the latitudes on the basis of his new model and his highly elaborate example for Venus. An Appendix includes an English translation by Sergei Tourkin of al-Kāshī's Persian description of the model.

INDEX

Thèmes : 10. Histoire des Sciences et des Techniques

AUTEURS

BENNO VAN DALEN

J. W. Goethe-Universität - Frankfurt