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- 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.

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Thèmes : 10. Histoire des Sciences et des Techniques

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