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- 1 This two-volume doctoral dissertation contains an edition and translation of the first and last books of the important and popular astronomical handbook (*zīj*) by the Persian astronomer Kūshyār ibn Labbān al-Gilānī, who lived around the year AD 1000. Contrary to many of his colleagues, Kūshyār included in his *zīj* not only an extensive set of tables (in Book 2) and explanations for their use (Book 1), but also an overview of cosmological aspects and the underlying planetary models (Book 3) as well as complete proofs for all calculations and other operations used in the first three books (Book 4). The *Jāmi' Zīj* is extant in around 20 manuscript copies of the Arabic original (more than half of which include only one or two of the four books) and in a single copy of a

Persian translation of Book 1. Kūshyār carried out various innovations, such as full displacements of all planetary equations, abandoning the need to decide whether the equations should be added or subtracted in particular cases, and the use of an alternative (although not very successful) method of so-called “Ptolemaic interpolation”, an approximation method that reduces a complicated function of two variables to two simple tables of a single variable. Bagheri's edition and translation have been carefully prepared and his commentary provides useful information on almost every single topic discussed in Books 1 and 4 of the *Jāmi' Zīj*. A publication of Books 2 and 3 is currently underway, thus making Kūshyār's work one of the very few Islamic *zīj*-es that will have been published integrally.

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Thèmes : 10. Histoire des Sciences et des Techniques

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