Mohammad K. Azarian* (azarian@evansville.edu), Department of Mathematics, University of Evansville, 1800 Lincoln Avenue, Evansville, IN 47722. A Medieval Calculation of Sine of One Degree by Ghiyāth al-Dīn Jamshīd Mas'ūd al-Kāsh̄̄ (d. 1429). Preliminary report.
Al-Kāshī (also known as Jamshīd Kāshān̄̄) discussed the calculation of sine of one degree in his non-extant treatise Risāla al-watar wa'l jaib ("The Treatise on the Chord and Sine"). Our discussion in this paper will be based on Sharh-i Zaīj-i Ulugh Beg ("Commentaries on the Zaīj-i Ulugh Beg"), by Nizām al-Dīn 'Abd al-'Alī ibn Muhammad ibn Husain al-Bīrjandī (d. 1528). In Chapter II of Book II of the above Zaīj, Bīrjandī commented on Kāshānī's aforementioned treatise, and he presented the calculation of sine of one degree based on Kāshān̄̄'s iterative method from Risāla al-watar wa'l jaib. (Received September 10, 2014)

