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Scientific Exchange Between the Ilkhanids and the Byzantine Empire

The Ilkhanids have a well-deserved reputation for innovation in the natural sciences. The achievements of the scholars associated with the Marāgha Observatory shaped the history of science in Islamic societies in general as well as the scientific culture of their rivals, the Mamlūks. More important, for this paper, the astronomy of the Ilkhanids reached the Byzantine Empire in a couple of ways.

First, the scholar Gregory Chioniades traveled to Marāgha in the late 13th century and received information on both theoretical and mathematical astronomy. The information about mathematical astronomy was the basis for a few zījes (handbooks of astronomy with tables) that Chioniades produced in Greek. Chioniades also learned about some of the developments in theoretical astronomy due to scholars associated with the Marāgha observatory. Scholars have understood this exchange of information about theoretical astronomy to be most significant for investigations about the background of European Renaissance astronomy.

Second, another Byzantine scholar, George Chrysococcès, traveled to Trebizond in 1347 to learn about Persian astronomy, i.e. the astronomy of Marāgha. He produced a text, the Persian Syntaxis (which somehow drew on Chioniades' work), that was translated into Hebrew. A Jewish scholar from Constantinople, Mordechai Khumṭiano (d. 1485-90) authored a Hebrew text entitled Peirush luḥot Paras (Commentary on the Persian Tables), a defense of astronomical tables based on those produced under the Ilkhanids at Marāgha and Tabriz. This presentation's focus will be on how Khumṭiano defended the methods of the Persians (i.e. from Marāgha) against those of Ptolemy, who was favored by Byzantine scholars such as Isaac Argyros. There is no doubt that material from Ilkhanid zījes played a role in the scientific culture of Romaniot Jews and Byzantine Christian scholars. I will also examine an Almagest commentary due to Khumṭiano and his studied Elijah Mizraḥi for any trace of theoretical astronomy from Marāgha.