

“In astronomy, the [Islamic] reactions ... ranged from simple corrections of what was thought to be a mistake in the text ... of the *Almagest*, to correcting the basic parameters by fresh observations, as in the case of redetermining the better values of precession and the inclination of the ecliptic among others, to critiquing the methods of observation, as was done in the case of the *fuṣūl* method, and finally to casting doubt on the reliability of the very foundations of the Greek astronomical tradition itself when it seemed to violate the principles upon which it was based in the first place.

All these developments ... generated a skeptic attitude toward the incoming tradition. In itself this attitude emboldened astronomers to raise deeper and deeper questions as they continued to examine this Greek tradition in the light of their own research. In this environment, it becomes easy to understand why good competent astronomers could not continue to practice astronomy by simply taking the Greek astronomical tradition at its face value....

It was this environment that motivated the research of the new Islamic astronomy. Its main mission, as was enunciated later by Mu’ayyad al-Dīn al-’Urdī (d. 1266) of Damascus, one of the most distinguished astronomers of that tradition, was to create an astronomy that did not suffer from the cosmological shortcomings of Ptolemaic astronomy, that could account for the observations just as well as Ptolemaic astronomy could do if not better, and that did not limit itself to criticizing Ptolemy only, despite all the benefits that one derived from the detailed critique of Ptolemy’s mistakes. This urgent need for a higher form of scientific astronomy was almost felt by all serious astronomers *whose work we have come to know only recently*, and who formed a continuous tradition inaugurated toward the beginnings of the ninth century and continued well into the sixteenth century as far as we can know now.

George Saliba, *Islamic Science and the Making of the European Renaissance*, p. 131ff, emphasis added