



Ca' Foscari  
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Department of  
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Breuis ac perutilis co[m]pl[us]io Alfragani... totu[m] id continens quod ad rudimenta astronomica est opportunum. Ferrara, Andreas Belfortis. 1493 Library of Congress Online Catalog

From the very beginning of Islam, cosmological questions gained significance for Muslim community by encountering Qur'anic verses on the structure of the universe and the glory of God mirrored in the creation of the seven "heavens". Despite highlighting the harmony, beauty and the integrity of the world, no systematic cosmology was set out in the Qur'an. This fact paved the way for foreign sciences to support Muslims in responding to their open questions in the first centuries. Besides variety of the players, astronomers undertook a key role since they were well patronized by early Abbasid Caliphates and enjoyed the translation movement carried out at the time. As a result of close collaboration between philosophers and astronomers, a harmony from Aristotelian physics and Ptolemaic representation of the universe was presumed by early Muslim scholars. This interaction did not last long as it led to theories in sharp conflict with religious accounts. Opposition to profane doctrines, more specially to those in philosophy, was followed zealously by legal scholars to the extent that finally ended up in a political shift of Abbasid caliph al-Mutawakkil (r. 847-861) who backed religious scholars in contrast to his predecessors. By taking distance from philosophy, astronomers made attempts to maintain their courtly positions in the middle of this dispute. Among other repercussions, it entailed finding new ways of approaching cosmological questions in astronomical works. My case study is the *Elements of Astronomy* by the ninth century Muslim astronomer, al-Farghānī (*Alfraganus*), that I argue, is written under the political crisis of al-Mutawakkil's time. At first glance, this book seems to give a comprehensive account of Ptolemy's astronomy in an entirely descriptive and non-mathematical format. By taking into account the socio-political context, it comes out that al-Farghānī was also aimed at delivering an independent representation of astronomy, devoid of any philosophical or religious accounts. This neutrality together with clarity and conciseness, might have caused the unique popularity of the *Elements of Astronomy*, not only in Arabic, but also in its Latin translations. In this talk, the role al-Farghānī's book played in spreading a new perspective to the contours of the cosmos will be explored. On top of that, I am interested in depicting a more obvious picture of scholarly life at the time of compiling the *Elements of Astronomy* to uncover why and how Ptolemaic cosmology was recast by al-Farghānī.

Guests hosted by  
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Workshop ERC EarlyModernCosmology  
Presents

## **Cosmology in Early Medieval Islam Through the lens of al-Farghānī's *Elements of Astronomy***

Discussant:

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History of Science / Humboldt-Universität zu Berlin

**Jonathan Regier** Ghent University

**Alberto Bardi** Dumbarton Oaks, Harvard University

Introduction by prof. **Pietro Omodeo**

**Thursday 2019 May 23** h. 4.00-6.00 p.m.  
**Malcanton Marcorà Palace, Aula Valent**  
Dorsoduro 3484/D, Venice