

Eclipsed no more

Osmanli Astronomi Literaturu Tarihi (History of Astronomy Literature during the Ottoman Period)

edited by Ekmeleddin Ihsanoglu
International Research Centre for Islamic
History, Culture and Arts: 1997. 1,146pp.
(two volumes). \$100

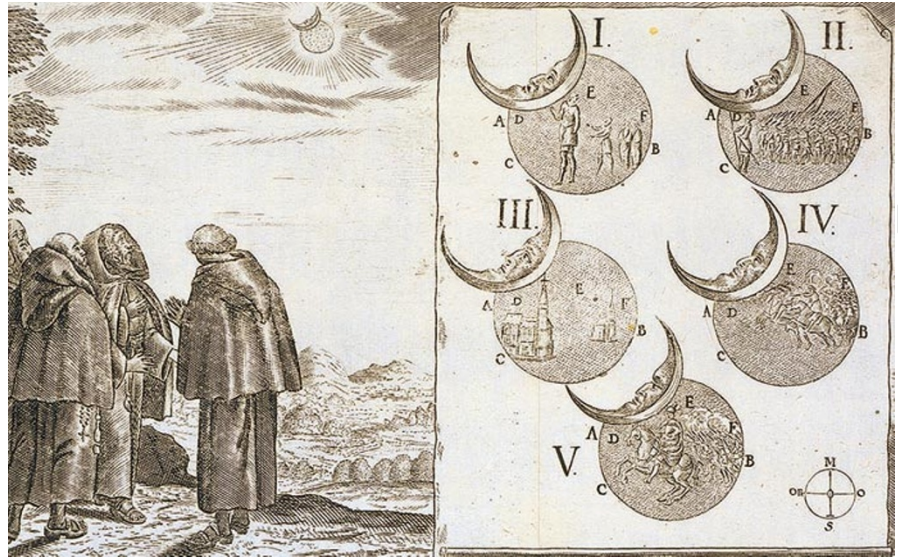
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Ottoman science has long been considered a poor descendant of Islamic science. It has been largely neglected, and even suppressed, partly because of its association with the 'decline' of Muslim civilization and partly because of European perceptions of the Ottoman state as an enemy. The project on 'scientific literature in the Ottoman period', sponsored by the Organisation of Islamic Conference and undertaken by the International Research Centre for Islamic History, Culture and Arts (IRCICA), is designed to highlight the achievements of Ottoman science and restore it to its rightful place.

It is a massive enterprise, inspired to some extent by Joseph Needham's work on Chinese science, and running into several volumes. Its nature and scope, as well as the problems involved in such an undertaking, are well illustrated by the first two volumes, on Ottoman astronomy.



Sun signs: Pisces seen through Ottoman eyes.



Star wars: the Ottomans would use astronomical events, such as an eclipse, to plan military campaigns.

The problems begin with definition. What constitutes Ottoman science? The Ottoman dynasty held power for 600 years, an extraordinary achievement in a region where states and empires emerged and then disappeared in a few generations. During that period the extent of Ottoman wealth and power changed enormously. At the beginning of the thirteenth century, the Ottomans held no more than a small area of northwest Anatolia. But by the end of the fifteenth century they were an important regional power, ruling most of modern Turkey and a large part of the Balkan peninsula. During the sixteenth century they became masters of a vast, multinational empire that stretched from Slovakia to Nubia and from Algiers to the Caucasus.

So where does Ottoman science begin and end? The IRCICA researchers solved this problem by focusing on scientists who lived, or spent part of their lives, in Ottoman lands between 1299 and 1923.

The location of the literature presents another problem. Ottoman scientific treatises are to be found not just in all the many countries that were once part of the Ottoman Empire but also in Western Europe and the United States. In this regard, the researchers left no library, no archive, no museum, unexplored.

The result is a monumental achievement. It not only provides us with a true picture of the extent of Ottoman scientific activity, but also turns the standard view on its head. The conventional view is that the empire reached its peak around 1600 and then spent the next 300 years generally declining, when science disappeared and technology evaporated. *Osmanli Astronomi* shows that, far from disappearing, science was very much alive in the Ottoman Empire right up to the eighteenth century, when it

shifted towards learning and assimilating European sciences through translations and adaptations.

The survey of the literature provides information on more than 600 original scientific minds, including those whose exact period is unknown, with details of where their work is located. Each entry gives a brief biography of the scientist, an outline of his scholarly career, a list of his works on astronomy and of any secondary literature relating to the author, and an indication of the language in which he wrote (normally Arabic, Turkish or Persian). A brief history and full bibliographical information for each work is also given.

Much of this literature consists of theoretical and practical astronomy. Included are works exploring orbits of the planets, the relationship between astronomy and Islam, zījes-tables (mathematical tables for calculating times of sunrise and sunset, planetary positions, eclipses and so on), calendars and astronomical instruments. The introduction provides a good insight into Ottoman astronomical institutions such as the Istanbul Observatory and the timekeeping institution Kandilli Rasathanesi. An extensive bibliography provides a guide to recent literature on these subjects.

Osmanli Astronomi is a truly prodigious work that will be celebrated by historians of Islamic science everywhere. It is not without its faults — there are poor translations and numerous typographical errors — but these are largely insignificant given the vast scope of the undertaking. The next volumes in the project will focus on mathematics and geography and will undoubtedly continue to rewrite the history of Ottoman science. □

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