

## Certissima signa

A Venice Conference on Greek and Latin Astronomical Texts

edited by Filippomaria Pontani

## Foreword

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The observation of the stars has never just been a matter of 'science', but has constantly intersected, supported or been amplified by material from the domains of philosophy, literature, medicine, religion, history and, indeed, sometimes of magic *tout court*. This is one reason why the study of ancient astronomy is such an immensely complex field. In addition, however, research into the history of astronomical writings often requires an acquaintance with if not a proficiency in skills such as paleography, mathematics, art history, ancient and medieval philosophy, codicology, geography, classical philology and others. Whereas there have been a few scholars from previous generations who attempted to tackle this immense body of material individually, even the earliest scholarship on the topic shows that it has always attracted collaborative ventures amongst specialists of differing disciplines.

It is in this tradition that the *Certissima signa* project was established in 2008 by Anna Santoni at the Scuola Normale Superiore in Pisa (see <http://certissimasigna.sns.it>). The project aims to create an international community of scholars from different backgrounds keen on the study of ancient astronomical texts and manuscripts, and more broadly on the history of science. The title of this volume records a shared commitment to this endeavour by all its authors.

The present collection of essays is based on papers delivered at a conference held at the Biblioteca Nazionale Marciana, Venice on June 16-17, 2016.<sup>1</sup> At the Venice meeting, the main focus of discussion was on topics exploring the relationship between texts and images, the *Nachleben* of the Greco-Latin tradition in later Western culture, the fate of astronomical theories and representations throughout the centuries and the relationship between astronomy and geography.

<sup>1</sup> We are most grateful to the Dipartimento di Studi Umanistici of the Università Ca' Foscari for making the conference possible. We also wish to thank the series director, Lucio Milano, for accepting and promoting this volume, as well as the anonymous referees for their suggestions during the review process. Special thanks go to Kristen Lippincott for her invaluable support and to Anna Santoni, μήτηρ τοῦ λόγου.

The volume opens with two papers devoted to the Biblioteca Marciana. Susy Marcon provides an illuminating survey of the history of the Marciana collections and introduction to the changing physical arrangement of the books within the Library across the centuries. Elisabetta Sciarra examines the history of some of the early printed editions in the Marciana and identifies some owners and annotators of the 'cinquecentine' in the collection. This choice to begin the volume with two essays devoted to the Library is not only a token of homage to the hosting institution, but it also mirrors a belief, shared by all contributors, in the absolute need for a close relationship between academia and libraries, and for a constant dialogue amongst researchers, librarians, archivists, keepers and curators, particularly where the 'special collections' of manuscripts, incunables and early printed editions are so rich and unique.

The discussion of ancient Greek astronomical theories is the focus of two papers. Jordi Pàmias explores the associations between myth and astronomy prior to Eratosthenes' *Catasterisms*, tracing certain elements back to the Pythagorean tradition of two centuries before. Klaus Geus and Irina Tupikova tackle the so-called 'zenith star method' for the measurement of the earth described by Ptolemy, discussing its possible dating and geographical location. Moving forward several centuries, Anne Weddigen examines some intriguing passages discussing planets and spheres in Manuel Bryennios' *Harmonica* (early 14th century), as well as the diagram with lunar phases that appears at the end of some manuscripts of Bryennios' treatise.

Shifting the focus to the transmission of Latin astronomical texts, there are three papers dealing with medieval manuscripts. In a painstaking study of one of the Biblioteca Marciana's manuscripts (ms. Marc. lat. VIII, 22), Fabio Guidetti explains why the iconography of the Carolingian star-catalogue in this codex, known as the *De signis coeli*, is so peculiar. He discusses its relationship with the images found in the related *De signis coeli* manuscript in Padua (Biblioteca Antoniana, ms. Anton. 27) and with the iconography of both the *Aratus Latinus* and Germanicus' *Aratea*. Anna Santoni addresses the relationship between the *De signis coeli* and the coeval treatise most often referred to as the *De ordine ac positione stellarum*. Her paper investigates the similarities and differences between the texts, as well as their relationship with the traditions preserved in Germanicus and the *Aratus Latinus*, especially with regard to the role of pagan mythology in the description of the skies. Finally, Francesco Bertola offers an overview of ten illuminations (one of which is from the above-mentioned manuscript, Marc. lat. VIII, 22) depicting the use of astronomical sighting tubes dating from the 10th through the 15th century, and presents his hypotheses concerning the use of these objects based on the available pictorial evidence.

The 15th century is a turning-point in the fate of Greco-Latin astronomy, which is particularly evident in Italian manuscripts and early printed

editions of ancient texts from the period. Three papers explore different aspects of this phenomenon. Arnaud Zucker analyses the degree of correspondence in the positioning of the stars between text and images (and the sky) across twenty illuminated manuscripts of Hyginus' *De astronomia* dating to the late-15th and early-16th centuries. He provides a detailed description of the constellations as they appear in each of these various witnesses. Kristen Lippincott explores numerous issues regarding the illustrations of the *editio princeps* of Hyginus' *De astronomia* (Venice 1482) and the problems surrounding their apparent indebtedness to a set of drawings that first appear in a 12th-century Germanicus manuscript (Madrid, Biblioteca nacional, ms. 19) and resurface in the illustrations to the *Liber introductorius* of Michael Scot. In their contribution, Filippomaria Pontani and Elisabetta Lugato provide the first detailed description of one of the masterpieces of the earlier phase of the Aldine press: the 1499 *Scriptores astronomici veteres* – a remarkable incunable both for its selection of texts (some of which appear in a surprising philological *facies*) and for its illustrations (partly connected to those of the 1482 Hyginus).

The volume is rounded off by two essays that are more loosely connected with the history of astronomy *per se*, but address two texts of the utmost interest. Petr Hadrava and Alena Hadravova describe the textual tradition of Christannus de Prachaticz's *Treatises on the Astrolabe* (ca. 1407), and discuss the advantages of using a computer-based method in the preparation of their critical edition of the text. And, finally, Davide Baldi analyses the presence of quotations from Classical authors (amongst them, Ptolemy) in the 1507 *Cosmographiae introductio*, the earliest geographical treatise to baptise the New World as 'America'.

At the Marciana conference, all the papers were delivered in front of what might be considered the most venerable extant map of the world, Fra Mauro's planisphere (ca. 1450); and on those very days, the *incertissima signa* of Venetian meteorology decided to baptise the event by conjuring up a highly unusual midsummer *acqua alta*. Even if these *thaumata* cannot be mirrored on the written page, we hope that readers will get a flavour of the enthusiasm that brought together fourteen scholars from seven different countries in a spirit of friendship and cooperation – perhaps the finest tribute to a city whose greatest printer, Aldus Manutius, hosted in his house and in his books, a number of friends and scholars from various countries, in the conviction that, as William Grocyn stated in the 1499 *Scriptores astronomici*, “debent esse τὰ τῶν φίλων κοινά”.

