Time’s Books

Compiled and Edited by Jo Alyson Parker


The last two decades have seen a growing interest in the astronomy and calendars of Antiquity and Medieval Europe.¹ This interest has now resulted in a new series—Time, Astronomy, and Calendars: Texts and Studies—by the Dutch publisher Brill. The series is edited by Charles Burnett and Sacha Stern, and its two first volumes were published in 2012. The first volume was C. Philipp E. Nothaft’s *Dating the Passion: The Life of Jesus and the Emergence of Scientific Chronology* (200-1600), whose review follows, and the second volume, under review here, is *A Survey of European Astronomical Tables in the Late Middle Ages*, by José Chabás from University Pompeu Fabra, Barcelona, and Bernard R. Goldstein from the University of Pittsburgh. The book contains an introduction, nineteen chapters, a list of manuscripts, a bibliography and an index with place names, personal names, sources and key words combined. The main text in the chapters is supplemented by 26 figures and 157 tables.

The purpose of Chabás’s and Goldstein’s survey is to present and make available for future research medieval tables containing astronomical data. These tables were recorded with the aim of aiding the understanding and application of the mathematical models on which the astronomy of the day was built: “In the absence of algebraic notation and mathematical graphing techniques, a table was often the best way to transmit precise information to the reader” (xvii). Chabás and Goldstein classify the medieval astronomical

tables into 19 different types after their content (10-11): 1) chronology; 2) trigonometry and spherical astronomy; 3) equation of time; 4) precession and apogees; 5) mean motions and radices; 6) equations; 7) true positions; 8) velocity; 9) latitude; 10) stations and retrogradations; 11) visibility of the moon and the planets; 12) parallax; 13) syzygies; 14) planetary conjunctions; 15) eclipses; 16) star lists; 17) geographical lists; 18) astrology; and 19) miscellaneous tables. These 19 types of tables are also the organizing principle for the chapter division into 19 chapters. It is not clear whether the classification of the tables into the 19 types solely reflects Chabás’s and Goldstein’s modern organizing principles or whether an identical or partly identical systematization is also found in the medieval texts.

The tables presented by Chabás and Goldstein are collected from manuscripts produced in the Latin West (although the survey is not limited to texts written in Latin) in the period from the tenth century onwards to the sixteenth century, that is, approximately the high and late medieval periods. The title of the book is therefore not entirely precise since it gives the impression that the survey only includes tables dated to the late medieval period (c. AD 1300-1500).

Regarding the data compiled in the tables, it derives ultimately, directly or indirectly, from data compiled in the works of the Alexandrian astronomer Claudius Ptolemy (Klaudios Ptolemaios), and here primarily his work *Almagest* from c. AD 150—data that it also expands on or corrects. Thus, the tables are not only a testimony of the level of scientific precision and complexity of the astronomy of the medieval period but are also a testimony of the transmission, reception, and further development of the mathematics in Ptolemy’s mathematical astronomy. This element of knowledge dissemination within medieval Europe is not explicitly addressed by Chabás and Goldstein, and as the book presents itself, it is more a collection of medieval texts with an extended commentary. Reading the survey from a historian’s perspective, we can only hope that future scholars will take up Chabás’s and Goldstein’s lead and provide further studies into these tables, for example, in relation to their use as sources for the regional and local dissemination of scientific knowledge in the Latin West during the medieval period. The book will readily prove usable as a handbook for readers interested in the technical details of the mathematical astronomy in medieval Europe, but the book therefore also presupposes that the reader have a minimum of mathematical knowledge.

Chabás and Goldstein are to be congratulated for making a widely scattered source material easily available and for providing these sources—the medieval astronomical tables—with clear explanations of their underlying mathematical