comes away with a keen sense of just how diverse and textured these responses were. In the next chapter Howell explores why the Catholic responses were more uniform.

Howell’s emphasis on the diverse theological hermeneutical positions makes this an extremely useful resource for anyone studying the rhetorical strategies used to promote Copernicanism, or for examining its reception. Overall, Howell’s *God’s two books* is a welcome contribution to studies in the history of science.

University of Manitoba, Winnipeg

RHONDA MARTENS

**HOW TO MAKE SUNDIALS AND ASTROLABES**


Clearly a careful labour of love self-published in a small edition, this large and elegantly produced volume translates the Nuremberg instrument maker’s unpublished German instructions for constructing sundials and astrolabes. Georg Hartmann’s basic manuscript is found in Vienna in the Österreichische Nationalbibliothek, Vin 12768, but the present volume includes additional material and illustrations from manuscripts in Weimar and Munich. Even with the combined resources of the three manuscripts, some of the diagrams had to be reconstructed from the verbal descriptions, and these John Lamprey has produced with great clarity.

In the decade that Hartmann worked on his manuscript, Johann Stoeffler’s beautifully illustrated volume on the making and use of the astrolabe was already available, having been published in 1513. For this reason Hartmann avoided duplication, concentrating primarily on a variety of sundials, and in the short section on the astrolabe specifically offered alternative methods.

Hartmann lived until 1564, well after the latest dates inscribed in the manuscript. An appendix to this volume, listing forty of his instruments, shows that he was still working in brass and ivory in his seventies. However, at the end of Book 6 Hartmann signs off on 19 July 1527 as “Vicar at Saint Sebald in Nuremberg”. Perhaps both his church duties and his instrument making prevented him from completing and publishing his technical manual. Now, nearly half a millennium later, these instructions have been published, thanks to Lamprey’s skill and enthusiasm.

Harvard-Smithsonian Center for Astrophysics

OWEN GINGERICH