

Generally speaking, the English translation is commendable for being the work of a non-native English speaker, despite a few lapses into Chinglish, the occasional howler, and haphazard proofreading. There are a few categorical statements that bring the reader up short, such as “Western medicine has not yet become an exact science, so it is not a science yet ...”, therefore it is on a par with Chinese traditional medicine (page 275). Despite minor flaws the highlighted chapters are highly informative and advance some original perspectives on the role of ‘the study of the heavens’ in pre-modern China, especially concerning potential Indian influence on cosmology by the early imperial period (ca. third century BCE). Jiang’s *Chinese Astrology and Astronomy: An Outside History* is an essential resource for English-speaking readers investigating the study of the heavens in imperial China.

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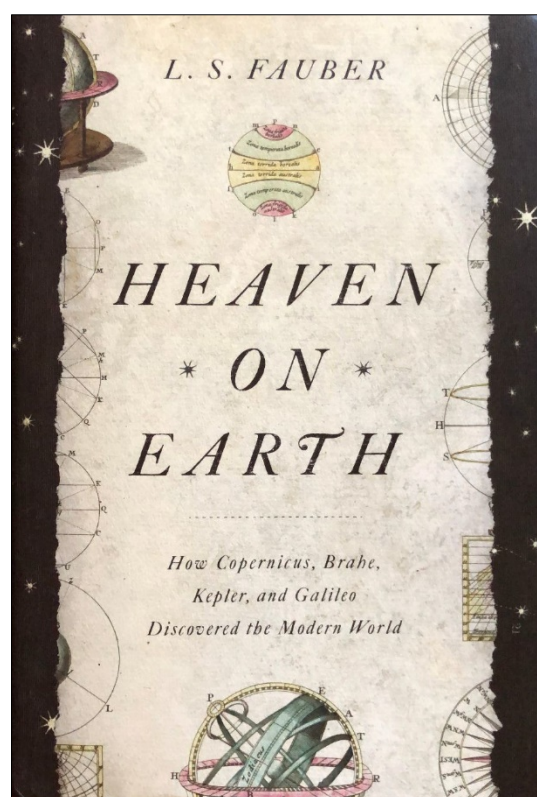
**Heaven On Earth: How Copernicus, Brahe, Kepler and Galileo Discovered the Modern World**, by L.S. Fauber. (New York, Pegasus Books, 2019). Pp. xii + 332. ISBN 978-1-64313-204-4 (hardback), 155 × 235 mm, US \$29.95.

The four great astronomers in the Early Modern era—Copernicus, Brahe, Kepler and Galileo—are the subject of this unusual history

of astronomy book. The best way to describe it is simply by quoting a passage on the author’s description of Kepler’s book *The Harmony of the World*:

Planets were plucked out of the quintessence, which knew no time, and placed back, recalibrated to the pulse of the human heart. The welkin grew thick with beats off the drum of reason, the parliament of fixed stars announced their fires in anticipation, the cosmos let out the ethereal drone of orchestral tuning. The universe began to play, conducted by Kepler’s theory of harmony. (page 94).

Well, what can one say to that? Either the reader will be captivated by the prose, or reminded of the worst excesses of Victorian



literature. When I first read the author’s take on the ancient reaction to the study of retrograde planetary motion, I thought he or she was a bit daft: “The ancient Egyptians must have thought the planets drunk.” (page 6). But as I read further into the text I realised that while this is certainly not a scholarly history of astronomy book (which has a limited audience), the author has carefully digested most of the relevant material about those four great astronomers and presented it in a novel fashion. By novel I do mean there are novelistic approaches to some of the material, but it gets to heart of the matter that any reader can relate to. For example:

As a child, it had brought Kepler physical pain that he had been denied the gift of

prophecy. Personal, immediate, mystical experience of God was the form of it he most desired, but he was too immoral, he thought, had committed too many crimes to receive such a gift. He never acted like a mystic, but he hoped he might access mystical insights through mathematics. (page 86)

Fauber describes Galileo's book *Dialogue on the Two Chief World Systems* as "the literary equivalent of a single man trying to take apart a castle with his bare hands," the castle being nearly two millennia of commentary on Aristotle's natural philosophy. (page 215).

The author (who is only identified as having attended Bard College and is now working on a PhD in Computer Science at the University of California, Riverside), is quite aware of his/her approach to the subject matter. It is evident if one reads the endnotes in conjunction with the text. The author has a powerful line about Giordano Bruno's reaction to a portrait of Jesus thrust before him, after he had been tied to a stake for execution: "Bruno would not look-out of disdain for Christ? Unlikely-out of disdain for the Church." (page 88). Turn to the note for this and you will read "I step into histrionics here, naturally." (page 281). This self-reflection actually saves the book from the travesty it could have been—what we have instead is a gem that is all the better for being unpolished.

These notes comprise 60 pages, giving exact locations for the material used to create the narrative, and much more. For example, a note on pages 312–314 contains the first English translation of a poem about Galileo by Maffeo Barberini (better known as Pope Urban VIII).

The book contains many delights, including quite a bit on Tycho's sister Sophie (listed as Sophia in the index), such as a quote from Tycho on his attempt to dissuade her from astrological speculations. Written with brio, the breezy, off-the-cuff style of this book serves as a counterpoint to all other books I have read on the four 'greats'. Despite the latitude taken in many instances, it is not, however, counterfactual. Even professional historians of astronomy may reconsider certain people or events in a different light after reading this, and it can equally well be recommended as an entry-level text to the complexities that surround early modern astronomy.

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***Internationality in the Astronomical Research of the 18<sup>th</sup> to 20<sup>th</sup> Centuries* edited by G. Wolfschmidt (Hamburg, Tredition, Nuncius Hamburgensis, Volume 49, 2020), Pp. 508, ISBN 978-3-7482-4975-7 (paperback), €39.90, 220mm × 170mm, 978-3-7482-4976-4 (hardback), €46.60, 226mm × 175mm, 978-3-7482-4977-1 (e-Book), €9.90**

This is the Proceedings of the meeting of the Working Group for the History of Astronomy of the German Astronomical Society held on 17–19 August, 2018 at Kuffner Observatory in Vienna.

There is no research in astronomy or any other field without contact with other scientists, and science is usually not bound to national borders. The guiding ideas of the topic addressed in this meeting were the beginnings of international cooperation mediated by the newly founded academies and societies; the establishment of the first journals as academy publications; and international campaigns.

The proceedings start with an introduction to the historical development of the internationality in the astronomical research by Gudrun Wolfschmidt covering the foundation of national and international astronomical academies with focus on the German societies and the IAU, the international campaigns of observing transits, creating star catalogs and monitoring variable stars, and ending in a short and rather incomplete mention of some current international projects.

Thirteen of the seventeen contributions to the meeting more or less addressing the general topic in a time range from the seventeenth to the twenty-first century are presented as chapters in the book; four contributions are included with abstracts only. The time range given in the title could be cause for misunderstanding: the cover pages state eighteenth to twentieth century, the title page eighteenth to twenty-first century, but actually seventeenth to twenty-first century is the correct range of the contributions. The papers concentrate on Austrian and German astronomical research.

In the first paper a detailed analysis of Kepler's eclipse observations from 1616 to 1620 in Linz is presented, in order to identify the house where Kepler lived when authoring his third law of planetary motion. The paper also gives a list and a short explanation of Kepler's publications that he finished while in Linz. The second paper describes the life of Giovanni Jacopo de Marinoni, mathematician, astronomer and geodesist in Vienna at the beginning of the eighteenth century. His pri-