

Review of Nicholas Kollerstrom, *Newton's Forgotten Lunar Theory*

by Kurt Smith.

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Newton's Forgotten Lunar Theory is an exceptionally clear, well-written study of Isaac Newton's 1702 theory of the moon's motion. As Nicholas Kollerstrom shows, the theory influenced a large number of the most prominent astronomers of the eighteenth century, including Edmond Halley. Kollerstrom contends that, with Halley's corrections, the theory was good enough to have won the coveted Longitude Prize, instituted in 1714.

This book is best suited for historians of science, though scientists and philosophers of science would certainly enjoy it. It begins by presenting the 1702 English edition of Newton's lunar theory, which is supplemented with detailed commentary. This, I believe, is an excellent feature of the book. Kollerstrom pulls no punches, allowing the reader to get a sense of the challenge he is willing to take on. As he rightly notes, the diagrammatic presentation of the theory, to mention only one thing, "may seem as remote from modern comprehension as an arcane alchemic sigil to a modern chemist" (p. 29). He spends considerable time working through diagrams, tables of data, and the construction of equations (both historic and recent) and offers a detailed assessment of each. In consequence, the reading is slow going at times — but worth it.

There are places where Kollerstrom could have further explored central concepts. For instance, early in the book he introduces the concept of "mean time," "universal time," "apparent time," "local time," "equation of Time," and so on. And although he tells the reader, for example, that "mean time" equals "apparent time" minus "equation of Time" (p. 25), a closer examination of this constellation of concepts would have been helpful because they play such a central role in the ultimate story of *any* such theory. For, in addition to understanding the technological advances that moved the theory along, the reader is also interested to understanding the conceptual landscape being developed that made the theory possible. but this is a minor concern. Overall, Kollerstrom does an excellent job in telling the story of Newton's forgotten lunar theory."