

"Densmore's goal is to help students comprehend Newton's demonstrations in their own terms. The aim is not to tell students what Newton demonstrated, but to enable them to understand the force of the demonstrations by repeating them. Although attention remains focused on mathematical demonstrations, the attitude is not ahistorical in any way. Rather, we stand as it were at the historical moment when Newton first elaborated the demonstrations and scientific thought attained a new level of understanding. ...

"This is a wonderful book. Taking Newton in his own terms, it insists on the full rigor of the demonstrations and does not hesitate to point out where full rigor appears to be lacking. ... As she says in the preliminaries, 'we understand Newton only in understanding why he proved things as he did.' Students are not the only ones who can profit from the exercise."

Richard S. Westfall, author of *Never at Rest*. Review in *Isis*.

"The stress is on encouraging students to reconstruct Newton's proofs in their original geometric form, rather than translating them into the more familiar symbolic calculus. This is particularly interesting because Newton's geometric style informs our geometric and physical intuition in a way which is complementary to the understanding achieved via analytical tools. ... It is a pleasure to follow Densmore's reconstruction of this momentous discovery in science, since the argument supporting it requires on the one hand very elementary mathematical tools, and on the other a profound understanding of the relationships between mathematical models and astronomical data.

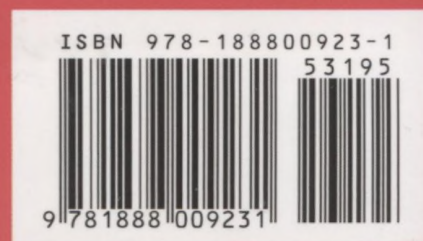
"Densmore's book is interesting not only for teaching purposes. Historians of science have a great deal to learn from it. The *Principia* is always difficult to read since Newton is often quite brief and leaves the reader to reconstruct the steps of the complete argument. This guidebook provides such an analysis. Densmore's book is a first-class work: it is a detailed, useful and enjoyable commentary on those mathematical demonstrations in which the theory of universal gravitation was first established."

Niccolò Guicciardini, review in *Math Reviews*

"Densmore's commentary has a directness, an intelligence and infectious energy that takes readers through all the difficulties to a very satisfying accomplishment...I cannot emphasize too strongly what an achievement it is."

Curtis Wilson, Editor,
General History of Astronomy

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