

Much has been written on the *Principia* and the ramifications of Newton's dynamics, but until now the details of Newton's solution to the Kepler problem have been available only to scholars patient and skilled enough to ferret them out. *The Key to Newton's Dynamics* explains in clear, accessible terms how the analytical basis for the concept of a universal gravitational force grew out of Newton's answer to the question of what kind of force would keep the planets on their elliptical paths around the sun. Bruce Brackenridge tracks Newton's work on the Kepler problem—showing the physicist's debt to the studies of Descartes and Galileo—from its early stages at Cambridge before 1669, through the revival of his interest ten years later, to its fruition in 1687 in the first edition of the *Principia* and its revision and extension in the later editions. Mary Ann Rossi has provided for this volume the first full English translation of the three crucial sections of Book One of the first edition, affording a unique opportunity for comparison to the readily available translations of the third edition.

J. BRUCE BRACKENRIDGE is Alice G. Chapman Professor of Physics at Lawrence University.

"*The Key to Newton's Dynamics* is lucid, important, and fills a large gap in the existing literature. Bruce Brackenridge is undoubtedly that gifted, patient teacher that one expects from a quality liberal arts college." —Alan E. Shapiro, University of Minnesota

"A master of technical exposition, Bruce Brackenridge leads the reader step-by-step to an understanding of the way in which Newton's principles of dynamics provide the key to the laws of planetary motion." —I. Bernard Cohen, Harvard University

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