



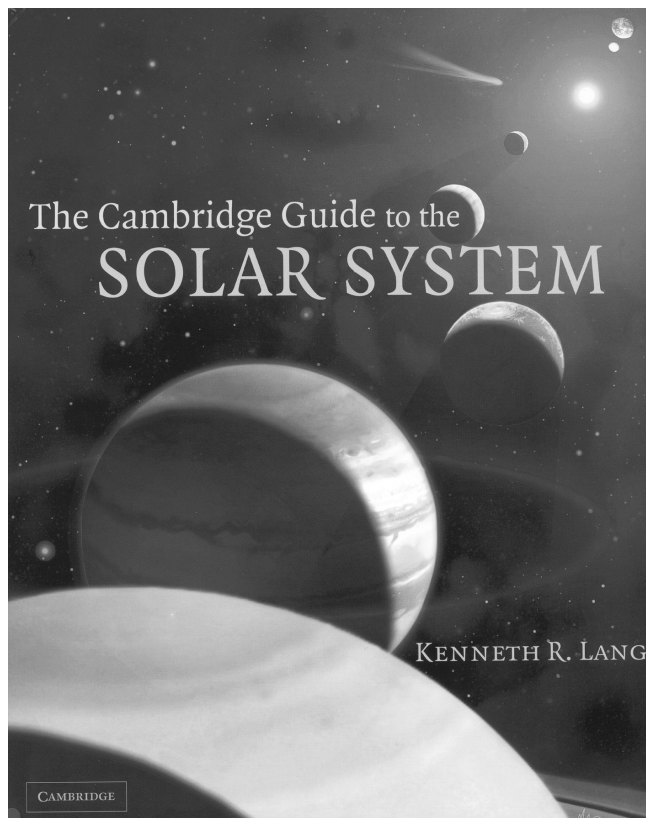
Book Review

The Cambridge guide to the solar system, by Kenneth R. Lang. Cambridge University Press, 2003, 468 pp., \$60.00, hardcover, (ISBN 0-52181-306-9)

Study of the Earth and its heavenly neighbors by human and robotic exploration, ground-based and orbiting telescopes and instrumentation, continually increases our pool of knowledge from which we mold our perceptions of the solar system and the means by which it has arrived in its present state. The past few decades marked a significant increase in humanity's ability to gather, process, and disseminate the information from these investigations. *The Cambridge guide to the solar system*, by Kenneth R. Lang, is therefore a welcome and needed update to *Wanderers in space*, written by Lang and Charles A. Whitney in 1994. This new *Guide* attractively presents selected images and data, as well as subsequent scientific interpretations, from many of the latest space missions including Clementine and Lunar Prospector, Mars Pathfinder and Mars Global Surveyor, Magellan, Galileo, NEAR Shoemaker, and more. Extensively illustrated, Lang makes use of images from history, science, nature, and the arts, that complement the expertly written text resulting in the presentation of planetary science from a historical, technical, and societal perspective. Lang does a wonderful job of catching us up with planetary science's accomplishments and results from the past decade.

The Cambridge guide to the solar system has compiled an impressive inventory of subject matter (any one of the subjects covered within its covers could constitute a lifetime of study and research) into fourteen chapters grouped into four major subject categories: 1) introduction and fundamental concepts; 2) the terrestrial worlds; 3) the gas giants; and 4) small bodies. The book is well organized and inviting to the reader. More than a compendium of facts, *The Cambridge guide to the solar system* is just what its name implies, a guide. Lang takes readers by hand, and leads them from the birth and development of planetary science and its fundamental concepts right through to the most recent discoveries, while also providing a glimpse into the future. In a world fascinated by space travel and exploration, Kenneth Lang's *Guide* may just be one of the many new sparks to ignite an entire generation of space savvy future scientists.

Admittedly light in mathematical and physical rigor, the *Guide* is presented in a manner appropriate for the educated non-scientist and would make an excellent addition to an honors-level high school classroom bookshelf, or could be



used as an introductory-level university textbook. Pre-chapter highlights and comprehensive summary diagrams will be welcome additions for the skimmers out there, whereas the many "focus boxes" and data tables provide supporting details that will be appreciated by more engaged and versed readers. Planetary science neophytes and fanatics alike will find the nine pages of suggested reading and complimentary websites at the end of the text very helpful in extending their curiosities.

Somewhat similar in scope to Beatty, Peterson, and Chaikin's *The new solar system* (Chapter 3, The Sun, happens to be written by Lang), *The Guide* feels like a watered down version, yet it has the advantage of being written in one voice, which provides a more seamless connection from chapter to chapter making it read more like a book and less like a collection of papers. Mired by only a few errors (e.g., basalt is not a "feldspar of the pyroxene type" (p. 111), and venusian coronae are not thought to form above mantle downwellings

(Fig. 7.25), the text flows nicely and maintains scientific validity. I commend Professor Lang for his attempt to present multiple viewpoints on controversial issues (e.g., global warming and climate change), despite being mostly one-sided when it comes to the “Demise of the dinosaurs” (Chap. 14.4). In short, I would recommend this book to anyone generally interested in space science and exploration.

With all of the recent successes, and presumed continued

success, of planetary orbiters, atmospheric probes, and surface landers, I look forward to Kenneth Lang’s second edition of the *Guide* near the end of the decade (hint, hint).

Leslie F. Bleamaster, III
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