

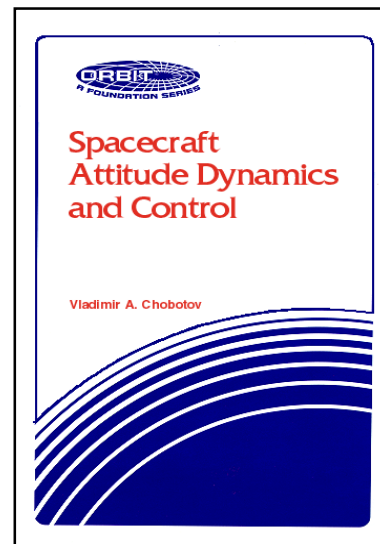
SPACECRAFT ATTITUDE DYNAMICS AND CONTROL

by Vladimir A. Chobotov

Orig. Ed. 1991, Reprint Ed. 2008 161 pp. ISBN 978-0-89464-069-8 \$98.75

Presented here are the basic concepts, methods, and mathematical developments which are necessary to understand spacecraft attitude dynamics and control. This book is a comprehensive and self-contained treatment with emphasis on the practical aspects of the subject. It is a "road map" to the field of spacecraft dynamics and control, which contains all essential elements of kinematics, rigid body dynamics, linear control theory, environmental effects, and the theory of the stability of motion, all in a single volume. The book is based on the author's more than forty years of industrial and teaching experience and can be used as a textbook in aerospace engineering courses at either the senior or the first-year graduate school level.

Spacecraft Attitude Dynamics, 2008 Reprint with Corrections, Supplement and CD ROM augments the original material published in 1991 by correcting errors and presenting a Supplement that reviews recent trends in dynamics and control of small satellite systems and tethers in space. Also, included is a CD-ROM the objective of which is to provide view points and guidelines for solving selected problems in the text. Spinners and a menu are employed to enhance the learning experience by providing numerical results for ranges of input parameters to selected problems. Moreover, a faculty CD-ROM is also available that presents complete solutions to the problems of interest.



About the Author

Dr. Chobotov served as a manager of the Space Hazards Section of the Aerospace Corporation until 1993 when he retired. Since then, he has been consulting and teaching at the Aerospace Corporation part time and lecturing at UCLA on orbital mechanics and related subjects. He is an author and co-author of several other books and of numerous journal publications. Professional associations include Associate Fellow of AIAA and member of the International Academy of Astronautics.

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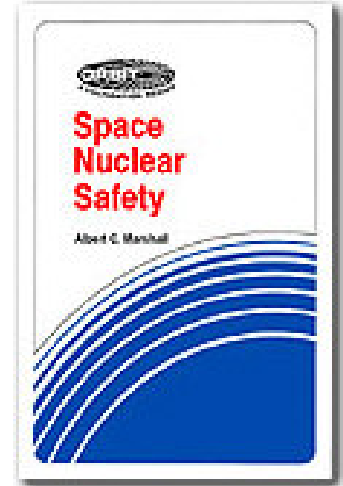
SPACE NUCLEAR SAFETY

edited by Albert C. Marshall, F. Eric Haskin, & Veniamin Usov

Orig. Ed. 2008 484 pp. ISBN 978-0-89464-061-2 \$193.00

Space Nuclear Safety, the first, and presently, the only book written on the topic of space nuclear safety, is a comprehensive textbook intended for professors and students. The principal authors and contributors are recognized leaders in their field of expertise. The book is also a convenient reference book for nuclear engineers, aerospace safety specialists, project managers, and government staff. Although *Space Nuclear Safety* is oriented toward nuclear engineers and aerospace safety professionals, the material should be accessible to engineers, scientists, graduate students and upper division undergraduate students without nuclear engineering or aerospace backgrounds.

Space Nuclear Safety covers both radioisotope power sources and space reactor systems. The chapters address safety principles and safety analysis methods and include discussions of safety issues and scenarios, protection and mitigation methods, and safety testing. Topics include radiation protection and shielding, propellant fires and explosions, orbital mechanics, atmospheric reentry, impact and analysis, reactor criticality safety, reactor transient analysis, risk/reliability analysis, and consequence analysis. Student exercises are provided that can be solved using a handheld calculator. Although the book focuses on relatively simple safety analysis methods, each chapter provides a brief discussion of computer analysis methods used in space nuclear safety programs.



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