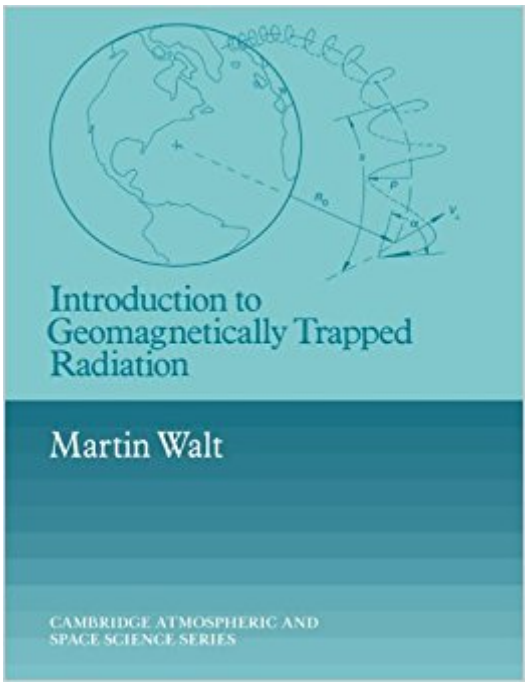
# Introduction To Geomagnetically Trapped Radiation (Cambridge Atmospheric And Space Science Series)



## Synopsis

This book is an introductory textbook on the physical processes occurring in the Earth's radiation belts. The presentation is at the advanced undergraduate or first year graduate level, and it is appropriate for students who intend to work in some aspect of magnetospheric physics. The treatment is quantitative and provides the mathematical basis for original work in this subject. The equations describing the motion of energetic ions and electrons in the geomagnetic field are derived from basic principles, and concepts such as magnetic field representations, guiding centre motion, adiabatic invariance, and particle distribution functions are presented in a detailed and accessible manner. Relevant experimental techniques are reviewed and a summary is given of the intensity and energy spectra of the particle populations in the Earth's radiation belts. Problem sets are included as well as appendices of tables, graphs and frequently used formulas.

## Book Information

Series: Cambridge Atmospheric and Space Science Series

Paperback: 192 pages

Publisher: Cambridge University Press; 1 edition (December 15, 2005)

Language: English

ISBN-10: 0521616115

ISBN-13: 978-0521616119

Product Dimensions: 6.8 x 0.4 x 9.7 inches

Shipping Weight: 11.4 ounces (View shipping rates and policies)

Average Customer Review: Be the first to review this item

Best Sellers Rank: #1,233,281 in Books (See Top 100 in Books) #129 inÃ Â Books > Science & Math > Physics > Electromagnetism > Magnetism #273 inÃ Â Books > Science & Math > Earth Sciences > Geophysics #1151 inÃ Â Books > Science & Math > Earth Sciences > Rivers

## Customer Reviews

.."a highly quantitative textbook that will give a solid mathematical grounding of the subject to students of astrophysics and aerospace engineering." A. Ewan Campbell, The Leading Edge

An introductory textbook on the physical processes controlling geomagnetically trapped radiation aimed at first year graduate students specialising in any aspect of magnetospheric physics.

Introduction to Geomagnetically Trapped Radiation (Cambridge Atmospheric and Space Science Series) Gaskinetic Theory (Cambridge Atmospheric and Space Science Series) Atmospheric and Space Flight Dynamics: Modeling and Simulation with MATLABÃ Â® and SimulinkÃ Â® (Modeling and Simulation in Science, Engineering and Technology) Atoms, Radiation, and Radiation Protection Atoms, Radiation, and Radiation Protection, 2nd Edition Treatment Planning in the Radiation Therapy of Cancer (Frontiers of Radiation Therapy and Oncology, Vol. 21) (v. 21) Radiation Nation: Fallout of Modern Technology - Your Complete Guide to EMF Protection & Safety: The Proven Health Risks of Electromagnetic Radiation (EMF) & What to Do Protect Yourself & Family Cambridge Global English Stage 9 Workbook: for Cambridge Secondary 1 English as a Second Language (Cambridge International Examinations) Atmospheric Science, Second Edition: An Introductory Survey (International Geophysics) Climatology: An Atmospheric Science (3rd Edition) Principles Of Atmospheric Science Launch Vehicles Pocket Space Guide: Heritage of the Space Race (Pocket Space Guides) LSC Understanding Space: An Introduction to Astronautics + Website (Space Technology Series) The Cambridge Companion to Science Fiction (Cambridge Companions to Literature) Handbook of Weather, Climate and Water: Atmospheric Chemistry, Hydrology and Societal Impacts Trevor Waugh’s Winning with Watercolour: Tips and Techniques for Atmospheric Paintings Jean Haines’ Atmospheric Watercolours: Painting with Freedom, Expression and Style Handbook of Optics, Third Edition Volume V: Atmospheric Optics, Modulators, Fiber Optics, X-Ray and Neutron Optics Atmospheric Chemistry and Physics: From Air Pollution to Climate Change Principles of Atmospheric Physics and Chemistry