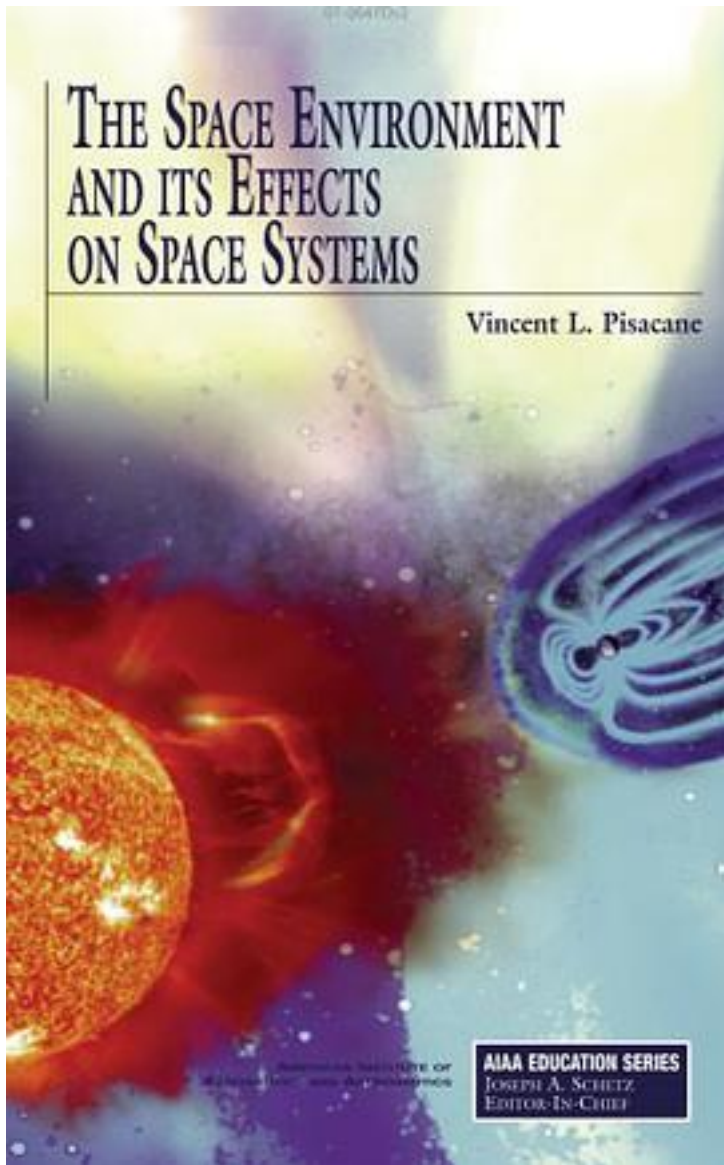


The Space Environment and Its Effects on Space Systems



[The Space Environment and Its Effects on Space Systems_ 下载链接1](#)

著者:Pisacane, Vincent L.

出版者:

出版时间:2008-8

装帧:

isbn:9781563479267

This textbook will help students and professionals understand the space environment and its impacts on spacecraft design, engineering, and performance. While the primary emphasis of the book is the Earth's environment and its effects on spacecraft, it also addresses the extraterrestrial environment and the effects of radiation on humans in space. The book begins with an introduction to the history of spacecraft failures, risk management, reliability and quality assurance techniques, and parts reliability. It goes on to provide an overview of the structure of the Sun; the structure, origin, and models of the geomagnetic field; gravitational field of the Earth; Earth's magnetosphere and radiation environment; neutral environment including fundamentals of the kinetic theory of gases; variation of pressure with altitude and hypoxia of humans; electromagnetic propagation; the effect of atomic oxygen on materials; plasma surrounding the Earth; transport and effects of photon and charged particle radiation on electronics and tissue; spacecraft contamination; techniques to mitigate debris impact; and heat transfer and thermal control of spacecraft. An appendix provides important astrodynamic constants and parameters of the celestial bodies in the solar system. Problem sets and examples are included, and a solution manual is available for instructors.

作者介绍:

目录:

[The Space Environment and Its Effects on Space Systems_ 下载链接1](#)

标签

评论

[The Space Environment and Its Effects on Space Systems_ 下载链接1](#)

[The Space Environment and Its Effects on Space Systems 下载链接1](#)