Record Nr. UNINA9910416104903321 Autore Hellweg Christine E **Titolo** Radiation in Space: Relevance and Risk for Human Missions / / by Christine E. Hellweg, Thomas Berger, Daniel Matthiä, Christa Baumstark-Khan Cham:,: Springer International Publishing:,: Imprint: Springer,, Pubbl/distr/stampa 2020 3-030-46744-9 **ISBN** Edizione [1st ed. 2020.] 1 online resource (XXIV, 111 p. 34 illus., 21 illus. in color.) Descrizione fisica Collana SpringerBriefs in Space Life Sciences, , 2196-5579 Disciplina 523.01501 Soggetti Medicine - Research Biology - Research Solar system Aerospace engineering **Astronautics** Cancer Ophthalmology Medical physics Biomedical Research Space Physics Aerospace Technology and Astronautics Cancer Biology **Medical Physics** Radiació Medi ambient espacial Llibres electrònics Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di bibliografia Includes bibliographical references. Chapter 1. General Introduction -- Chapter 2. Radiation in Space: The Nota di contenuto

Physics -- Chapter 3. Radiation in Space: The Biology -- Chapter 4.

Countermeasures -- Chapter 6. Challenges for Exploratory Missions.-.

Radiation Risk Assessment -- Chapter 5. Space Radiation

Sommario/riassunto

This volume of the series Springer Briefs in Space Life Sciences explains the physics and biology of radiation in space, defines various forms of cosmic radiation and their dosimetry, and presents a range of exposure scenarios. It also discusses the effects of radiation on human health and describes the molecular mechanisms of heavy charged particles' deleterious effects in the body. Lastly, it discusses countermeasures and addresses the vital question: Are we ready for launch? Written for researchers in the space life sciences and space biomedicine, and for master's students in biology, physics, and medicine, the book will also benefit all non-experts endeavoring to understand and enter space.