

1. Record Nr.	UNINA9910337606503321
Titolo	Handbook of cosmic hazards and planetary defense // editors, Firooz Allahdadi, Joseph N. Pelton
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2020
ISBN	3-319-02847-2
Descrizione fisica	1 online resource (1200 p.) : 400 illus., 100 illus. in color
Disciplina	629.1
Soggetti	Aerospace engineering Astronautics Natural disasters Space sciences Paleontology Aerospace Technology and Astronautics Natural Hazards Space Sciences (including Extraterrestrial Physics, Space Exploration and Astronautics) Paleontology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Preface -- Foreword -- Introduction -- Space Hazards -- Key Space Missions for Exploration and Planetary Defense -- Ground-Based Observation Activities -- Planetary Defense Activities -- The Future of Planetary Defense -- Appendices.
Sommario/riassunto	Covers in a comprehensive fashion all aspects of cosmic hazards and possible strategies for contending with these threats through a comprehensive planetary defense strategy. This handbook brings together in a single reference work a rich blend of information about the various types of cosmic threats that are posed to human civilization by asteroids, comets, bolides, meteors, solar flares and coronal mass ejections, cosmic radiation and other types of threats that are only recently beginning to be understood and studied, such as investigation of the "cracks" in the protective shield provided by the Van Allen belts

and the geomagnetosphere, of matter-antimatter collisions, orbital debris and radiological or biological contamination. Some areas that are addressed involve areas about which there is a good deal of information that has been collected for many decades by multiple space missions run by many different space agencies, observatories and scientific researchers. Other areas involving research and studies that have only recently gotten underway are discussed by some of the world's foremost experts in each of these areas, who provide up-to-date and scientifically verifiable information. Although much of the work in these various areas have been conducted by space agencies, an expanding range of work is also being carried out by observatories, by universities and other research centers, and even by private foundations and professional organizations. The purpose of this work is thus several-fold: to include the latest information and most systematic research from around the world in a single reference work; to note where there are significant gaps in knowledge where new research, spacecraft, observatories, or other initiatives are needed to fill in critical missing information; and to give the best possible information about preventative actions that might be taken against cosmic threats and identify various alternative strategies that are now under way or planned to cope with these various threats.
