

1. Record Nr.	UNINA9910156338903321
Titolo	Assessment and Mitigation of Asteroid Impact Hazards : Proceedings of the 2015 Barcelona Asteroid Day / / edited by Josep M. Trigo-Rodríguez, Maria Gritsevich, Herbert Palme
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2017
Edizione	[1st ed. 2017.]
Descrizione fisica	1 online resource (X, 256 p. 65 illus., 31 illus. in color.)
Collana	Astrophysics and Space Science Proceedings, , 1570-6605 ; ; 46
Disciplina	520 500.5
Soggetti	Solar system Planetary science Mineralogy Space Physics Planetary Science
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	Barcelona Asteroid Day 2015: Revisiting the Threat by Asteroid and Comet Impact -- Dynamic Sources of Contemporary Hazard From Meteoroids and Small Asteroids -- The Chemistry of Solar System Materials: Sun, Planets, Asteroids, Meteorites and Dust -- Shape Models and Physical Properties of Asteroids -- Asteroid Mining: Mineral Resources in Undifferentiated Bodies From the Chemical Composition of Carbonaceous Chondrites -- Atomistic Simulations of Aqueous Alteration Processes of Mafic Silicates in Carbonaceous Chondrites -- Measuring the Terminal Heights of Bolides to Understand the Atmospheric Flight of Large Asteroidal Fragments -- Constraining the Pre-Atmospheric Parameters of Large Meteoroids: Košice, A Case Study -- Detection of Nocturnal and Daylight Bolides From Ebre Observatory in the Framework of the SPMN Fireball Network -- Natural Hazard Associated to Shock Waves of Meter-Sized Meteoroids -- Chelyabinsk Meteorite As A Proxy for Studying the Properties of Potentially Hazardous Asteroids and Impact Deflection Strategies -- Asteroids,

Sommario/riassunto

This volume is a compilation of the research presented at the International Asteroid Day workshop which was celebrated at Barcelona on June 30th, 2015. The proceedings discuss the beginning of a new era in the study and exploration of the solar system's minor bodies. International Asteroid Day commemorates the Tunguska event of June 30th, 1908. The workshop's goal was to promote the importance of dealing proactively with impact hazards from space. Multidisciplinary experts contributed to this discussion by describing the nature of comets and asteroids along with their offspring, meteoroids. New missions to return material samples of asteroids back to Earth such as Osiris-REx and Hayabusa 2, as well as projects like AIM and DART which will test impact deflection techniques for Potentially Hazardous Asteroids encounters were also covered. The proceedings include both an outreach level to popularize impact hazards and a scientific character which covers the latest knowledge on these topics, as well as offering proposals of promising new techniques that will help gain new insights of the properties of these challenging bodies by studying meteoroids and meteorites. Asteroids, comets, meteoroids and meteorites are introduced with descriptions of their nature, origin, and solar system pathways.
