Record Nr. UNINA9910299439403321 Planetary Exploration and Science: Recent Results and Advances // **Titolo** edited by Shuanggen Jin, Nader Haghighipour, Wing-Huen Ip Pubbl/distr/stampa Berlin, Heidelberg:,: Springer Berlin Heidelberg:,: Imprint: Springer, 2015 **ISBN** 3-662-45052-6 Edizione [1st ed. 2015.] Descrizione fisica 1 online resource (344 p.) Springer Geophysics, , 2364-9119 Collana Disciplina 551.9 Soggetti Planetology Geochemistry Astronomy **Astrophysics** Aerospace engineering **Astronautics** Astronomy, Astrophysics and Cosmology Aerospace Technology and Astronautics Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references. Nota di contenuto Partial Least Squares Modeling of Lunar surface Iron content --Quantitative characterization of Lunar Mare Orientale basalts detected by M3 -- Gravity changes over Russian rivers basins from GRACE --Gravimetric forward and inverse modeling methods of the crustal density structures -- Radar Exploration of Mars -- Automatic recognition of impact craters on the Martian surface -- Upper Ionosphere of Mars during Solar Quiet and Disturbed conditions --Mars Astrobiology - Recent Status and Progresses -- Classical physics for why planets and the Sun rotate by their periods -- Estimates of the Size of the Ionosphere of Comet 67P/Churyumov-Gerasimenko during Its Perihelion Passage in 2014/2015 -- Photometric and spectroscopic observations of exoplanet transit events -- Photochemistry of Terrestrial Exoplanet Atmospheres -- Planet formation in Binaries. This contributed monograph is the first work to present the latest Sommario/riassunto results and findings on the new topic and hot field of planetary

exploration and sciences, e.g., lunar surface iron content and mare orientale basalts, Earth's gravity field, Martian radar exploration, crater recognition, ionosphere and astrobiology, Comet ionosphere, exoplanetary atmospheres and planet formation in binaries. By providing detailed theory and examples, this book helps readers to quickly familiarize themselves with the field. In addition, it offers a special section on next-generation planetary exploration, which opens a new landscape for future exploration plans and missions. Prof. Shuanggen Jin works at the Shanghai Astronomical Observatory, Chinese Academy of Sciences, China. Dr. Nader Haghighipour works at the University of Hawaii-Manoa, USA. Prof. Wing-Huen Ip works at the National Central University, Taiwan.