

1. Record Nr.	UNINA9910299956903321
Titolo	Outer Solar System [[electronic resource] ] : Prospective Energy and Material Resources // edited by Viorel Badescu, Kris Zacny
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2018
ISBN	3-319-73845-3
Edizione	[1st ed. 2018.]
Descrizione fisica	1 online resource (943 pages)
Disciplina	919.904
Soggetti	Energy systems Space sciences Planetology Aerospace engineering Astronautics Observations, Astronomical Astronomy—Observations Energy harvesting Energy Systems Space Sciences (including Extraterrestrial Physics, Space Exploration and Astronautics) Aerospace Technology and Astronautics Astronomy, Observations and Techniques Energy Harvesting
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	A Survey of Pluto's Surface Composition -- Physical Properties of Icy Materials -- Atmospheric Mining in the Outer Solar System: Resource Capturing, Storage, and Utilization -- Project VALKYRIE: Laser-powered Cryobots and Other Methods for Penetrating Deep Ice on Ocean Worlds -- Europa Drum Sampler (EDuS) -- Drilling mechanisms using piezoelectric actuators developed at Jet Propulsion Laboratories -- Ultrasonically-assisted penetration of granular and cemented materials -- Flight in the Outer Solar System and Interstellar Travel -- Triton

Hopper: Exploring Neptune's Captured Kuiper Belt Object -- Sub-Ice Autonomous Underwater Vehicle Architectures for Ocean World Exploration and Life Search -- Titan Submarine -- WindBots: A Concept for Persistent In-Situ Science Explorers for Gas Giants -- Enceladus Vent Explorer Concept -- Prospect of Exploration and Exploitation of Kuiper Belt Object Resources in the Future -- Outer Solar System -- Sample Return Mission by an Unmanned Interplanetary Spaceship UNIS -- Spacecraft Power System Considerations for the Far Reaches of the Solar System -- Hybrid nuclear spacecraft for the outer planets -- Exploration of the Outer Solar System: Missions and their Power Systems -- Multi-Rendezvous Solar Electric Propulsion Mission Opportunities to Jupiter Trojans -- Implausible, Yet Intriguing: Business in the Outer Solar System -- Sources of Energy in the Outer Solar System.

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Sommario/riassunto

The Earth has limited resources while the resources in space are virtually unlimited. Further development of humanity will require going beyond our planet and exploring of extraterrestrial bodies and their resources. This book investigates Outer Solar Systems and their prospective energy and material resources. It presents past missions and future technologies and solutions to old problems that could become reality in our life time. The book therefore is a great resource of condensed information for specialists interested in current and impending Outer Solar Systems related activities and a good starting point for space researchers, inventors, technologists and potential investors.

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