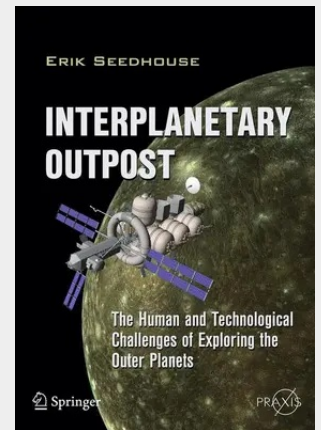


Interplanetary Outpost

The Human and Technological Challenges of Exploring the Outer Planets

"Interplanetary Outpost" follows the mission architecture template of NASA's plan for Human Outer Planet Exploration (HOPE), which envisions sending a crew to the moon Callisto to conduct exploration and sample return activities. To realize such a mission, the spacecraft will be the most complex interplanetary vehicle ever built, representing the best technical efforts of several nations. A wealth of new technologies will need to be developed, including new propulsion systems, hibernation strategies, and revolutionary radiation shielding materials. Step by step, the book will describe how the mission architecture will evolve, how crews will be selected and trained, and what the mission will entail from launch to landing. However, the focus of "Interplanetary Outpost" is on the human element. The extended duration, logistical challenges, radiation concerns, communication lag times, isolation, and deleterious effects on the human body will conspire to not only significantly impair human performance but also affect the behavior of crewmembers. This book addresses each of these issues in detail while still providing the reader with a background to the necessary elements comprising such a mission.

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