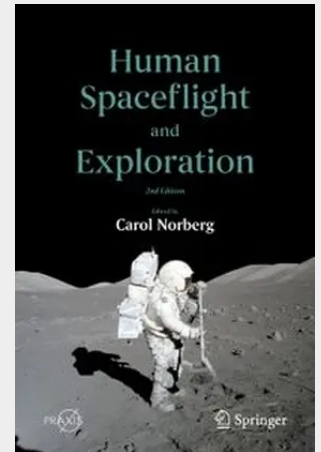


Human Spaceflight and Exploration

This book presents an overview of international activities in human spaceflight and exploration at a time when humanity's return to the Moon feels more tangible than it has in decades. The authors review the historical development of human spaceflight and the rigorous strategies used to select astronaut candidates for space missions. In addition, they summarize the status of solar system exploration using robotic vehicles. The basics of the space environment and the effects of space travel on the human body are explained, along with the critical challenges posed by microgravity and radiation exposure during deep-space missions. The book also guides readers through the engineering challenges of designing space suits as well as the construction of reliable life support systems for spacecraft. This updated new edition captures recent developments in this rapidly evolving field. The book includes information about the entry of commercial actors into space activities — a domain traditionally dominated by national space agencies, particularly the U.S.A. and Russia. Commercial innovation has expanded the opportunities for space travel, paving the way for a more diverse group of people to participate in space missions. The contributors bring together a broad range of expertise with backgrounds spanning an astronaut, an astronaut recruitment specialist, a space suit designer, a space engineer, and a space physicist.

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