# Human Spaceflight: Mission Analysis And Design (Space Technology Series)

## Synopsis

This book includes over 800 rules of thumb and sanity checks that will enable you to identify key issues and errors early in the design process.

## Book Information

Series: Space Technology Series

Paperback: 1064 pages

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Average Customer Review: 5.0 out of 5 starsÂ Â See all reviewsÂ (3 customer reviews)

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## Customer Reviews

As a graduate student in space architecture, this is the single most useful book I have found for designing human missions and spacecraft. It is an extraordinary collection of valuable information.Part textbook, part reference manual, the book includes both descriptive text and a wealth of numerical data. It is broken up into 31 chapters, each about 20 to 30 pages long. Each chapter focuses on one aspect of human spaceflight, such as structures, power systems, crew accommodations, or planetary surface vehicles, and each is written by one or more experts in the relevant field.Although the book is designed for people who work with spacecraft for a living, it is very accessible. Anyone with a good grasp of algebra and a strong interest in spaceflight should be able to follow most of it.If I could change one thing about this book, it would be to make it a hardbound edition. My copy is rapidly becoming dog-eared. It’s just so blasted useful...

Trade paperback, 1035 pp. Illustrations, charts, graphs, tables.An Introduction to Human SpaceflightDesigning Human Space MissionsThe Space Environment -- Hazards and EffectsSurface EnvironmentsPhysiology of SpaceflightHuman Factors of Crewed

SpaceflightPsychology of SpaceflightSafetyOrbit Selection and AstrodynamicsEntry, Descent, Landing, and AscentDesigning and Sizing Space ElementsVehiclesDesigning, Sizing, and Integrating a Surface BasePlanetary VehiclesIn-situ ResourcesThermal ControlEnvironmental Controls and Life Support SystemsCrew AccommodationsAttitude Determination and ControlDesigning Power SystemsStructuresExtravehicular Activity SystemsSpace RoboticsPropulsion SystemsSelecting Launch and Transfer VehiclesMission Operations for Crewed SpaceflightCommand, Control, and Communications ArchitectureSpace Logistics SupportEstimating the CostInternational Crewed MissionsMars Design ExampleAppendix: Inertias of Geometric PrimitivesAppendix: Explanation of Earth Satellite ParametersIndexGlossary of Acronyms

this book is indispensable for anyone designing systems, vehicles or facilities for human space flight.

from the Smithsonian National Air and Space Museum (Smithsonian Series)