Long

Stellar Engines

Advanced Spacecraft Propulsion through Extreme Aerospace Engineering Design

This book considers the unique method of inertial confinement fusion as a means for propelling a spacecraft on missions, through interplanetary and interstellar space. This has involved combining the two separate fields of knowledge that is advanced propulsion theory and high temperature thermonuclear plasma physics. For the first time, it lays out the theoretical basis for inertial confinement fusion physics and advanced space propulsion, how the engines can be designed, the various physics and engineering parameters calculated through the fundamental equations. The goal of the book is to give readers an overview of the field by introduction of the relevant material, but also to instruct the reader in calculation design examples so that they may be able to reproduce some of this material themselves, or use the material in design calculations of their own as they strive to develop spacecraft concepts. The book is also designed to teach the reader the subject matter of advanced concept spacecraft design for interplanetary and interstellar missions to include world ships, and also consideration of exotic vehicle architectures and advanced propulsion methods to include interstellar ramjets and a black hole engine.

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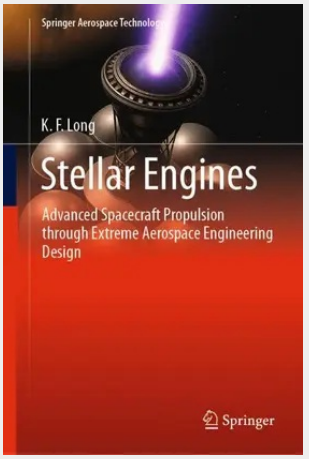

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