Propellantless Propulsion By Electromagnetic Inertia | 88ea27d6652fe6f4ad8c7567638bf85

International Aerospace Abstracts

Modern Astrophysics

A new edition of the Tethers in Space handbook was needed after the last edition published in 1989. Tether-related activities have been quite busy in the 90's. We have had the flights of TISSI and TISS-R, SEDS-1 and -2, PMG, TIPS and OEDIPUS. In less than three years there have been one international conference on Tethers in Space, held in Washington DC, and three workshops, held at ESA/Eose in the Netherlands, at ISS in Japan and at the University of Michigan, Ann Arbor. The community has grown and we finally have real flight data to compare our models with. The life of spaceborne tethers has not always been easy and we got our nose of data, but we feel pretty optimistic for the future. We are just stepping through the present stage to start using tethers for space technologies and technological applications. As we are writing this handbook TIPS, a REAL tether project is flying above our heads. There is no emphasis in affirming that as of today spaceborne tethers are a reality and their potential is far from being fully appreciated. Consequently, a large number of new information has had to be incorporated into this new edition. The general structure of the book has remained essentially the same. The editors have taken the opportunity to review and update the chapters to a category which they felt had not been updated recently. The section on the flights has been enriched with information on the scientific results and we hope that the editors have taken into account the scientific results and that the effects exist and can be applied to propulsion? The third part of the book - the most speculative - will examine the question: what physics is needed if we are to make wormholes and warp drives? Is such physics plausible? And how might we go about actually building such devices? This book pulls all of that material together from various sources, updates and revisions it, and presents it in a coherent form so that these interested will be able to find everything of relevance in one place.

lectures on Gravitation, Cosmology, and black holes

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Secrets of Antigravity Propulsion

In recent years scientists have investigated a series of new methods for non-reчатнокосмического propulsion and flight. Particularly in the current political climate new, and cheaper, and more ‘fuel efficient’ methods are being investigated. Such new methods include the gas tube method, cable accelerators, tether launch systems, space elevators, solar and magnetic sails, circle launcher space keepers and more. The author of Non-reчатнокосмического Space Launch and Flight brings a vast amount of experience to the topic, having worked as an engineer, designer and writer at key institutions including NASA and the US Air Forces. Explains all the new non-reчатнокосмического launch methods, and compares them with each other and traditional rockets investigates the unifying principles of the different systems and shows how to select the best design suited to the propulsion mission. The book goes beyond technical and theoretical aspects of_Advanced Space Propulsion Systems

Frontiers of Propulsion Science

This book tells the story of the Space Shuttle in its many different roles as orbital launch platform, orbital workshop, and science and technology laboratory. It focuses on the technology designed and developed to support the missions of the Space Shuttle program. Each mission is examined, from the mission planning process to the post-mission analysis, to illustrate the Shuttle's impact on manned spaceflight. The book presents a detailed look at each Space Shuttle mission, delivering an essential overview of the Space Shuttle's accomplishments.

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In recent years, an unprecedented interest in novel and revolutionary space missions has risen out of the advanced NASA and ESA programs. Astrophysicists, astronomers, space systems engineers, mathematicians, and scientists have been cooperating to implement novel and ground-breaking space missions. Recent progress in mathematical dynamics has enabled development of specialized spacecraft orbits and propulsion systems. Recently, the concept of flying spacecraft in formation has gained a lot of interest within the community. These progresses construct the background to a significant renaissance of research dealing with astrodynamics and its applications. Modern Astrodynamics is designed as a stepping stone for the exposition of modern astrodynamics to students, researchers, engineers, and scientists. This volume will present the main constituents of the astrodynamical science in an elaborate, comprehensive and rigorous manner. Although the volume will contain a few distinct chapters, it will render a coherent portrayal of astrodynamics. Encompasses the main constituents of the astrodynamical sciences in an elaborate, comprehensive and rigorous manner. Presents recent astrodynamical advances and describes the challenges ahead. The first volume of this series designed to give scientists and engineers worldwide an opportunity to publish their works in this multi-disciplinary field.
attempts to formulate a language for our message, including the Astronette and two generations of Linco (linguistic cosmos). The chosen medium for interstellar communication reveals much about the technological sophistication of the civilization that sends it, Oberhaus observes, but even more interesting is the information embedded in the message itself. In Extraterrestrial Languages, he considers how philosophy, linguistics, mathematics, science, and art have informed the design or limited the effectiveness of our interstellar messaging.

Gravitation and Inertia
Space propulsion systems have a great influence on our ability to travel to other planets or how cheap a satellite can provide TV programs. This book provides an up-to-date overview of all kinds of propulsion systems ranging from classical rocket technology, nuclear propulsion to electric propulsion. In addition, some current technologies for micro-, propellantless and even extrapropulsion, which is a new program under development at NASA. The author shows the limitations of the present concepts and how they could look like in the future. Starting from historical developments, the reader is taken on a journey showing the amazing technology that has been put on hold for decades to be rediscovered in the near future for questions like how we can even reach other stars within a human lifetime. The author is actively involved in advanced propulsion research and contributes with his own experience to many of the presented topics. The book is written for anyone who is interested in how space travel can be revolutionized.

The Space Shuttle Program
Solar sail technology is very close to becoming an reality and it will soon be used in the exploration of the solar system and beyond. This fascinating book provides an accessible introduction to solar sails and details how they work and what they will be used for in the exploration of space. The book examines current plans for solar sails and how advanced technology, such as nanotechnology, might enhance their performance. Coverage shows how solar sail propulsion will make space exploration more affordable and demonstrates how access to destinations within (and beyond) the solar system will become within reach.

Deep Space Propulsion

35th AIAA/ASME/SAE/ASEE Joint Propulsion Conference and Exhibit
A companion volume to 'Electrogravitics Systems: Reports on a New Propulsion Methodology', this book delivers: (1) the scientific validation from three different authorities; (2) the compelling public history of gravity research conducted by the aviation industry before it became 'unacknowledged' and (3) testimonials which eye-witnesses have provided. In total, this anthology attests to the validity of the Biefeld-Brown high voltage force effect. The book's Science Section includes a well-known 'electrokinetic force' and how it works; the proposed ion mobility explanation; and how electricity and gravity may couple. The Historical Section contains seven articles about T T Brown, gravity research, etc. Also included are a Testimonial Section and Patent Section.

Non-Rocket Space Launch and Flight
An understandable perspective on the types of space propulsion systems necessary to enable low-cost space flights to Earth orbit and to the Moon and the future developments necessary for exploration of the solar system and beyond to the stars.

Invitation to Contemporary Physics
The technology of the next few decades could possibly allow us to explore with robotic probes the closest stars outside our Solar System, and maybe even observe some of the recently discovered planets circling these stars. This book looks at the reasons for exploring our stellar neighbors and our mission to send robotic probes to explore and develop technology to build a new interstellar civilization which will be able to reach the nearest stars, and thus to colonize them in the future. Such propulsion technology has radically different requirements from conventional chemical rockets, because of the enormous distances that must be crossed. Surprisingly, many propulsion schemes for interstellar travel have been suggested and await only practical engineering solutions and the political will to make them a reality. The book explains the principles of the propulsion methods which could possibly be used in the future to build an interstellar civilization.

Optical Nano and Micro Actuator Technology
In a science fiction thriller set in modern America, a male alcoholic stoner obsessed with faster than light travel evade and outsmart the near omniscient Project Luddite and it's All Seeing Eye to see his dream come true.Sample Chapter - Debunking the Debunks: I made my way from my bedroom to the table, and sank into the soft cushions of the sofa, getting comfortable. There was a trail that led Washington Post reporter Bob Woodward on an investigation that examines the dark side of American show business—TV, rock and roll, and the movie industry. From on-the-record interviews with 217 people, including Belushi's drug dealers, and those who live in the show business underground, the author has...
Field Propulsion System for Space Travel

In Optical Nano and Micro Actuator Technology, leading engineers, material scientists, chemists, physicists, laser scientists, and manufacturing specialists offer an in-depth, wide-ranging look at the fundamental and unique characteristics of light-driven optical actuators. They discuss how light can initiate physical movement and control a variety of mechanisms that perform mechanical work at the micro- and nanoscale. The book begins with the scientific background necessary for understanding light-driven systems, discussing the nature of light and the interaction between light and NEMS/MEMS devices. It then covers innovative optical actuator technologies that have been developed for many applications. The book examines photosensitive materials that enable the design of optically driven structures and mechanisms and describes specific light-driven technologies that permit the manipulation of micro- and nanoscale objects. It also explores applications in optofluidics, bioMEMS and biophotonics, medical device design, and micromachine control. Inspiring the next generation of scientists and engineers to advance light-driven technologies, this book gives readers a solid grounding in this emerging interdisciplinary area. It thoroughly explains the scientific language and fundamental principles, provides a holistic view of optical nano and micro actuator systems, and illustrates current and potential applications of light-driven systems.

Physics from the Edge

The fundamental and very important property of inertia has never been well understood. This book shows how inertia has puzzled many scientists such as Galileo and Mach, and then presents a new theory that explains inertia for the first time, and also predicts galaxy rotation without dark matter, cosmic acceleration and some other anomalies. Further evidence for, and tests of, the theory are presented and exciting applications such as new inertial launch methods and the theoretical possibility of faster than light travel will be discussed. To allow readers to use the theory themselves, some simple maths is included, and to help explain the points made, there are numerous cartoons by the author.

Making Starships and Stargates

This Hugo Award finalist, “justifiably regarded as a classic” (SFReviews.net), is the tale of an epic space voyage where time dilation goes horribly wrong. Aboard the spacecraft Leonora Christine, fifty crewmembers, half men and half women, have embarked on a journey of discovery like no other to a planet thirty light-years away. Since their ship is not capable of traveling faster than light, the crew will be subject to the effects of time dilation and relativity. They will age five years on board the ship before reaching their destination, but thirty-three years will pass on Earth.

Solar Sails

Extraterrestrial Languages

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37th AIAA/ASME/SAE/ASEE Joint Propulsion Conference & Exhibit

The proceedings of STAF-05 feature a broad spectrum of topics on space science and technology, space exploration, space colonization; advanced propulsion concepts; space nuclear power and propulsion systems technologies; thermophysics in microgravity, advanced energy conversion technologies; next generation space transportation; high temperature materials; and high power electric propulsion. These topics span the range from basic research to the recent technology advances and hardware testing.