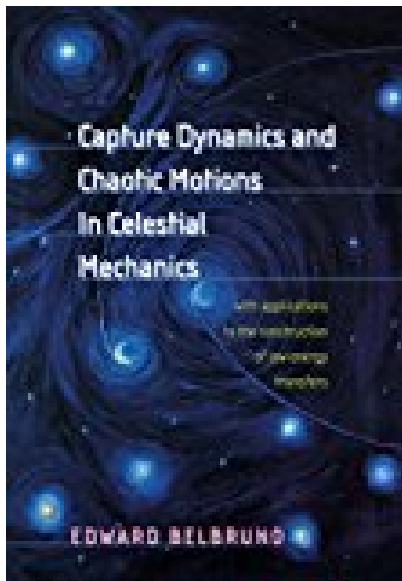


# Capture Dynamics and Chaotic Motions in Celestial Mechanics With Applications to the Construction of Low Energy Transfers

---



## BOOK DETAILS

- Author : Edward Belbruno
- Pages : 232 Pages
- Publisher : Princeton University Press
- Language : English
- ISBN : 0691094802

[↓ DOWNLOAD](#)

## **BOOK SYNOPSIS**

This book describes a revolutionary new approach to determining low energy routes for spacecraft and comets by exploiting regions in space where motion is very sensitive (or chaotic). It also represents an ideal introductory text to celestial mechanics, dynamical systems, and dynamical astronomy. Bringing together wide-ranging research by others with his own original work, much of it new or previously unpublished, Edward Belbruno argues that regions supporting chaotic motions, termed weak stability boundaries, can be estimated. Although controversial until quite recently, this method was in fact first applied in 1991, when Belbruno used a new route developed from this theory to get a stray Japanese satellite back on course to the moon. This application provided a major verification of his theory, representing the first application of chaos to space travel. Since that time, the theory has been used in other space missions, and NASA is implementing new applications under Belbruno's direction. The use of invariant manifolds to find low energy orbits is another method here addressed. Recent work on estimating weak stability boundaries and related regions has also given mathematical insight into chaotic motion in the three-body problem. Belbruno further considers different capture and escape mechanisms, and resonance transitions. Providing a rigorous theoretical framework that incorporates both recent developments such as Aubrey-Mather theory and established fundamentals like Kolmogorov-Arnold-Moser theory, this book represents an indispensable resource for graduate students and researchers in the disciplines concerned as well as practitioners in fields such as aerospace engineering.

### **CAPTURE DYNAMICS AND CHAOTIC MOTIONS IN CELESTIAL MECHANICS WITH APPLICATIONS TO THE CONSTRUCTION OF LOW ENERGY**

**TRANSFERS** - Are you looking for Ebook Capture Dynamics And Chaotic Motions In Celestial Mechanics With Applications To The Construction Of Low Energy Transfers? You will be glad to know that right now Capture Dynamics And Chaotic Motions In Celestial Mechanics With Applications To The Construction Of Low Energy Transfers is available on our online library. With our online resources, you can find Applied Numerical Methods With Matlab Solution Manual 3rd Edition or just about any type of ebooks, for any type of product.

Best of all, they are entirely free to find, use and download, so there is no cost or stress at all. Capture Dynamics And Chaotic Motions In Celestial Mechanics With Applications To The Construction Of Low Energy Transfers may not make exciting reading, but Applied Numerical Methods With Matlab Solution Manual 3rd Edition is packed with valuable instructions, information and warnings. We also have many ebooks and user guide is also related with Capture Dynamics And Chaotic Motions In Celestial Mechanics With Applications To The Construction Of Low Energy Transfers and many other ebooks.

We have made it easy for you to find a PDF Ebooks without any digging. And by having access to our ebooks online or by storing it on your computer, you have convenient answers with Capture Dynamics And Chaotic Motions In Celestial Mechanics With Applications To The Construction Of Low Energy Transfers. To get started finding Capture Dynamics And Chaotic Motions In Celestial Mechanics With Applications To The Construction Of Low Energy Transfers, you are right to find our website which has a comprehensive collection of manuals listed.