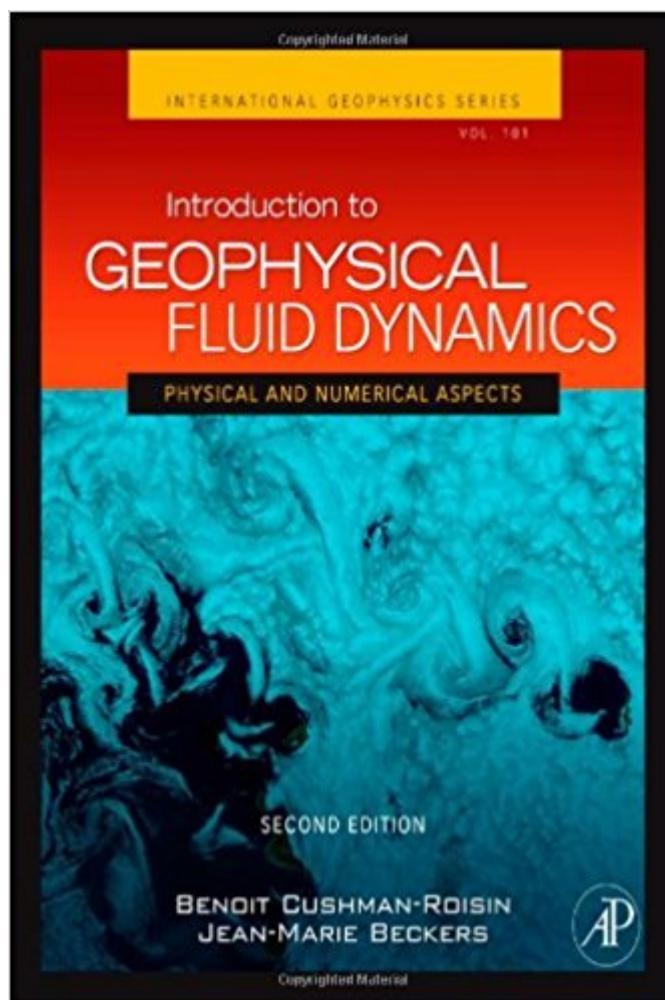


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Introduction To Geophysical Fluid Dynamics, Volume 101, Second Edition: Physical And Numerical Aspects (International Geophysics)



Synopsis

This book provides an introductory-level exploration of geophysical fluid dynamics (GFD), the principles governing air and water flows on large terrestrial scales. Physical principles are illustrated with the aid of the simplest existing models, and the computer methods are shown in juxtaposition with the equations to which they apply. It explores contemporary topics of climate dynamics and equatorial dynamics, including the Greenhouse Effect, global warming, and the El Nino Southern Oscillation. Combines both physical and numerical aspects of geophysical fluid dynamics into a single affordable volume. Explores contemporary topics such as the Greenhouse Effect, global warming and the El Nino Southern Oscillation. Biographical and historical notes at the ends of chapters trace the intellectual development of the field. Recipient of the 2010 Wernaers Prize, awarded each year by the National Fund for Scientific Research of Belgium (FNR-FNRS).

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It is a good one and a right choice for me. I also recommend everyone to purchase for this item if you need it.

Excelent

Disclosure: this is a review / complaint about the paper edition, not about the contents of the book. Content-wise the book is fantastic. The author remains one of the clearest writers in the field. It is one of the best introductory books on GFD. **HOWEVER**, the printed (paper) edition does not have color! The figures on p. 719 (comparison between 20 model outputs for ENSO prediction, there is no difference in grey scale between a blue line and a green line!), or pp. 707-708 (what's the difference between dark red and dark blue in grey-scale, ey?) are not in color. There are many other examples (pp. 491, 492, etc). A lot of information is lost! May be the kindle edition, viewed on KindleFire would have proper images. **Update (April 1st, 2016):** High quality color figures are available online (...)

DON'T BUY The book is an excellent textbook but the quality of the printing is extremely bad. A lot of info in the figures is lost due to the low quality of the printing.

If you want to understand how the ocean & atmosphere work and how to model them, this book is what you need! This book is about physical intuition and mathematical rigour. It provides readers with profound physical insight into the equations governing the planetary fluids and the art of resolving them numerically, together with a series of exercises (various numerical applications with the computer codes) and biographical notes of notable scientists putting the science in historical

perspective. Thank you Benoit & Jean-Marie for this fascinating textbook, which will certainly inspire the new generation of Earth System Scientists.

This 2nd edition of the book offers an outstanding introductory level course in GFD, expanding the content of the 1st edition to related computational methods, useful code examples and other very interesting material such as problems and exercises. The authors have mastered the delicate balance between theoretical aspects and practical applications, scientific details and intuition, emerging challenges and the recognition of seminal and reference works. I wish this book had been available when I was a student!

This book is really an important addition to the rapidly growing library of Atmosphere-Ocean-Climate + Geophysical Fluid Dynamics literature. Its novel approach is to combine and integrate the physical and numerical aspects of the field. The former are essential to the understanding of the processes & phenomena, the latter to manipulating the huge data sets and very large numerical models that help advance the theoretical understanding.

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