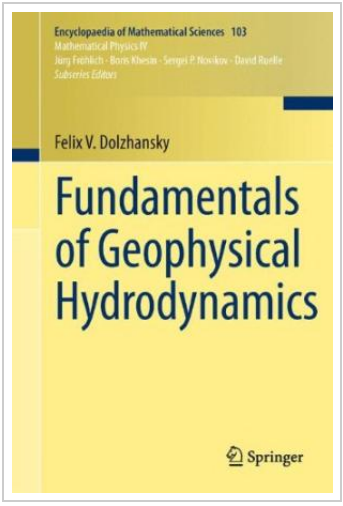

Fundamentals of Geophysical Hydrodynamics

By Felix V. Dolzhansky

Springer-Verlag Gmbh Okt 2012, 2012. Buch. Condition: Neu. Neuware - This newly-translated book takes the reader from the basic principles and conservation laws of hydrodynamics to the description of general atmospheric circulation. Among the topics covered are the Kelvin, Ertel and Rossby-Obukhov invariants, quasi-geostrophic equation, thermal wind, singular Helmholtz vortices, derivation of the Navier-Stokes equation, Kolmogorov's flow, hydrodynamic stability, and geophysical boundary layers. Generalizing V. Arnold's approach to hydrodynamics, the author ingeniously brings in an analogy of Coriolis forces acting on fluid with motion of the Euler heavy top and shows how this is used in the analysis of general atmospheric circulation.This book is based on popular graduate and undergraduate courses given by F.V.Dolzhansky at the Moscow Institute of Physics and Technology, and is the result of the author's highly acclaimed work in Moscow's Laboratory of Geophysical Hydrodynamics. Each chapter is full of examples and figures, exercises and hints, motivating and illustrating both theoretical and experimental results. The exposition is comprehensive yet user-friendly in engaging and exploring the broad range of topics for students and researchers in mathematics, physics, meteorology and engineering. This newly-translated book takes the reader from the basic principles and conservation laws of hydrodynamics to the description...

Reviews

A fresh eBook with a brand new standpoint. It can be rally exciting throgh looking at period of time. I am delighted to inform you that this is the greatest book i have read through during my individual existence and may be he very best publication for ever.

-- ***Era Thompson***

It is simple in go through preferable to comprehend. It is full of wisdom and knowledge It is extremely difficult to leave it before concluding, once you begin to read the book.

-- ***Leif Predovic***