

Cambridge University Press

978-0-521-80681-7 - Large-Scale Atmosphere–ocean Dynamics: Volume I: Analytical Methods
and Numerical Models

Edited by John Norbury and Ian Roulstone

Table of Contents

[More information](#)

Contents

Contributors	ix
Preface	xi
J.C.R. Hunt, J. Norbury and I. Roulstone	
<i>Introduction and Scientific Background</i>	xiii
1. A view of the equations of meteorological dynamics and various approximations	
<i>A.A. White</i>	1
2. Extended-geostrophic Euler–Poincaré models for mesoscale oceanographic flow	
<i>J.S. Allen, D.D. Holm and P.A. Newberger</i>	101
3. Fast singular oscillating limits of stably-stratified 3D Euler and Navier–Stokes equations and ageostrophic wave fronts	
<i>A. Babin, A. Mahalov and B. Nicolaenko</i>	126
4. New mathematical developments in atmosphere and ocean dynamics, and their application to computer simulations	
<i>M.J.P. Cullen</i>	202
5. Rearrangements of functions with applications to meteorology and ideal fluid flow	
<i>R.J. Douglas</i>	288
6. Statistical methods in atmospheric dynamics: probability metrics and discrepancy measures as a means of defining balance	
<i>S. Baigent and J. Norbury</i>	342