Update on Book Project

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Book Status

- Cambridge University Press copyediting
- Proofs to authors this month
- Book advertised on CUP web-site
- Price not final, expected around $80
- Available for sale February 2011
- Many thanks to Rodger Ames for editorial and technical assistance

THE DEVELOPMENT OF

Atmospheric General Circulation Models

Over the last 50 years, models that predict the state of the atmosphere have evolved from conceptual frameworks to advanced computational tools for short- and medium-range weather prediction and climate simulation. This book presents a comprehensive discussion of general circulation models of the atmosphere – covering their historical and contemporary development, their societal context, and current efforts to integrate these models into wider earth-system models. Leading researchers provide unique perspectives on the scientific breakthroughs, overarching themes, critical applications, and future prospects for atmospheric general circulation models. Key interdisciplinary links to other subject areas such as chemistry, oceanography, and ecology are also highlighted.

This book is a core reference for academic researchers and professionals involved in atmospheric physics, meteorology, and climate science, and can be used as a resource for graduate-level courses in climate modeling and numerical weather prediction. Given the critical role that atmospheric general circulation models are playing in the intense public discourse on climate change, it is also a valuable resource for policy makers and all those concerned with the scientific basis for the ongoing public-policy debate.

Cover illustration: this illustration shows how general circulation models decompose the atmosphere into discrete volumes, which in turn include parameterizations of smaller-scale processes, like clouds, which interact with the larger-scale processes. Such models are powerful tools for simulating climate and predicting weather. Image developed by Dr. Lisa Gardiner at the UCAR Office of Education and Outreach for the Center for Multi-Scale Modeling of Atmospheric Processes (CMMAP), a National Science Foundation Science and Technology Center.

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Donner, Schubert and Somerville THE DEVELOPMENT OF Atmospheric General Circulation Models

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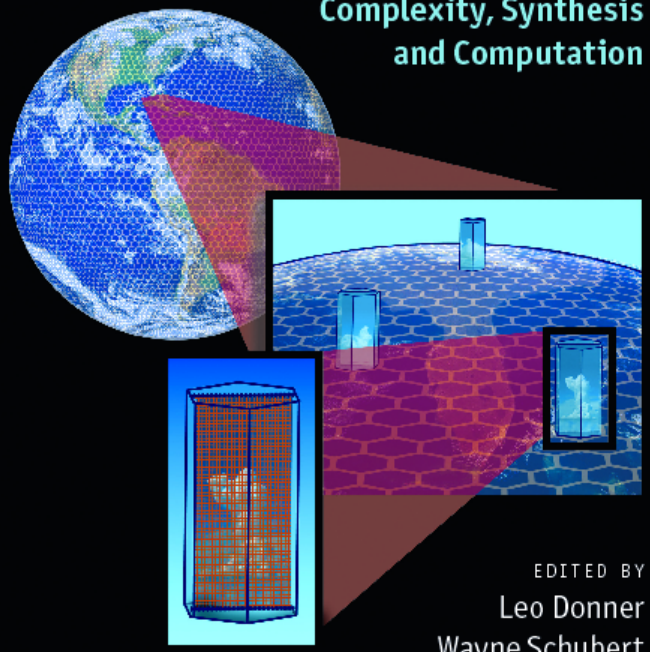
THE DEVELOPMENT OF

Atmospheric General Circulation Models

Complexity, Synthesis and Computation



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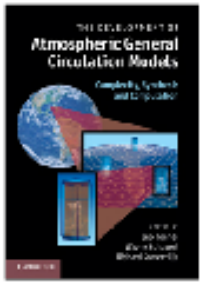

Details

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The Development of Atmospheric General Circulation Models

Complexity, Synthesis and Computation

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