

## Praise for *Physics of the Atmosphere and Climate*:

"Salby's earlier book is a classic. As a textbook it is unequalled in breadth, depth, and lucidity. It is the single volume that I recommend to every one of my students in atmospheric science. This new version improves over the previous version, if that is possible, in three aspects: beautiful illustrations of global processes . . . from newly available satellite data, new topics of current interest . . . and a new chapter on the influence of the ocean on the atmosphere. These changes make the book more useful as a starting point for studying climate change."

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– Associate Professor Hampton N. Shirer, *Pennsylvania State University*

"I recommend it as a foundation for anyone who wants to do research on the important open questions about aerosols, radiation, biogeochemistry, and ocean-atmosphere coupling."

– Professor Jim McWilliams, *University of California, Los Angeles*

Murry Salby's new book provides an integrated treatment of the processes controlling the Earth-atmosphere system developed from first principles through a balance of theory and applications. This book builds on Salby's previous book *Fundamentals of Atmospheric Physics*. The scope has been expanded to include climate, while streamlining the presentation for undergraduates in science, mathematics, and engineering. Advanced material, suitable for graduate students and researchers, has been retained but distinguished from the basic development. The book offers a conceptual yet quantitative understanding of the controlling influences integrated through theory and major applications. It leads readers through a methodical development of the diverse physical processes that shape weather, global energetics, and climate. End-of-chapter problems of varying difficulty develop student knowledge and its quantitative application, supported by answers and detailed solutions online for instructors.

Cover image: Visible imagery during August 2005, revealing twin cyclones that formed in the equatorial Pacific. Being entrained into them is haze from Indonesian forest fires, which developed during prolonged drought under El Niño conditions (negative phase of the Southern Oscillation). While it prevailed over SE Asia, the dense aerosol that was maintained by those fires led to widespread health restrictions and public closures. Courtesy of Australian Bureau of Meteorology and Japan Meteorological Agency.

Cover design by David Levy



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Resources for instructors:

- All figures from the book
- Worked solutions to student problems

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