An Introduction to Boundary Layer Meteorology

Roland B. Stull



Atmospheric Sciences Library

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Part of the excitement in boundary-layer meteorology is the challenge associated with turbulent flow — one of the unsolved problems in classical physics. An additional attraction of the filed is the rich diversity of topics and research methods that are collected under the umbrella-term of boundary-layer meteorology. The flavor of the challenges and the excitement associated with the study of the atmospheric boundary layer are captured in this textbook.

Fundamental concepts and mathematics are presented prior to their use, physical interpretations of the terms in equations are given, sample data are shown, examples are solved, and exercises are included.

The work should also be considered as a major reference and as a review of the literature, since it includes tables of parameterizations, procedures, filed experiments, useful constants, and graphs of various phenomena under a variety of conditions.

It is assumed that the work will be used at the beginning graduate level for students with an undergraduate background in meteorology, but the author envisions, and has catered for, a heterogeneity in the background and experience of his readers.

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