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Collana	Advancing weather and climate science ; ; v. 1
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Soggetti	Atmospheric thermodynamics Precipitation (Meteorology)
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Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	1. Ideal gases -- 2 The first and second laws -- 3. General applications -- 4. The atmosphere under gravity -- 5. Water in the atmosphere -- 6. Vertical structure of the moist atmosphere -- 7. Cloud drops -- 8. Mixtures and solutions -- 9. Thermal radiation -- 10. Non-equilibrium processes -- Appendix A. Functions of several variables -- Appendix B. Exergy and thermodynamic stability -- Appendix C. Thermodynamic diagrams -- Appendix D. Relationship between energy density and energy flux -- Index.
Sommario/riassunto	Thermal Physics of the Atmosphere offers a concise and thorough introduction on how basic thermodynamics naturally leads on to advanced topics in atmospheric physics. The book starts by covering the basics of thermodynamics and its applications in atmospheric science. The later chapters describe major applications, specific to more specialized areas of atmospheric physics, including vertical structure and stability, cloud formation, and radiative processes. The book concludes with a discussion of non-equilibrium thermodynamics

as applied to the atmosphere. This book provides a thorough introduction and invaluable grounding for specialised literature on the subject. Introduces a wide range of areas associated with atmospheric physics; Starts from basic level thermal physics; Ideally suited for readers with a general physics background; Self-assessment questions included for each chapter; Supplementary website to accompany the book.
