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Sommario/riassunto	This book covers the role of water in global atmospheric phenomena, focussing on the physical processes involving water molecules and water microparticles. It presents the reader with a detailed look at some of the most important types of global atmospheric phenomena involving water, such as water circulation, atmospheric electricity and the greenhouse effect. Beginning with the cycle of water evaporation and condensation, and the important roles played by the nucleation and growth processes of water microdroplets, the book discusses atmospheric electricity as a secondary phenomenon of water circulation in the atmosphere, comprising a chain of processes involving water molecules and water microdroplets. Finally, the book discusses aspects of the molecular spectroscopy of greenhouse atmospheric components, showing how water molecules and water microdroplets give the main contribution to atmospheric emission in the infrared spectrum range. Featuring numerous didactic schematics and appendices detailing all necessary unit conversion factors, this book is useful to both active researchers and doctoral students working in the fields of atmospheric physics, climate science and molecular spectroscopy.