Climate Physics involves understanding the composition and structure of the atmosphere and ocean and their coupled, planetary-scale behaviour and evolution. It also includes the principles of new global measurement systems using satellites and remote sensing instrumentation, as well as the theory underlying data analysis and the construction of numerical computer models. These make quantitative studies and predictions possible of topical issues such as global warming and stratospheric ozone depletion, and are increasingly on the syllabus for environmental science courses.

Elementary Climate Physics is an introductory text that covers these and other climate-related topics at a level suitable for undergraduates in the physical sciences, and for graduate students and others requiring a quantitative introduction to the field. It aims to set out the basic mechanisms controlling climate, to apply relatively simple physics to the problem of climate change, and to provide a foundation for more advanced work. References to appropriate further reading at a higher level are provided, along with some sample examination questions.

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