Book Review

“Lectures in Meteorology”, by Nicole Molders and Gerhard Kramm, Springer Atmospheric Sciences, Springer, 2014; ISBN: 978-3-319-02143-0 (Hardback)

MUGE KOMURCU¹

“Lectures in Meteorology” is a comprehensive book on meteorology that provides concise lectures on many topics ranging from atmospheric physics, atmospheric chemistry and atmospheric dynamics to climate. I particularly enjoyed that it starts with brief historical references on the development of meteorology in Chapter 1, and ends with brief explanations of measurement devices in the last of the appendices. Each chapter provides a good, concise and comprehensive lecture on a meteorological concept, hence would be useful as reference reading for advanced-level classes focusing on the particular concept. While the incorporation of derivations for several equations are particularly helpful for graduate students, the limited detailed physical explanations of the concepts with accompanying illustrations and the lack of linkage of the separate chapters toward a “big picture” will narrow the usage of this book as a reference book rather than a main textbook for a graduate-level introduction to meteorology class. Furthermore, the traditionally organized final chapter, titled “Climate and Climatology”, would serve as a more up-to-date reference if it was expanded to

include a more detailed and cohesive description of: The components of the climate system; current understanding of the feedbacks in the climate system; small-scale processes affecting regional and global climate and a detailed section on Earth-System modeling. Though some of these concepts are somewhat explained, with the suggested expansion of the final chapter, the book could also serve as a good reference for readers interested in learning meteorology to study global climate change.

Designed more as a reference book, the book is a bit of a dry read to be an undergraduate-level textbook and as a reference book, it is a more comprehensive but heavier read compared to other undergraduate-level reference books in meteorology. Therefore, this book would best serve as a quick reference book for atmospheric scientists and graduate students studying atmospheric science or to the point study guide for scientists of different expertise interested in learning meteorology for research applications. It is undeniably a strong reference book that will be a great addition to any library.

¹ Earth Systems Research Center, University of New Hampshire, Durham, NH, USA. E-mail: muge.komurcu@unh.edu