[Free pdf] Climate Change Science: A Modern Synthesis: Volume 1 - The Physical Climate

Climate Change Science: A Modern Synthesis: Volume 1 - The Physical Climate

G. Thomas Farmer, John Cook
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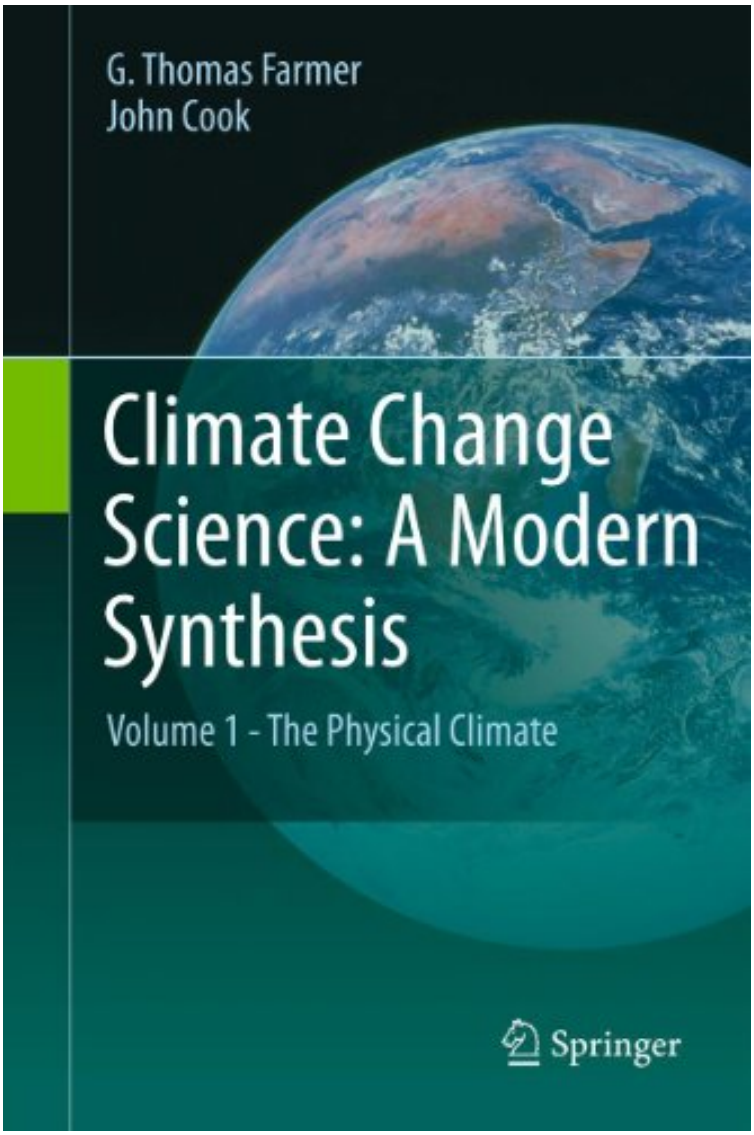

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G. Thomas Farmer, John Cook : Climate Change Science: A Modern Synthesis: Volume 1 - The Physical Climate before purchasing it in order to gage whether or not it would be worth my time, and all praised Climate Change Science: A Modern Synthesis: Volume 1 - The Physical Climate:

1 of 1 people found the following review helpful.) It is a fantastic reference and resource - and as issues arise in ...By Ross StevensI purchased John Cooks book a few months ago (more correctly, my wife gave it to me for my birthday!)It is a fantastic reference and resource - and as issues arise in that parallel world of climate change denialism,

'A Modern Synthesis' enables me gain a broad understanding of the particular subject, with great illustrations and up-to-date references.I am on the mailing list for John's 'Skeptical Science' forum, to which this book is an essential add-on, for me.My awareness and interest in climate change science was awakened a few years ago when I attended a lecture by James Hansen, and then purchased ' Storms of My Grandchildren'. For me, Johns book is a great follow up resource.Ross Stevens,North AdelaideSouth Australia0 of 1 people found the following review helpful. Five StarsBy Rafique AhmedI was very satisfied with this purcahse.6 of 7 people found the following review helpful. Milankovitch Cycles and Pleistocene Glaciation, page 409 in the book.By Marvin A. SebournDo the authors "implausibly attribute Milankovitch eccentricity cycles to recent Pleistocene pattern of 100ky glacial oscillations" as the reviewer suggests? As a likely contributing factor, yes. As a sole determinant, no. Read the book, or at least access the relevant parts through search functions.Directly from the book, 21.1 Glacials and Interglacialspage 409:"Because so much water was taken up as ice, global sea level dropped approximately 140 m (448 ft), exposing a great deal of the present-day continental shelf. The causes of the Pleistocene cycle of glacial and interglacial episodes ARE STILL BEING DEBATED. It appears that continental positions, oceanic circulation, solar-energy fluctuations, and Earth's orbital cycles COMBINED to generate these glacial conditions, so perhaps ii is inappropriate lo pinpoint any single cause. However, a trigger for the first glacial episode was PROBABLY an orbital one and the apparent 100.000-year periodicity of the major advances strongly suggests an astronomical cause. HOWEVER, the 100,000 year cycle, as we've seen, is the weakest of the astronomical cycles and MANY SCIENTIST THINK IT MUST HAVE BEEN A COMBINATION OF FACTORS that initiated the glaciation (Nebraskan in North America) about 680.000 years ago".Emphasis mine. A long way from what the reviewer wrote.I was forced to make a star rating before posting this. I have not read the entire book. My comments refer only to the one-star review by Mr Wallace. If I buy and read this book, I will amend my rating, if appropriate.osugeography

An introduction to the principles of climate change science with an emphasis on the empirical evidence for climate change and a warming world. Additional readings are given at the end of each chapter. A list of "Things to Know" opens each chapter. Chapters are arranged so that the student is first introduced to the scientific method(s), examples of the use of the scientific method from other sciences drawn from the history of science with an emphasis on climate science. Climate science is treated in each chapter based on the premise of global warming. Chapter treatments on the atmosphere. biosphere, geosphere, hydrosphere, and anthroposphere and their inter-relationships are given.

From the book reviews:ldquo;Climate Change Science: A Modern Synthesis is the latest entry in a small but growing field of texts aimed at students in introductory college courses in climate science. hellip; The book clearly acknowledges the broadly interdisciplinary nature of climate change science, with 22 chapters covering a wide range of topics in climate science. hellip; the book is designed so that the chapters can largely stand on their own and an instructor can pick and choose which topics to emphasize.rdquo; (Jonathan Cole, Reports of the National Center for Science Education, Vol. 34 (4), July-August, 2014)ldquo;This book is the first of a two-part series focused on Earthrsquo;s climate in the past, present, and future. Volume 1 deals with physical aspects of climate science and provides a broad introduction to scientific inquiry and the history of the discipline, followed by detailed descriptions of climate system components and their importance in a climate change context. hellip; this volume may also be a useful reference for people working in climate-related disciplines. Summing Up: Recommended. Upper-division undergraduates, graduate students, researchers/faculty, professionals.rdquo; (J. Schoof, Choice, Vol. 51 (4), December, 2013)From the AuthorThis book is volume one of a two-part series on Climate Change Science. Volume 2's title is "Earth's Climate History." nbsp;Volume 2 is being written and should be published within the current year (2013). The two volumes are for a one-year college course for college undergraduates who wish to become more aware of Earth's current climate and it's evolution to the present day. nbsp;Each volume will be stand-alone and each may be used in a one-semester science class.From the Back CoverClimate Change Science: A Modern Synthesis introduces the principles of climate change science, emphasizing the empirical evidence for climate change and a warming world. Divided into eleven sections, this comprehensive book opens with an introduction to basic scientific principles including the scientific method, the laws of thermodynamics, the gathering and interpretation of data, biographical notes on a few of the giants of science and their contributions, profiles of selected climate change scientists and their contributions, Newtonrsquo;s laws of motion and more. The remaining sections include an Overview of Climate Change Science; Earthrsquo;s Atmosphere; The World Ocean and Climate; Earthrsquo;s Cryosphere and Climate History; Land and Its Climates; Climate Models; Paleoclimatology; Future Climates and Mitigation; Skeptics and Deniers of Global Warming and Specific Declarations against Climate Science and Climate Scientists. The book offers extensive coverage of the major aspects of climate change and its effects and interactions with the atmosphere, the World Ocean, glaciers and land. Modeling the Climate receives its own chapter, and there are sections on past climates and a chapter outlining the ideas of climate change skeptics and deniers and the scientific evidence that either refutes or substantiates their claims.Each chapter opens with a list of ldquo;Things to Know.rdquo; The book goes on to offer chapter-length discussion of the atmosphere, biosphere, geosphere, hydrosphere and

anthroposphere and their inter-relationships and much more. Designed as an introductory text for use at the undergraduate level, Climate Change Science assumes no science background on the part of the reader.