An Online Textbook: A Rich Resource for Tropical Meteorology Education

Arlene Laing[1], Jenni-Louise Evans[2], Wendy Schreiber-Abshire[1]

[1]UCAR/COMET®, Boulder, Colorado

[2]Department of Meteorology, Pennsylvania State University, University Park, Pennsylvania

RESPONDING TO A NEED

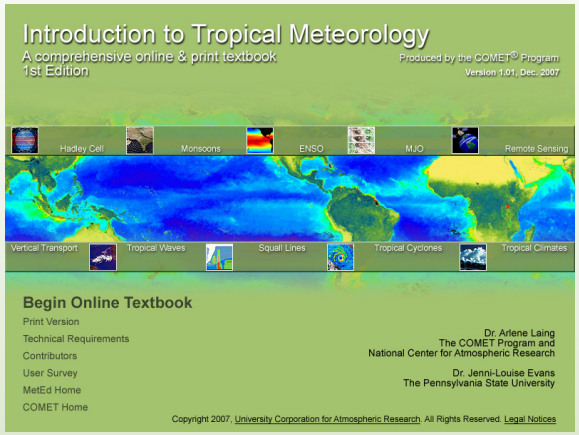
The situation before 2007 …

"Unfortunately, there is still no tropical meteorology textbook. As a result, you will be provided with material from various sources, including journal articles, chapters from text, and handouts of figures."

In response to this need, the COMET program has launched a new online tropical meteorology textbook. The textbook covers fundamental science of the tropical atmosphere and synthesizes the tremendous increase in our knowledge of tropical meteorology during the past two decades.

It is aimed at undergraduate students who have completed introductory meteorology and who know basic thermodynamic and dynamic meteorology. It is also a great resource for early graduate students, professionals, and anyone interested in tropical weather and climate.

The material is reviewed for scientific accuracy and appropriateness of academic level by scientists and professors with expertise in diverse aspects of tropical meteorology.



http://www.meted.ucar.edu/tropical/textbook/

CHAPTERS

Will be added to the Web site as they are completed.

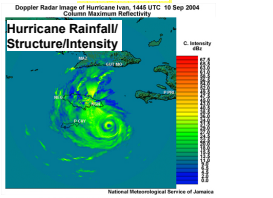
Introduction to Tropical Meteorology, Version 1.01 — The COMET® Program

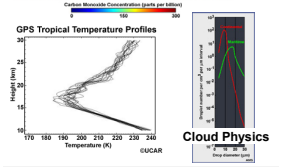
Contents

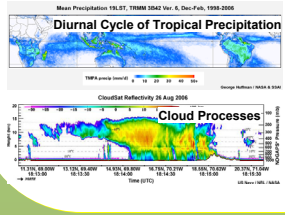
Preface
Chapter 1: Introduction
Chapter 2: Radiation and Temperature
Chapter 3: Tropical Remote Sensing Applications (Available Chapter, August 2007)
Chapter 4: Global Circulation and the Tropics
Chapter 5: Tropical Variability
Chapter 6: The Distribution of Moisture and Precipitation
Chapter 7: Vertical Transport of Energy and Moisture
Chapter 8: Synoptic-scale Weather Systems
Chapter 9: Mesoscale and Local Weather Systems
Chapter 10: Tropical Cyclones
Chapter 11: Observations, Analysis, and Prediction of Tropical Weather
Chapter 12: Tropical Climate and Regional Climate Change

ANIMATIONS & ILLUSTRATIONS

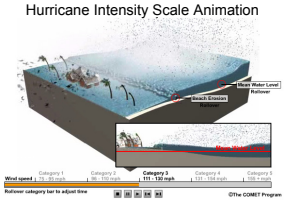
Figures

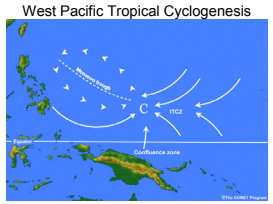


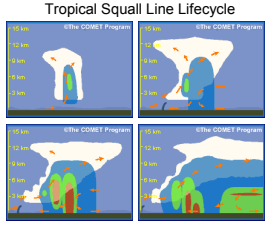




Conceptual Models

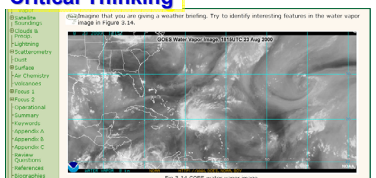






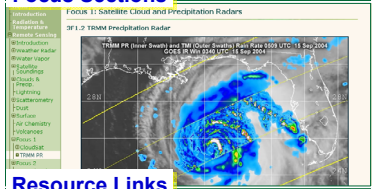
LEARNING TOOLS

Critical Thinking

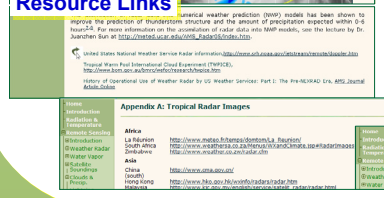


Feedback

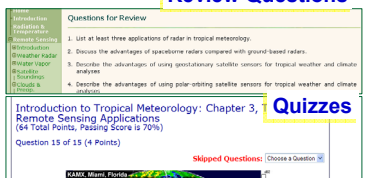
Focus Sections



Resource Links

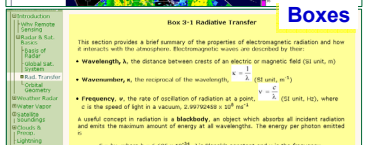


Review Questions

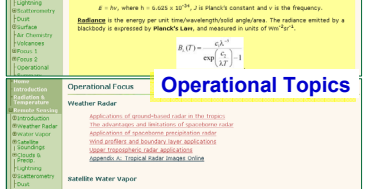


Quizzes

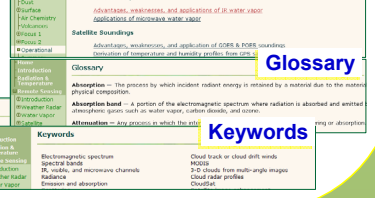
Boxes



Operational Topics



Glossary

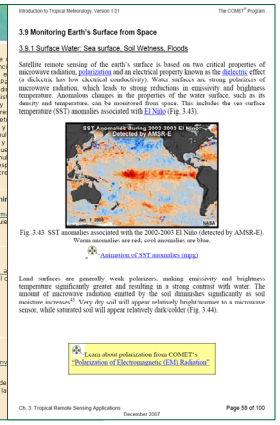


Keywords

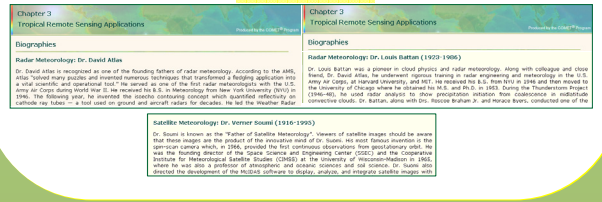
EXTRAS

El Libro en Español

PDF for Printing



Biographies



This poster was prepared by the University Corporation for Atmospheric Research under cooperative agreement award #NA06NWS4670013 from the National Oceanic and Atmospheric Administration (NOAA), U.S. Department of Commerce. The statements, findings, conclusions, and recommendations are those of the author and do not necessarily reflect the views of the National Oceanic and Atmospheric Administration (NOAA), U.S. Department of Commerce.