Record Nr. UNINA9910437941503321 Autore Krishnamurti T.N Titolo Tropical Meteorology: An Introduction // by T.N. Krishnamurti, Lydia Stefanova, Vasubandhu Misra New York, NY:,: Springer New York:,: Imprint: Springer,, 2013 Pubbl/distr/stampa **ISBN** 1-4614-7409-4 Edizione [1st ed. 2013.] Descrizione fisica 1 online resource (427 p.) Collana Springer Atmospheric Sciences, , 2194-5217 Disciplina 551.6913 Soggetti Atmospheric sciences Meteorology Oceanography **Environmental sciences** Climate change Atmospheric Sciences Math. Appl. in Environmental Science Climate Change Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references and index. Nota di contenuto The Zonally Averaged Tropical Circulation -- Zonally Asymmetric Features in the Tropics -- The Intertropical Convergence Zone -- Heat Induced Circulations -- Monsoons -- Tropical Waves and Tropical Depressions -- The Madden Julian Oscillation -- Scale Interaction in the Tropics -- El Nino and Southern Oscillation -- Diabatic Potential Vorticity Over the Global Tropics -- Tropical Cloud Ensembles --Tropical boundary layer -- Radiative Forcing -- Dry and moist static stability -- Hurricane Observations -- Genesis, Tracks and Intensification of Hurricanes -- Modeling and Forecasting of Hurricanes -- Sea Breeze and Diurnal Change Over the Tropics -- Tropical Squall Lines and Mesoscale convective systems. Sommario/riassunto This book is designed as an introductory course in Tropical Meteorology targeting graduate or advanced undergraduate students.

The material within can be covered in a one-semester course program. The text starts from the global scale-view of the Tropics, addressing

the zonally symmetric and asymmetric features of the tropical

circulation. It then goes on to progressively smaller spatial and time scales – from the El Niño Southern Oscillation and the Asian Monsoon, down to tropical waves, hurricanes, sea breezes, and tropical squall lines. The emphasis in most chapters is on the observational aspects of the phenomenon in question, the theories regarding its nature and maintenance, and the approaches to its numerical modeling. The concept of scale interactions is also presented as a way of gaining insight into the generation and redistribution of energy for the maintenance of oscillations of a variety of spatial and temporal scales.