Global Perspectives on Tropical Cyclones: From Science to Mitigation

This book is a completely rewritten, updated and expanded new edition of the original Global Perspectives on Tropical Cyclones published in 1995. It presents a comprehensive review of the state of science and forecasting of tropical cyclones together with the application of this science to disaster mitigation, hence the tag: From Science to Mitigation.

Since the previous volume, enormous progress in understanding tropical cyclones has been achieved. These advances range from the theoretical through to ever more sophisticated computer modeling, all underpinned by a vast and growing range of observations from airborne, space and ocean observation platforms. The growth in observational capability is reflected by the inclusion of three new chapters on this topic. The chapter on the effects of climate change on tropical cyclone activity is also new, and appropriate given the recent intense debate on this issue. The advances in the understanding of tropical cyclones which have led to significant improvements in forecasting track, intensity, rainfall and storm surge, are reviewed in detail over three chapters. For the first time, a chapter on seasonal prediction is included. The book concludes with an important chapter on disaster mitigation, which is timely given the enormous loss of life in recent tropical cyclone disasters.

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