

Special Issue

Toward Improvement of Typhoon/Hurricane Prediction with Better-Initialization and Higher-Resolution Models

Message from the Guest Editors

In this Special Issue, any research advancement within this interesting area is welcome, for the improvement of numerical forecast skill. In particular, recent typhoons over the western North Pacific and South China Sea have been concerned with more remote observations available in this region. For example, GNSS radio occultation (RO) data now may provide evenly dense global coverage in the subtropical and tropical regions and potentially have great impacts on tropical cyclone prediction. Integration with remote observations, including RO data in a 3DVAR/EnKF hybrid data assimilation (DA) system, is now present in most operational models. The performance of operational models on typhoon/hurricane forecasts with hybrid DA is worth updating in this Special Issue. Topographic effects of steep mountains affecting the dynamic mechanisms of typhoon track and structural evolution are essentially important for prediction on track with or without deflection, as well as torrential rainfall over the terrain. Environmental factors are also vital to the development of translational typhoons/hurricanes.

Guest Editors

Dr. Ching-Yuang Huang

Department of Atmospheric Sciences, National Central University,
Taoyuan City 320, Taiwan

Dr. Shu-Ya Chen

GPS Science and Application Research Center, National Central
University, Taoyuan City 320, Taiwan

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Atmosphere
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
atmosphere@mdpi.com

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Message from the Editor-in-Chief

Continued developments in instrumentation and modeling have driven atmospheric science to become increasingly more complex with a deeper understanding of concepts, mechanisms, and interactions. This is the field that innovation built and it has led to a better appreciation for the complexity with atmosphere. Human life is intertwined in this complexity as we strive to better understand our atmosphere. Climate change is constantly stretching the limits of our thinking and forcing new ideas and concepts to be played out. Welcome to the Anthropocene!

Editor-in-Chief

Dr. Daniele Contini

Institute of Atmospheric Sciences and Climate (ISAC), National Research Council (CNR), Str. Prv. Lecce-Monteroni km 1.2, 73100 Lecce, Italy

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