

Special Issue

Investigating Tropical Cyclone Intensity Changes with Advanced Data Analysis Techniques

Message from the Guest Editors

The techniques for TC intensity changes include numerical simulations, case studies, composite analysis for identifying important features, climatic and persistence models, as well as for developing statistical models. In this special issue, we invite original and review articles that use advanced data analysis techniques for the investigation of TCs, mainly on intensity changes such as TC genesis, intensification, and rapid intensity changes. Those contribution may leverage the diverse data sources, in situ observations, airborne measurements, satellite remote sensing data, and reanalysis gridded data arrays, and cloud-based platforms. The advanced techniques include but are not limited to

- Artificial intelligence (AI) for enhancing TC intensity change prediction capabilities
- Explainable statistical/machine learning methods of discovering precursors to TC intensity changes
- Automated machine learning frameworks for improving TC intensity change rapid intensification

In summary, contributing papers should highlight the roles of advanced data analysis techniques in the investigation of TC intensity changes.

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Deadline for manuscript submissions

closed (31 October 2022)



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About the Journal

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

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