Special Issue

Multi-Scale Climate Simulations

Message from the Guest Editor

Global warming has become one of the most prominent features of long-term climate change. It is generally recognized that the dominant factor is external forcing. The influence of interdecadal or interannual changes, such as internal variability, leads to the complex characteristics of multi-scale interactions in the climate system. With increasing computer technology and understanding of climate change, climate models have been developed and updated for generations. Although models have improved their simulation of multi-scale changes in the climate system, errors still exist. The aim of this Special Issue is to go deeply into the study of multi-scale climate simulations. Topics of interest for the Special Issue include, but are not limited to:
1) Multi-scale change characteristics of climate system;
2) Causes and mechanisms of multi-scale climate change;
3) Model performance in multi-scale climate change, including error and its source analysis, and model improvement;
4) The detection and attribution of multi-scale climate change;
5) Future projections.
Knowledge of the above is of great scientific and societal importance to understanding climate change and developing climate models

Guest Editor

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Deadline for manuscript submissions

closed (20 June 2024)

Atmosphere

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mdpi.com/si/176923

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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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