

Special Issue

Advances in Methods for the Investigation of the Atmospheric Water Cycle

Message from the Guest Editor

The atmospheric water cycle is a crucial component of Earth, playing an important role in understanding climate change, weather patterns, and water resource management. This Special Issue welcomes submissions on, but not limited to, the following topics:

- Novel remote sensing instruments and data processing methods;
- Monitoring and analysis methods for water vapor transport;
- High-resolution simulations of the atmospheric water cycle;
- Applications of machine learning and artificial intelligence in optimizing water cycle models;
- Changes in the water cycle under different climate scenarios due to climate change;
- Impacts of extreme weather events on water resources;
- Quantitative methods for the dynamic relationships between precipitation, evaporation, soil moisture, and vegetation;
- Assessment methods for the impacts of climate change on transboundary water resources.

Guest Editor

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Deadline for manuscript submissions

closed (20 January 2026)



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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

Dr. Daniele Contini

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