



Transport Processes in the Atmosphere

Guest Editor:

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submissions:

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Message from the Guest Editor

Transport and mixing in fluids are ubiquitous in nature, and Lagrangian dynamics play important roles in shaping these processes. They have far-reaching implications in many interwoven fields across different scales and among various disciplines. At the core of these studies, the collective information on trajectories of passive or active tracers embedded in some background flows dictates how transport barriers and corridors form, and how models and analyses of related fields can be formulated around such dynamical patterns. This Special Issue brings together related expertise on Lagrangian transport and mixing processes in the atmosphere. The aim is to cross-fertilize advances in applied mathematics and geophysics to improve our understanding of atmospheric transport. Original research or review papers are welcome covering a wide range of topics, including but not limited to:

- Theories and methods on Lagrangian dynamics related to the atmosphere;
- Relevant numerical and computational tool developments;
- Analyses and re-analyses of atmospheric transport processes at different scales;
- Lagrangian modeling, chemical tracer dynamics.





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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!

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