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Measurement and Modeling of the Precipitation Particle Size Distribution

Guest Editors:

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Deadline for manuscript submissions:

closed (15 June 2020)

Message from the Guest Editors

Dear Colleagues,

The precipitation particle size distribution (PSD) is the fundamental metric that describes rain and snow. Knowledge of how raindrops and snowflakes as well as other hydrometeors are distributed within the atmosphere enables more precise hydrometeorological forecasts, more accurate remote sensing, and better characterization of their erosive effect on soil and materials. This Special Issue brings together research on the PSD of both rain and snow, highlighting some key advances made in their measurement and modeling in the past decade, with a particular focus on remote sensing and cloud-resolving models.

We invite you to contribute articles to this Special Issue by reporting on current research entailing the measurement of precipitation particle sizes, both in situ and via remote sensing, as well as modeling of the precipitation PSD, including its representation by statistical models and parameterization in cloud-resolving models.

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Editor-in-Chief

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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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