



Atmospheric Aerosol Composition and its Impact on Clouds

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Message from the Guest Editor

Dear Colleagues,

Aerosol-cloud interactions modulate the surface radiation budget and precipitation processes, globally. The ability and efficiency in which aerosols serve as cloud condensation nuclei or ice nucleating particles depends on their composition, i.e., chemistry, biology, and morphology. Thus, evaluating aerosol composition is crucial for improving our understanding of aerosol-cloud processes. Although an abundance of research on aerosol characterization and cloud-forming capabilities exists, aerosol-cloud processes and their effects on radiation and precipitation remain poorly constrained due to the complex and evolving nature of aerosol properties, sources, and abundance.

The objective for this Special Issue is to highlight novel research focused on the characterization of aerosols in the context of cloud formation, cloud radiative forcing, and/or precipitation processes. Manuscripts on these aspects are welcome.

Dr. Jessie M. Creamean

Guest Editor





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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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