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# Studying the Effects of Dust on Weather

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Deadline for manuscript submissions:
**closed (1 June 2018)**

## Message from the Guest Editors

Dear Colleagues,

This Special Issue intends to feature current efforts towards understanding the effects of mineral dust on weather at all scales and bring more attention from the operational and research communities to this important subject. Dust aerosols can directly interact with radiation and change the energy budget of the atmosphere and surface, modifying the thermal and dynamical structure of the atmosphere. In addition, suspended dust particles can serve as both cloud condensation and ice nuclei, thus, potentially altering cloud microphysical processes. Sometimes, dust may completely determine a storm's fate. Mineral dust aerosols can be transported far from source areas, giving dust the potential to affect weather over large portions of the Earth. Due to the large, daunting uncertainty in long-term climate simulations introduced by aerosol-radiation-cloud interactions, this SI emphasizes the impact of dust on weather, which will help us better understand the physics of dust–atmosphere processes and solidify the foundation for modeling and understanding the effects of mineral dust on climate and weather.

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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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