



Aerosol–Cloud–Precipitation Interactions: From Weather to Climate

Guest Editor:

Dr. Xianwen Jing

Department of Climate and
Space Sciences and Engineering,
University of Michigan, 2455
Hayward Street, Ann Arbor, MI,
USA

xianwen@umich.edu

Deadline for manuscript
submissions:

22 November 2021

Message from the Guest Editor

Dear Colleagues,

Aerosols or their predecessors from human activities, with varying properties and geographical locations, can remarkably alter the microphysical characteristics of clouds and their propensity to generate precipitation, which affects not only the local weather characteristics, but also the radiation budget and climate on larger scales.

However, great uncertainties still persist in the modelling of aerosol–cloud–precipitation interaction (ACPI) in both numerical weather prediction and global climate models. Challenges arise largely from the broad span of scales: from submicrons to tens or hundreds of kilometers. It therefore warrants more intensive cross-scale research efforts, from both the observational and modeling approaches, in order to disentangle the role of aerosols in affecting weather and climate.

This Special Issue is expected to focus on studies on ACPI on various spatial and temporal scales. All studies that enhance our understanding of the mechanisms within and the impacts from ACPI are highly relevant to this Special Issue. Cross-scale studies that bridge the gap between the weather and climate effects of ACPI are especially welcome.

