Advances in Meteorology

Hindawi

Special Issue on

Experimental, Observational, and Numerical Research on Intentional and Inadvertent Weather Modification

CALL FOR PAPERS

Since the discovery of the dry ice and silver iodide effects on clouds by Shaefer and Vonnegut in the late 1940s and early 1950s, artificial weather modification operations that deliberately introduce seeding materials into clouds to impact clouds and precipitation have been practiced all around the world. Beyond precipitation enhancement, the practice of intentional weather modification quickly expanded to include hail suppression, fog and haze dissipation, cloud dissipation, rain suppression, and snow reduction. Along with these intentional activities, clouds and precipitation have been inadvertently changed by human activities such as industrial air pollution and urbanization. Despite the inherent difficulty in assessing the effect of intentional and inadvertent weather modification, various materials, methods, technologies, and applications of conducting and evaluating weather modification have been developed. During the last several decades, fundamental theories, observational instruments, and especially numerical models have advanced dramatically in the fields of cloud microphysics, dynamics, and cloud-aerosol interactions to a level that the effects of intentional and inadvertent weather modification can be more or less quantitatively assessed.

This special issue aims to provide assessments of the state of the science, publish high-quality research articles on various topics, and address opportunities and challenges in the fields of intentional and inadvertent weather modification.

Potential topics include but are not limited to the following:

- Reviews on different technologies/methods/materials/approaches of weather modification
- Summary of recent weather modification programs
- Novel technologies/methods/materials/approaches for conducting/evaluating weather modification operations and experiments
- Laboratory experiments on quantifying the impact of seeding materials
- Clinical studies of weather modification impact
- Statistical analysis of weather modification impact
- Numerical simulations of weather modification events
- Observational and numerical studies of inadvertent weather modification events
- Weather modification in the changing climate system (no geoengineering papers will be considered in this special issue)

Authors can submit their manuscripts through the Manuscript Tracking System at http://mts.hindawi.com/submit/journals/amete/eonr/.

Papers are published upon acceptance, regardless of the Special Issue publication date.

Lead Guest Editor
Lulin Xue, National Center for Atmospheric Science, Boulder, USA
xuel@ucar.edu

Guest Editors
Bart Geerts, University of Wyoming, Laramie, USA
geerts@uwyo.edu

Xueliang Guo, Chinese Academy of Meteorological Sciences, Beijing, China
guoxl@camscma.cn

István Geresdi, University of Pécs, Pécs, Hungary
geresdi@gamma.ttk.pte.hu

Steven Siems, Monash University, Melbourne, Australia
steven.siems@monash.edu

Submission Deadline
Friday, 1 September 2017

Publication Date
January 2018