

Special Issue

The Michigan-Ontario Ozone Source Experiment (MOOSE)

Message from the Guest Editors

MOOSE has three components. The first component, the Great Lakes Meteorology and Ozone Recirculation (GLAMOR) sub-experiment, deals with the physics and chemistry of land-lake atmospheric circulations and their influence on regional oxidative capacity, including the role of reactive nitrogen reservoirs such as HONO. The second, called the Chemical Source Signatures (CHESS) sub-experiment, characterizes emissions of ozone precursors and air toxins (e.g., formaldehyde) from industrial point sources and their ambient concentration impacts on fine to regional scales. The third component, Methane Releases from Landfills and Gas Lines (MERLIN), examines the role of large methane leaks in enhancing the amount of ozone formed from surrounding emissions of more reactive Volatile Organic Compounds (VOCs) and nitrogen oxides (NO_x). The papers in this Special Issue are devoted to the experimental methods and data interpretation methods, including real-time measurements and advanced modeling approaches, used during MOOSE, and the latest scientific conclusions drawn from these that may enhance ozone attainment strategies in the border region.

Guest Editors

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Deadline for manuscript submissions

closed (30 September 2023)



Atmosphere

an Open Access Journal
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Impact Factor 2.3
CiteScore 4.9



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About the Journal

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!

Editor-in-Chief

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