

Seminar Series 2015 - 2016

Southern Ontario Centre for Atmospheric Aerosol Research
University of Toronto

Exploring the connections between aerosols and clouds in the high Arctic summer



Julia Burkart
Post Doctoral Fellow

Dept. of Chemistry
University of Toronto

Megan Willis
PhD Student

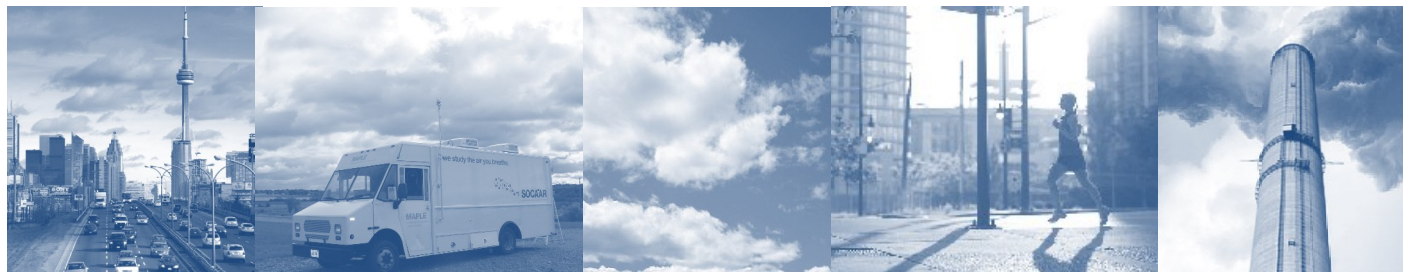
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The Arctic is a complex and poorly understood aerosol environment, impacted by strong anthropogenic contributions during winter months and by regional sources in cleaner summer months. With melting sea-ice it is likely that the influence from the ocean on the high Arctic atmosphere will increase. Using results from NETCARE summer aircraft campaign, this talk will explore the interactions of oceanic aerosol sources with particles and clouds in the pristine summertime Arctic. Extensive measurements of trace gases, aerosol and cloud properties were carried out in July 2014 from Resolute Bay, Nunavut near the marginal ice zone in Lancaster Sound. Frequent observations of small particles suggest that new particle formation occurred primarily in pristine air. These small particles were observed to grow into the cloud condensation nuclei active size range, with aerosol composition indicating the influence of marine biogenic sources. Low-level clouds were common and their properties are influenced by these particles originating from local sources, thereby potentially affecting the radiation balance in the summertime Arctic.

November 4, 2015, 3 – 4 PM

Wallberg Building, 200 College Street, Room 407



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