

Seminar Series 2014 - 2015

Southern Ontario Centre for Atmospheric Aerosol Research
University of Toronto

Two Perspectives on Ultrafine Particles: Modeling Size-Resolved Urban Traffic Impacts in Los Angeles, and One Year of Number Size Distribution Measurements in the North Central U.S.

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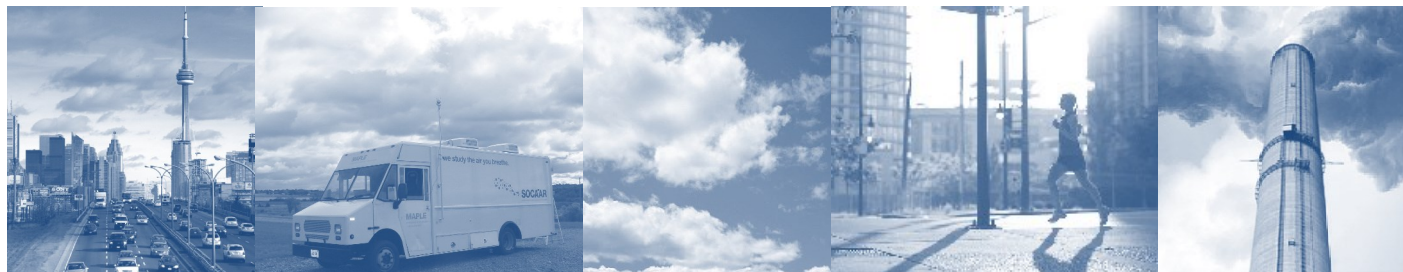


A 10 month field campaign monitoring the aerosol number size distribution was conducted in 2013 and 2014 at the long-term reference site in Bondville, Illinois. Results from this study, including diurnal and seasonal patterns and the influence of new particle formation and growth events on the size distribution, will be discussed. The site is representative of a wide region of the Midwestern U.S. and is home to many long-term monitoring stations of NASA, NOAA, and the US EPA, including a 20+ year record of particle number concentration and aircraft vertical profiles of optical properties, number concentration and particle number size distribution. Ongoing efforts to model the number size distribution and cloud nuclei concentration using nucleation explicit WRF-Chem will be presented.

In a second portion of the talk, the University of Iowa Aerosol Screening Model (ASM), a physically-based vehicular UFP model for use in near-road environments, is evaluated versus 11 sites in the Los Angeles area and used to examine sensitivity of ultrafine aerosols to road types, road proximity, and vehicle class.

December 16, 2014, 2 – 3 PM

Wallberg Building, 200 College Street, Room 407



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