

# **The Fog Remote Sensing and Modeling (FRAM) Field Project and Preliminary Results**

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The purpose of the Fog Remote Sensing And Modeling (FRAM) field project is to characterize fog formation, including its evolution, and dissipation, in continental and marine environments, and then to use the derived results in numerical simulations. Phase 1 and 2 of the project took place during the winter of 2005-2006 in southern Ontario and the summer of 2006 in Nova Scotia along the Atlantic coast, respectively. These phases focus on winter continental fog and summer marine fog, respectively. Observations include droplet, ice, and aerosols sizes and concentrations from optical probes, visibility from a visibility meter, liquid water path from a microwave radiometers (MWR), and inferred fog properties such as mean volume diameter, liquid water content, number concentration of droplets, and liquid water path from satellites. The results will be used to develop microphysical parameterizations which could be incorporated in numerical forecast models. During the winter of 2005-2006, an increased frequency of fog formation was observed in southern Ontario relative to the 30-year climatology. Most of the events occurred while rain was falling onto a snow surface resulting in a higher boundary layer relative humidity, and fog formation. Overall, the mechanisms for fog formation, along with some model simulations using the derived microphysical parameterizations will be discussed