



AUTOMATED MOBILE METEOROLOGICAL OBSERVING STATIONS

The 2015 Pan American and Parapan American Games will take place this year in Toronto and surrounding areas from July 10-26 and August 7-15, respectively. The Toronto 2015 Games is the largest multi-sport event Canada has ever hosted, involving 7,600 athletes competing in 51 sports (36 Pan Am and 15 Parapan) in 30 different venues located in the Greater Golden Horseshoe Area. Environment Canada is providing state-of-the art, 24/7 dedicated, venue-specific weather alerting services and environmental emergency support for the Toronto 2015 Games. The TO2015 Games are also a catalyst for enhancing existing weather services through research and demonstration projects that will benefit future generations of Canadians.

What does the technology do?

Three vehicles equipped with Automated Mobile Meteorological Observing Stations (AMMOS) units will be deployed during the TO2015 Games as part of the high-resolution monitoring system across the Greater Golden Horseshoe Area, called the Pan Am Mesonet. AMMOS vehicles will travel routes between the Lake Ontario shore in Toronto and rural areas to the north.

These three mobile stations will be used to collect data in locations where fixed stations cannot, such as along roadways surrounded by large buildings in downtown Toronto - known as 'urban canyons'. The AMMOS mobile observations will complement those from the Mesonet and will help monitor weather and air quality conditions during the Games.

What's new about the technology?

While the scientific instruments on board have been used for a number of years to support research initiatives, during the Games Environment Canada scientists will be using these instruments to measure the inland progression of lake breezes. Lake breezes, which occur frequently in the Greater Toronto Area, are sometimes catalysts for thunderstorm development. They can also have an impact on the transport of air pollution, sometimes trapping it near the ground resulting in episodes of highly reduced air quality.



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What is the legacy for Canadians?

This will be the first time in Canada where more than one AMMOS vehicle will be used to gather information about heat stress, temperature in urban canyons and air quality in an urban environment. The data gathered by the three AMMOS vehicles will be provided at a fine resolution in an urban setting where it is normally difficult to get measurements.

