

The 2015 Toronto Games Science Showcase: Overview and Preliminary Results

David Sills

Environment Canada

The Pan Am and ParaPan Am Games were held in July and August of 2015 in Toronto. The Science and Technology Branch of Environment Canada helped to support the Games by undertaking a number of initiatives that would 'showcase' cutting-edge techniques and technology. Enhanced observational networks were implemented including a new network of 55 surface stations, a number of mobile stations, 3D total lightning detection, Doppler lidar sampling, and integrated measurements at 'supersites'. Very high-resolution NWP models were also run, cascading from 2.5 km to 1.0 km to 250 m horizontal grid spacing, along with a high-resolution air quality model. Finally, a Next Generation Forecasting, Nowcasting and Alerting Demonstration evaluated the benefits and challenges of the forecaster-interactive MetObject approach as it applies to severe thunderstorm prediction. The goal of the presentation is to make the larger Great Lakes forecasting community aware of the new techniques and technologies used, how they contributed to better outcomes during the Games, and when/where they may be used operationally.