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CMOS HALIFAX CENTRE

**Sensitivity Tests for the 10 February 2006 Avalon
Peninsula Snow Storm**

by

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Abstract

A winter storm produced a heavy snowfall on the Avalon Peninsula in southeastern Newfoundland on February 10 - 11 2006. The snowfall was much more intense than predicted by the operational weather forecast model. In order to diagnose the poor model performance for this case, various sensitivity tests were conducted. In particular, the "key analysis errors" methodology was applied in order to identify what changes to the initial analysis would have produced a more accurate numerical weather model prediction. The corrected analysis was then used as initial conditions for rerunning the forecasts with a variety of forecast model configurations. This presentation will include a review of the data assimilation infrastructure upon which the "key analysis errors" method is based, a review of the storm as predicted and observed, and results and tentative conclusions from the sensitivity experiments.

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