P39 An initial comparison of WRF and MPAS over Antarctica.

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The Antarctic Mesoscale Prediction System (AMPS) is a real-time numerical weather prediction capability that provides model guidance for the forecasters of the U.S. Antarctic Program. Since 2006 AMPS has used the Weather Research and Forecasting (WRF) Model for its forecasts and products. With the Model for Prediction Across Scales
(MPAS) an emerging global numerical weather prediction model designed to capture the cloud scale, the AMPS effort has begun testing of MPAS in real-time runs over Antarctica. This presentation offers a preliminary assessment of WRF and MPAS in this setting.

Focussing on surface verifications of surface variables,
it is found that overall WRF performs better statistically than MPAS. However, the initial implementation of MPAS is seen to hold its own against WRF, with statistically better performance at a number of sites for certain variables and seasons. While the results are encouraging for MPAS, WRF has a broader range of capabilities, contains polar modifications, and runs with at much smaller computational cost. These advantages will thus position WRF as the main AMPS model for a while.