



OU - School of Meteorology

AAARG (Arctic And Antarctic Research Group)



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Key research themes:

1. Polar regions weather and climate processes
2. High latitude atmospheric dynamics and cryosphere interactions
3. Linkages between polar and midlatitude processes
4. Global, nonhydrostatic, Earth-system coupled multi-scale modeling of weather and climate phenomena
5. Ensemble data assimilation and upper-troposphere lower-stratosphere observations in polar regions

Key references

1. Cavallo, S.M. and G.J. Hakim, 2013: Physical mechanisms of tropopause polar vortex intensity change, *J. Atmos. Sci.*, **70**, 3359-3373.
2. Cavallo, S.M., J. Berner, and C. Snyder, 2016: Diagnosing Model Errors from Time-Averaged Tendencies in the Weather Research and Forecasting (WRF) Model, *Mon. Wea. Rev.*, **144** (2). 759-779.
3. Cavallo, S. M. and G. J. Hakim, 2010: The composite structure of tropopause polar cyclones from a mesoscale model. *Mon. Wea. Rev.* , **138** (10) , 3840-3857, doi:10.1175/ 2010MWR3371.1.

