

CURRICULUM VITAE

DANIEL F. STEINHOFF

Graduate Research Associate, Polar Meteorology Group, Byrd Polar Research Center
Ph.D. Candidate, Atmospheric Sciences Program, Department of Geography
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Personal

Citizenship: United States of America

Education

The Ohio State University, Columbus OH	Atmospheric Sciences	<i>Ph.D.</i> <i>Expected August 2010</i>
The Ohio State University, Columbus OH	Atmospheric Sciences	<i>M.S., 2008</i> Thesis title: “ <i>Cyclogenesis near the Adélie Coast and Influence of the Low-level Wind Regime</i> ”
University of Wisconsin-Madison, Madison WI	Atmospheric Sciences	<i>B.S., 2003</i>

Appointments

2005-present: Graduate Research Associate, Polar Meteorology Group, Byrd Polar Research Center, The Ohio State University.

Research Interests

Polar meteorology, atmospheric dynamics, mesoscale processes, synoptic meteorology, numerical weather prediction, Weather Research and Forecasting (WRF) model simulations

Refereed Publications

- 2010 Bromwich, D. H., **D. F. Steinhoff**, I. Simmonds, K. Keay, and R. L. Fogt. Climatological cyclogenesis near Adélie Land Antarctica and influence of the low-level wind regime. *Tellus A*, in preparation.
- Speirs, J. C., **D. F. Steinhoff**, H. A. McGowan, D. H. Bromwich, and A. J. Monaghan. Foehn winds in the McMurdo Dry Valleys, Antarctica: The origin of extreme warming events. *J. Climate*, in press.
- Steinhoff, D. F.** and D. H. Bromwich. Dynamics of cyclone development and the importance of low-level processes near Adélie Land Antarctica. *Tellus A*, in preparation.
- 2009 **Steinhoff, D. F.**, S. Chaudhuri, and D. H. Bromwich. A new perspective on the Ross Ice Shelf Air Stream. *Mon. Wea. Rev.*, **137**, 4030-4046.
- 2008 **Steinhoff, D. F.**, D. H. Bromwich, M. Lambertson, S. L. Knuth, and M. A. Lazzara. A dynamical investigation of the May 2004 McMurdo Antarctica severe wind event using AMPS. *Mon. Wea. Rev.*, **136**, 7-26.

Conference Presentations

- Steinhoff, D. F., D. H. Bromwich, J. C. Speirs, H. A. McGowan, and A. J. Monaghan, 2009: Foehn winds in the McMurdo Dry Valleys of Antarctica. *MOCA-09 (IAMAS-IAPSO-IACS Joint Assembly)*, Montréal, Québec, Canada, July 2009.
- Steinhoff, D. F., D. H. Bromwich, J. C. Speirs, H. A. McGowan, and A. J. Monaghan, 2009: Foehn winds in the McMurdo Dry Valleys of Antarctica. *Fourth Antarctic Meteorological Observation, Modeling, and Forecasting Workshop*, Charleston SC, July 2009.
- Steinhoff, D. F., D. H. Bromwich, J. C. Speirs, H. A. McGowan, and A. J. Monaghan, 2009: Foehn winds in the McMurdo Dry Valleys of Antarctica. *AMS 10th Conference on Polar Meteorology and Oceanography*, Madison WI, May 2009.
- Steinhoff, D. F., S. Chaudhuri, and D. H. Bromwich, 2009: A case study of a Ross Ice Shelf Air Stream event: A new perspective. *AMS 10th Conference on Polar Meteorology and Oceanography*, Madison WI, May 2009.
- Steinhoff, D. F., D. H. Bromwich, and R. L. Fogt, 2008: Cyclogenesis near the Adélie Coast and influence of the low-level wind regime. *Third Antarctic Meteorological Observation, Modeling, and Forecasting Workshop*, Madison WI, June 2008.
- Steinhoff, D. F., D. H. Bromwich, and R. L. Fogt, 2008: Cyclogenesis near the Adélie Coast and influence of the low-level wind regime. *Byrd Polar Research Center weekly seminar*, The Ohio State University, Columbus OH, May 2008.
- Steinhoff, D. F. and D. H. Bromwich, 2008: Developing coastal cyclones and surface mass balance over Adélie Land and Wilkes Land Antarctica. *Center for Remote Sensing of Ice Sheets (CReSIS)*, Lawrence KS, March 2008.
- Steinhoff, D. F., D. H. Bromwich, A. J. Monaghan, and R. L. Fogt, 2007: Factors responsible for cyclogenesis in the Adélie Land coastal region of Antarctica. *Monash Univ. (Australia) Earth Sciences department seminar*, Clayton, Victoria, Australia, September 2007.
- Steinhoff, D. F., D. H. Bromwich, and R. L. Fogt, 2007: The impact of the Adélie Land katabatic wind regime on coastal cyclogenesis. *International Union of Geodesy and Geophysics (IUGG) General Assembly*, Perugia, Italy, July 2007.
- Steinhoff, D. F., D. H. Bromwich, and R. L. Fogt, 2007: The impact of the Adélie Land katabatic wind regime on coastal cyclogenesis. *Second Antarctic Meteorological Observation, Modeling, and Forecasting Workshop*, Rome, Italy, June 2007.
- Steinhoff, D. F. and D. H. Bromwich, 2007: Evaluation of Williams Field Terminal Aerodrome Forecasts (TAFs) during the 2006-07 Field Season. *Second Antarctic Meteorological Observation, Modeling, and Forecasting Workshop*, Rome, Italy, June 2007.
- Steinhoff, D. F. and D. H. Bromwich, 2007: Preliminary upper-air verification of Polar WRF in AMPS. *Second Antarctic Meteorological Observation, Modeling, and Forecasting Workshop*, Rome, Italy, June 2007.
- Steinhoff, D. F., D. H. Bromwich, M. Lambertson, S. L. Knuth, and M. A. Lazzara, 2006: A dynamical investigation of the May 2004 McMurdo Antarctica severe wind event using AMPS. *Antarctic Meteorological Observation, Modeling, and Forecasting Workshop*, Boulder CO, June 2006.

- Steinhoff, D. F., D. H. Bromwich, and M. Lambertson, 2005: Extreme winds and rapid degeneration of the May 2004 McMurdo Antarctica storm: Analysis using the AMPS forecast model, AWS data, and MODIS data. *Antarctic Automatic Weather Station – Antarctic Mesoscale Prediction System – Antarctic Meteorological Research Center Joint Annual Meeting*, Columbus OH, June 2005.
- Steinhoff, D. F., D. H. Bromwich, and M. Lambertson, 2005: Extreme winds and rapid degeneration of the May 2004 McMurdo Antarctica storm: Analysis using the AMPS forecast model, AWS data, and MODIS data. *FORMOSAT-3/COSMIC Science Summer Camp*, Taipei, Taiwan, May 2005.

Workshops Attended

- Weather Research and Forecasting (WRF) Tutorial, NCAR, Boulder CO, July 2008.
- FORMOSAT-3/COSMIC Science Summer Camp, Taipei, Taiwan, May 2005.

Field Work

- McMurdo Station, Antarctica, November - December 2006 (trip report available at http://polarmet.osu.edu/PolarMet/PMGAbstracts/trip_report_2006_steinhoff.pdf).
- McMurdo Station, Antarctica, January - February 2009 (trip report available at http://polarmet.osu.edu/PolarMet/PMGAbstracts/trip_report_2009_steinhoff.pdf).

Honors

- Ray Travel Award recipient (for IAMAS Montreal), The Ohio State University Council of Graduate Students, 2009.
- Student Poster Award, American Meteorological Society 10th Conference on Polar Meteorology and Oceanography, 2009.
- Recipient of the Rick Toracinta Graduate Scholarship in Atmospheric Science, The Ohio State University, 2008.
- NSF-OPP Travel Grant to International Union of Geodesy and Geophysics (IUGG) symposium, 2007.
- UCAR Travel Award to FORMOSAT-3/COSMIC Science Summer Camp, 2005.

Community Activities

- Representative for Atmospheric Sciences to the Council of Graduate Students (CGS), The Ohio State University, 2006-07.
- 38 presentations to school field trips (K-12 and college) to Byrd Polar Research Center since January 2008.
- Mentor to Ruth Burrows, Upper Arlington High School, Upper Arlington OH, science fair project, meetings every 1-2 weeks, November 2006 – February 2007.
- Mentor to Saptarshi Chaudhuri, Columbus Alternative High School, Columbus OH, summer internship, approximately 40 hours per week, June – August 2008. This work resulted in a manuscript in *Monthly Weather Review*. Saptarshi is now an undergraduate at Caltech.

Computer Skills

- Operating systems: Linux/UNIX, Mac OS X, Windows

- Programming: FORTRAN 77/90, Perl, C-shell scripting, IDL
- Meteorological analysis: GEMPAK, NCL, McIDAS, GrADS
- Numerical weather prediction: WRF, MM5

Professional Memberships

- American Meteorological Society (AMS)
- American Geophysical Union (AGU)

Advisor

Dr. David Bromwich, The Ohio State University (M.S., Ph.D.)