

## CURRICULUM VITAE

# DR RYAN L FOGT

National Research Council Postdoctoral Research Fellow  
NOAA Earth System Research Laboratory

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### Professional Preparation

The Ohio State University, Columbus, OH Atmospheric Sciences *Ph.D., 2007*  
Dissertation title: *“Investigation of the Southern Annular Mode and the El Niño – Southern Oscillation Interactions”*  
Advisor: Dr. David H. Bromwich

The Ohio State University, Columbus, OH Atmospheric Sciences *M.S., 2003*  
Thesis title: *“Decadal variability of the ENSO teleconnection to the South Pacific”*  
Advisor: Dr. David H. Bromwich

Creighton University, Omaha, NE Atmospheric Sciences *B.S., summa cum laude, 2000*  
Senior Research Project: *“A Statistical Analysis of Lake-Effect Snow at Cleveland, OH and Buffalo, NY”*  
Advisor: Dr. Arthur V. Douglas

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### Appointments

2007-present Postdoctoral Research Fellow, National Research Council, NOAA Earth System Research Laboratory. Research interests: polar climatology, large scale climate interactions and teleconnections, global climate change.

2004-2007 Graduate Research Associate, Polar Meteorology Group, Byrd Polar Research Center, The Ohio State University

2002-2004 Graduate Teaching Associate, Department of Geography, The Ohio State University.

2001-2002 University Fellow, The Ohio State University.

2001 Graduate teaching associate, Department of Atmospheric and Environmental Sciences, Creighton University.

1999-2000 Undergraduate Research Assistant, Department of Atmospheric and Environmental Sciences, Creighton University

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## Teaching Experience

Sep – Dec 2004	2 recitation sections of Geography 120, The Ohio State University.
Jan – Jun 2004	2 sections (1 per quarter) of <b>instructor of record</b> for Geography 120, The Ohio State University.
Sep – Dec 2003	1 recitation section of Geography 210 (Physical Geography and Environmental Issues), The Ohio State University.
Sep – Dec 2002	2 recitation sections of Geography 120 (Earth Systems 2: Atmospheric Environment), The Ohio State University.
Jan – May 2001	4 sections as <b>instructor of record</b> for Atmospheric Sciences 114, Creighton University.
Aug - Dec 2000	2 sections as <b>instructor of record</b> for Atmospheric Sciences 114 (Introduction to Atmospheric Sciences Laboratory), Creighton University.

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## Peer-Reviewed Publications

- 2009 Jones, J. M., **R. L. Fogt**, M. Widmann, G. J. Marshall, P. D. Jones, and M. Visbeck. Historical SAM Variability. Part I: Century Length Seasonal Reconstructions of the Southern Hemisphere Annular Mode. *J. Climate*, in press.
- 2009 **Fogt, R. L.**, J. Perlwitz, A. J. Monaghan, D.H. Bromwich, J. M. Jones, and G. J. Marshall. Historical SAM Variability. Part II: 20th Century Variability and Trends from Reconstructions, Observations, and the IPCC AR4 Models. *J. Climate*, accepted with minor revisions.
- 2009 **Fogt, R. L.**, J. Perlwitz, S. Pawson, and M. A. Olsen. Intra-annual relationships between polar ozone and the SAM. *Geophys. Res. Lett.*, **35**, L04707, doi:10.1029/2008GL036627.
- 2008 **Fogt, R.L.**, and D.H. Bromwich. Atmospheric moisture and cloud cover characteristics forecast by AMPS. *Wea. Forecasting*, **23**, 914-930.
- 2008 **Fogt, R.L.** Contributing author to the Antarctic circulation section of 'State of the Climate in 2007'. *Bull. Amer. Meteorol. Soc.*, **89**, s99-s100.
- 2008 Perlwitz, J., S. Pawson, **R. L. Fogt**, J. E. Nielsen, and W. D. Neff. Impact of stratospheric ozone hole recovery on Antarctic climate. *Geophys. Res. Lett.*, **35**, L08714, doi:10.1029/2008GL033317.
- 2007 **Fogt, R.L.** Contributing author to the Antarctic circulation section of 'State of the Climate in 2006'. *Bull. Amer. Meteorol. Soc.*, **88**, s72-s73.
- 2007 **Fogt, R.L.** Contributing author, IPCC Working Group 1 (WG1) Fourth Assessment Report, for “Chapter 3: Observations: Surface and Atmospheric Climate Change”; subsections 3.4.1.3, “Changes in the Free Atmosphere: Temperature of the Upper Air: Troposphere and Stratosphere” and 3.5.2, “Changes in Atmospheric Circulation: Geopotential Height, Winds, and the Jet Stream”.
- 2007 Bromwich, D.H., **R.L. Fogt**, K.I. Hodges, and J.E. Walsh. A tropospheric assessment of the ERA-40, NCEP, and JRA-25 global atmospheric reanalyses in the polar regions. *J. Geophys. Res.*, **112**, doi:10.1029/2006JD007859.
- 2006 Monaghan, A.J., D.H. Bromwich, **R.L. Fogt**, S-H. Wang, P.A. Mayewski, D.A. Dixon, A.A. Ekaykin, M. Frezzotti, I.D. Goodwin, E. Isaksson, S.D. Kaspari, V.I. Morgan, H. Oerter, T.D. van Ommen, C.J. van der Veen, and J. Wen. Insignificant change in Antarctic snowfall since the International Geophysical Year, *Science*, **313**, 827-831.

- 2006 **Fogt, R.L.**, and D.H. Bromwich. Decadal variability of the ENSO teleconnection to the high-latitude South Pacific governed by coupling with the Southern Annular Mode. *J. Climate*, **19**, 979-997.
- 2005 Bertler, N.A.N., P.J. Barrett, P.A. Mayewski, **R.L. Fogt**, K.J. Kreutz, and J. Shulmeister. Reply to comment by Doran et al. on “El Niño suppresses Antarctic warming.” *Geophys. Res. Lett.*, **32**, L07707, doi: 10.1029/2005GL022595.
- 2004 Bromwich, D.H., and **R.L. Fogt**. Strong trends in the skill of the ERA-40 and NCEP / NCAR reanalyses in the high and middle latitudes of the Southern Hemisphere, 1958-2001. *J. Climate*, **17**, 4603-4619.
- 2004 Bertler, N.A.N., P.J. Barrett, P.A. Mayewski, **R.L. Fogt**, K.J. Kreutz, and J. Shulmeister. El Niño suppresses Antarctic warming. *Geophys. Res. Lett.*, **31**, L15207, doi:10.1029/2004GL020749.
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### Other Publications

- 2008 **Fogt, R.L.**, D.H. Bromwich, and K.M. Hines. Recent SAM and ENSO teleconnections for Antarctica. *US CLIVAR Variations*, **6 (1)**, 4-6.
- 2007 **Fogt, R.L.** Investigation of the Southern Annular Mode and the El Niño – Southern Oscillation Interactions. Ph.D. Dissertation, Atmospheric Sciences Program, Department of Geography, The Ohio State University, 212 pp.
- 2007 Bromwich, D.H., **R.L. Fogt**, K.I. Hodges, and J.E. Walsh. A tropospheric assessment of contemporary global reanalyses in the polar regions. *In preprints of the 87<sup>th</sup> Annual Conference of the American Meteorological Society*, San Antonio, TX, 6 pp.
- 2006 Bromwich, D.H. and **R.L. Fogt**. An assessment of contemporary global reanalyses in the polar regions. *In Proceedings of the ECMWF / GEO Workshop on Atmospheric Re-Analyses*, Reading, UK, 49-54.
- 2006 **Fogt, R.L.**, and D.H. Bromwich. The AMPS pseudo satellite product. *In preprints of the Antarctic Meteorological Observation, Modeling, and Forecasting Workshop*, Boulder, CO, 4 pp.
- 2006 **Fogt, R.L.**, G. E. Vázquez, and D.H. Bromwich. AMPS precipitable water vapor comparisons with GPS observations in the McMurdo region. *In preprints of the Antarctic Meteorological Observation, Modeling, and Forecasting Workshop*, Boulder, CO, 4 pp.
- 2005 **Fogt, R.L.**, and D.H. Bromwich. Decadal variability of the Antarctic-ENSO teleconnection and its association with the Southern Annular Mode. *CLIVAR Exchanges*, **10 (4)**, 4.
- 2005 **Fogt, R.L.**, and D.H. Bromwich. An evaluation of clouds forecast by AMPS. *In preprints of the Joint annual meetings of the Antarctic Automatic Weather Station, Antarctic Meteorological Research Center, and the Antarctic Mesoscale Prediction System (AMPS)*, Columbus, OH, 1 pp.
- 2005 **Fogt, R.L.**, and D.H. Bromwich. Strong trends in the skill of the ERA-40 and NCEP / NCAR reanalyses in the high and middle latitudes of the Southern Hemisphere, 1958-2001. *In preprints of the 8<sup>th</sup> Conference on Polar Meteorology and Oceanography*, San Diego, CA.
- 2005 **Fogt, R.L.**, and D.H. Bromwich. Decadal variability of the ENSO teleconnection to the South Pacific governed by coupling with the Antarctic Oscillation. *In preprints of the 8<sup>th</sup> Conference on Polar Meteorology and Oceanography*, San Diego, CA.

- 2004 **Fogt, R.L.**, D.H. Bromwich, K.M. Hines, Z. Guo, and J.F. Carrasco. Strong ENSO Variability in the Drake Passage in the 1990s. *In preprints of the 7<sup>th</sup> Conference on Polar Meteorology and Oceanography*, Hyannis, MA.
- 2003 **Fogt, R.L.** Decadal variability of the ENSO teleconnection to the South Pacific. M.S. Thesis, Atmospheric Sciences Program, Department of Geography, The Ohio State University, 135 pp.

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### **Conference and Workshop Contributions**

- 2009 Oral 10<sup>th</sup> Conference on Polar Meteorology and Oceanography, Madison, WI. "South Pacific ENSO teleconnection variations linked to the SAM".
- 2009 Oral 9<sup>th</sup> International Conference on Southern Hemisphere Meteorology and Oceanography, Melbourne, Australia. "Part II. 20<sup>th</sup> century of Southern Annular Mode variability from reconstructions, observations, and the IPCC AR4 models."
- 2008 Poster Boulder Department of Commerce Labs Postdoctoral Poster Symposium, Boulder, CO. "An investigation of long term Southern Annular Mode variability".
- 2008 Oral New Generation of Polar Researchers Symposium, Colorado Springs, CO. "Unraveling the past: A long-term investigation of Southern Annular Mode variability".
- 2008 Poster New Generation of Polar Researchers Symposium, Colorado Springs, CO. "An investigation of long term Southern Annular Mode variability".
- 2007 Oral SCAR 2nd Workshop on High Latitude Climate Change, Seattle, WA. "The role of tropical forcing on recent change in the Arctic and Antarctic". Workshop report online: [http://www.scar.org/publications/reports/32/Report\\_32.pdf](http://www.scar.org/publications/reports/32/Report_32.pdf)
- 2007 Oral The International Union of Geodesy and Geophysics (IUGG) XXIV, Perugia, Italy. "Centennial Southern Annular Mode behavior in observations and IPCC AR4 models."
- 2007 Oral The Antarctic Meteorological Observation, Modeling, and Forecasting Workshop, Rome, Italy. "Atmospheric moisture and cloud cover characteristics forecast by AMPS."
- 2006 Oral The Antarctic Meteorological Observation, Modeling, and Forecasting Workshop, Boulder, CO. "The AMPS pseudo satellite product."
- 2005 Oral The Antarctic Automatic Weather Station – Antarctic Mesoscale Prediction System – Antarctic Meteorological Research Center Joint Annual Meeting, Columbus, OH. "An evaluation of clouds forecast by AMPS."
- 2003 Oral 7<sup>th</sup> Conference on Polar Meteorology and Oceanography, Hyannis, MA. "Decadal variability of the ENSO teleconnection to the South Pacific."

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### **Field Work**

- Field visit and interaction with weather observers at Amundsen-Scott South Pole Station, January 2006.
- Participant, On-site interactions with McMurdo forecasters in McMurdo, Antarctica, on behalf of the Antarctic Mesoscale Prediction System (AMPS) project, January 2006; January 2005; December 2002-January 2003.
- Automatic weather station servicing and installation in Antarctica, January 2006; January 2005.

- Site visit and interaction with weather observers at Odell Glacier, Antarctica, December 2002.

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### **Synergistic Activities**

- Convener, Association of Polar Early Career Scientists (APECS) career and mentoring panel, May 2009.
- Editor, 2008 *State of the Climate* report by the *American Meteorological Society* for the chapter on Antarctica
- Reviewer, *Journal of Geophysical Research*, *International Journal of Climatology*, *Journal of Climate*, *Geophysical Research Letters*, and NSF proposals, 2004-present.
- Panelist, Climate Change Challenge Panel, Colorado School of Mines, January 2008.
- Participant, Reanalysis workshop in the High Latitudes, Cambridge, UK, April 2006.
- Reviewer, IPCC WG1 Fourth Assessment Report, 2005.
- Contributed to the preliminary data collection and development of the North American Drought Monitor (NADM, <http://www.ncdc.noaa.gov/oa/climate/monitoring/drought/nadm/>) as an undergraduate research assistant.

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### **Grant / Proposal Writing Experience**

- PI, NRC Research Associateship Programs Postdoctoral Fellowship, "An investigation of long-term Southern Annular Mode variability" - 2007-2009 - \$46,000 to NOAA ESRL
- Contributor, UCAR: "Support and Enhancement of the Antarctic Mesoscale Prediction System (AMPS)" - 2006-2008 - \$248,790 to Byrd Polar Research Center Polar Meteorology Group.
- Contributor, NSF: "Antarctic climate variability and tropical teleconnections" -2008-2011 - \$390,000 to Byrd Polar Research Center Polar Meteorology Group.

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### **Honors and Awards**

- \$2000 UCAR Travel Grant to 9<sup>th</sup> International Conference on Southern Hemisphere Meteorology and Oceanography, Melbourne, Australia, February 2009.
- Competitively chosen to attend the New Generation of Polar Researchers symposium, Colorado Springs, CO, May 4-11, 2008.
- \$3000 NSF-OPP Travel Grant to International Union of Geodesy and Geophysics (IUGG) annual conference, Perugia, Italy, July 2007.
- Recipient, E. Willard and Ruby S. Miller fellow award, Department of Geography, The Ohio State University, March 2007.
- NSF / Raytheon Polar Services Travel Grant to McMurdo, Antarctica, December 2002, January 2005, January 2006
- University Fellowship, The Ohio State University, September 2001-August 2002
- Graduated *Summa Cum Laude* (3.9 or higher cumulative GPA), Creighton University
- Outstanding Senior Research Award, Department of Atmospheric Sciences, Creighton University, May 2001
- Academic Achievement Award for Highest Graduating GPA in Atmospheric Sciences, Creighton University, May 2001

- Creighton University Atmospheric Sciences Scholarship, 1999-2000

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## Professional Memberships

- American Meteorological Society
  - American Geophysical Union
  - Association of Polar Early Career Scientists
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## Professional References

### **Dr. David Bromwich, M.S. and Ph.D.**

#### **Advisor**

Byrd Polar Research Center  
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Department of Geography  
1090 Carmack Rd.  
108 Scott Hall  
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### **Dr. William Neff, NRC Post-doctoral**

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### **Dr. Jeff Rogers**

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### **Dr. Judith Perlwitz, Science Advisor**

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