

CURRICULUM VITAE

ANDREW J. MONAGHAN

Senior Research Associate
Polar Meteorology Group
Byrd Polar Research Center
The Ohio State University
1090 Carmack Road
Columbus, OH 43210

Phone: 614-247-6789 Fax: 614-292-4697

E-mail: monaghan.11@osu.edu

Website: <http://polarmet.mps.ohio-state.edu/monaghan>

Professional Preparation

University of Alaska, Fairbanks	Civil Engineering	<i>B.S., 1998</i>
The Ohio State University, Columbus	Atmospheric Sciences	<i>M.S., 2003</i>
The Ohio State University, Columbus	Atmospheric Sciences	<i>Ph.D., 2007</i>

Appointments

2007-present: Senior Research Associate, Polar Meteorology Group, Byrd Polar Research Center, The Ohio State University.

2000-2007: Research Associate, Polar Meteorology Group, Byrd Polar Research Center, The Ohio State University.

1998-2000: Technician, Water and Environmental Research Center, University of Alaska Fairbanks.

Refereed Publications

- 2007 Monaghan, A.J., D.H. Bromwich, and D.P. Schneider. 20th century Antarctic air temperature and snowfall simulations by IPCC climate models. *Geophys. Res. Letts.*, submitted November 2007.
- 2007 Monaghan, A.J., and D.H. Bromwich. Advances in describing recent Antarctic climate variability. *Bull. Amer. Meteorol. Soc.*, provisionally accepted, November 2007.
- 2007 Monaghan, A.J., D.H. Bromwich, W. Chapman, and J.C. Comiso. Recent variability and trends of Antarctic near-surface temperature. *J. Geophys. Research*, in press.
- 2007 Wee, T-K., Y-H. Kuo, D.H. Bromwich, and A.J. Monaghan. Assimilation of GPS radio occultation refractivity data from CHAMP and SAC-C missions over high southern latitudes with MM5 4DVAR. *Mon. Wea. Rev.*, in press April 2007.
- 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 Monaghan, A.J., D.H. Bromwich, and S-H. Wang. Recent trends in Antarctic snow accumulation from Polar MM5. *Philos. Trans. Royal Soc. A*, **364**, 1683-1708.
- 2006 Wen, Jiahong, K.C. Jezek, A.J. Monaghan, S. Bo, R. Jiawen, P. Huybrechts. Accumulation variability and mass budgets of the Lambert Glacier-Amery Ice Shelf system at high elevations. *Ann. Glaciol.*, **43**, 351-360.

- 2005 Monaghan, A.J., D.H. Bromwich, J.G. Powers, and K.W. Manning. The climate of the McMurdo, Antarctica region as represented by one year of forecasts from the Antarctic Mesoscale Prediction System. *J. Climate*, **18**, 1174-1189.
- 2005 Bromwich, D.H., A.J. Monaghan, K.W. Manning, and J.G. Powers. Real-time forecasting for the Antarctic: An evaluation of the Antarctic Mesoscale Prediction System (AMPS), *Mon. Wea. Rev.*, **133**, 579-603.
- 2004 Bromwich, D.H., A.J. Monaghan, and Z. Guo. Modeling the ENSO modulation of Antarctic climate in the late 1990s with Polar MM5. *J. Climate*, **17**, 109-132.
- 2003 Monaghan, A.J., D.H. Bromwich, H. Wei, A.M. Cayette, J.G. Powers, Y-H. Kuo, and M.L. Lazzara. Performance of weather forecast models in the rescue of Dr. Ronald Shemanski from South Pole in April 2001. *Wea. Forecasting.*, **18**, 142-160.
- 2003 Powers, J.G., A.J. Monaghan, A.M. Cayette, D.H. Bromwich, Y-H. Kuo, and K.W. Manning. Real-time mesoscale modeling over Antarctica: The Antarctic Mesoscale Prediction System (AMPS). *Bull. Amer. Meteor. Soc.*, **84**, 1533-1545.
- 2003 Bromwich, D.H., A.J. Monaghan, J.J. Powers, J.J. Cassano, H. Wei, Y-H. Kuo, and A. Pellegrini. Antarctic Mesoscale Prediction System (AMPS): A case study from the 2000/2001 field season. *Mon. Wea. Rev.*, **131**, 412-434.
- 2003 Carrasco, J.F., D.H. Bromwich, and A.J. Monaghan. Distribution and characteristics of mesoscale cyclones in the Antarctic: Ross Sea east to the Weddell Sea. *Mon. Wea. Rev.*, **131**, 289-301.
- 2003 Van Woert, M.L., E.S. Johnson, L. Langone, D.L. Worthen, A.J. Monaghan, D.H. Bromwich, R. Meloni, and R.B. Dunbar. The Ross Sea circulation during the 1990s. *In Antarctic Research Series, biogeochemical cycles in the Ross Sea.* (G. Ditullio and R. Dunbar eds.), **78**, 5-34.

Recent Conference and Workshop Contributions

- Presenter (talk), 2nd Antarctic Meteorological Observation, Modeling, and Forecasting Workshop, Rome, Italy, June 2007. Title: "Do topographically-induced vortices in the lee of Ross Island contribute to mesoscale cyclogenesis?" (abstract available in preprints)
- Presenter (talk), SUNY Stony Brook 'Topics in Atmospheric and Oceanic Sciences Seminar Series', Stony Brook, NY, February 2007. Title: "Changes in snowfall and near-surface temperature over Antarctica during the past 50 years."
- Presenter (talk), West Antarctic Ice Sheet Initiative (WAIS) Annual Workshop, Eatonville, WA, September 2006. Title: "A high spatial resolution record of near-surface temperature over WAIS during the past 5 decades." (abstract available in preprints)
- Presenter (talk), SCAR Workshop on the Antarctic Wind Field, Kuala Lumpur, Malaysia, March 2006. Title: "A Study of the Adélie Land Katabatic Wind Regime and Its Impact on Coastal Cyclonic Activity."
- Presenter (talk), WMO/THORPEX Scientific Conference, Cape Town, South Africa, February 2006. Title: "Antarctic atmospheric research during the IPY and its relationship to THORPEX."
- Presenter (talk), Lamont-Doherty Earth Observatory Physical Oceanography Seminar, Palisades, NY, October 2005. Title: "Recent trends in Antarctic snow accumulation."
- Presenter (talk), West Antarctic Ice Sheet Initiative (WAIS) Annual Workshop, Sterling, VA, September 2005. Title: "Recent variability and trends in Antarctic snow accumulation from Polar MM5." (abstract available in preprints)

- Presenter (talk), Antarctic Automatic Weather Station – Antarctic Mesoscale Prediction System – Antarctic Meteorological Research Center Joint Annual Meeting, Columbus, OH, June 2005. Title: “Toward understanding Antarctica’s role in global sea level change: simulating Antarctic accumulation variability in recent decades.” (abstract available in preprints)
- Presenter (poster), Scientific Committee on Antarctic Research, Open Science Conference, Bremen, Germany, July 2004. Title: “The AMPS archive: A meteorological resource for the Antarctic research community.” (abstract available in preprints)

Grants

- 7/1/2007-6/30/2010: “An Investigation of the Contemporary and Paleo Climates of the McMurdo Dry Valleys, Antarctica” P.I.: A. Monaghan, Co-P.I.: D. Bromwich. (\$263 K).

Honors and Awards

- Inaugural recipient of the Lay/Everett Service Award for outstanding service to the Byrd Polar Research Center, 2005.

Teaching Experience

- Geography 520 (Climatology), The Ohio State University, Winter 2006.
- International Studies 597.02 (Antarctic Marine Ecology and Policy), The Ohio State University, Spring 2007.

Community Activities

- Attendee, Early Career Scientists Assembly – ASP Junior Faculty Forum on “Geophysical and statistical challenges in detection/attribution of regional climate change”, Boulder, CO, July 2007.
- Attendee, Summer School on Modeling of the Arctic Climate, Fairbanks, AK, July 2003.
- Reviewer for Journal of Climate, Journal of Geophysical Research, Monthly Weather Review, Annals of Glaciology, and Antarctic Science.
- Contributor to Intergovernmental Panel on Climate Change 4th Assessment Report and the Bulletin of the American Meteorological Society’s annual “State of the Climate” report.
- Member of the American Meteorological Society and the American Geophysical Union.
- Editor of the Byrd Polar Research Center’s weekly e-newsletter.

Advisor

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