

CURRICULUM VITAE

NOLAN T. ATKINS

Born: December 29, 1964

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Professional Interests

- 1) Research in Mesoscale Meteorology
- 2) Teaching undergraduate level courses in Meteorology

Educational Background

1988 Bachelor of Science in Physics
University of Minnesota, Minneapolis
Minneapolis, Minnesota

1991 Masters of Science in Atmospheric Sciences
University of California, Los Angeles
Los Angeles, California

1995 Doctorate of Philosophy in Atmospheric Sciences
University of California, Los Angeles
Los Angeles, California

Professional Experience

1988 - 1992 Graduate Teaching Assistant, University of California, Los Angeles

1992 - 1995 Graduate Research Assistant, University of California, Los Angeles

1995 - 1997 Postdoctoral Appointment at the National Center for Atmospheric Research in the Advanced Study Program

1997 -2001 Assistant Professor of Meteorology, Lyndon State College, Lyndonville, VT

1998 -2000 Co-Chairperson, Department of Meteorology, Lyndon State College, Lyndonville, VT

2001 – 2007 Associate Professor of Meteorology, Lyndon State College, Lyndonville, VT

2007 – present Professor of Meteorology, Lyndon State College, Lyndonville, VT

2008- present Chairman, Department of Atmospheric Sciences, Lyndon State College, Lyndonville, VT

Professional Affiliations and Activities

- 1989 - 1995 Student member of the American Meteorological Society
1995 - present Member of the American Meteorological Society
1999-2000 Member of the Program Committee for the American Meteorological Society's
20th Conference on Severe Local Storms
2001-2004 Member of the American Meteorological Society Scientific and Technological
Activities Commission (STAC) Committee on Severe Local Storms
2001- 2002 Chairperson of the 21st Severe Local Storms Program Committee
2005 – present Appointed as a member of the NCAR/NSF Observing Facilities Assessment
Panel (OFAP)
2006 – 2009 Editor, *Monthly Weather Review*
2008 – present Chairperson of the American Meteorological Society Scientific and Technological
Activities Commission (STAC) Committee on Severe Local Storms

Field Work Experience

- 1991 CaPE (Convection and Precipitation/Electrification) experiment over east-central
Florida
1992 Participated in the ground and aerial surveys of Hurricane Andrew
1994-1995 VORTEX (Verification of the Origins of Tornadoes EXperiment)
2003 Bow-Echo and MCV Experiment (BAMEX)
2009-2010 VORTEX (Verification of the Origins of Tornadoes Experiment) 2

Honors

- 1987 Became a member of Tau Beta Pi, the National Engineering Honor Society
1991 Recipient of the Morris Neiberger Memorial Award for outstanding teaching in
the Atmospheric Sciences, Department of Atmospheric Sciences, UCLA
1999, 2003 Recipient of the Senior Class Award for Outstanding Faculty, Lyndon State
College

Technical Experience

- Operating Systems: UNIX, Linux, and Windows
- Programming Languages: Fortran, HTML
- Mesoscale Modeling: Weather, Research, and Forecast Model
(WRF), WRF Standard Initialization
(WRFSI), and WRF Preprocessing System
(WPS)
- Visualization Tools: NCAR Graphics and NCL, VIS5D, RIP4,
GEMPAK, McIDAS, and the IDV

Peer Reviewed Publications

- Atkins, N.T., and R.M. Wakimoto, 1991: Wet microburst activity over the southeastern United States: Implications for forecasting. *Weather and Forecasting*, **6**, 470-482.
- Atkins, N.T., R.M. Wakimoto, and T.M. Weckwerth, 1995: Observations of the sea-breeze front during CaPE. Part II: Dual-Doppler and aircraft analysis. *Mon. Wea. Rev.*, **123**, 944-969.
- Atkins, N.T., and R.M. Wakimoto, 1997: Influence of the synoptic-scale flow on sea-breezes observed during CaPE. *Mon. Wea. Rev.*, **125**, 2112-2130.
- Atkins, N.T., R.M. Wakimoto, and C.L. Ziegler, 1998: Observations of the fine-scale structure of a dryline during VORTEX 95. *Mon. Wea. Rev.*, **126**, 525-550.
- Atkins, N.T., M.L. Weisman, and L.J. Wicker, 1999: The influence of preexisting boundaries on supercell evolution. *Mon. Wea. Rev.*, **127**, 2910-2927.
- Atkins, N.T., J.M. Arnott, R.W. Przybylinski, R.A. Wolf, and B.D. Ketcham, 2004: Vortex structure and evolution within bow echoes. Part I: Single-Doppler and damage analysis of the 29 June 1998 derecho. *Mon. Wea. Rev.*, **132**, 2224-2242.
- Atkins, N.T., C.S. Bouchard, R.W. Przybylinski, R.J. Trapp, and G. Schmocker, 2005: Damaging surface wind mechanisms within the 10 June 2003 Saint Louis bow echo during BAMEX. *Mon. Wea. Rev.*, **133**, 2275-2296.
- Atkins, N.T. and M. St. Laurent, 2009: Bow Echo Mesovortices. Part I: Processes That Influence Their Damaging Potential. *Mon. Wea. Rev.*, **137**, 1497-1513.
- Atkins, N.T. and M. St. Laurent, 2009: Bow Echo Mesovortices. Part II: Their Genesis. *Mon. Wea. Rev.*, **137**, 1514-1532.
- Davis, C., N. Atkins, D. Bartels, L. Bosart, M. Coniglio, G. Bryan, W. Cotton, D. Dowell, B. Jewett, R. Johns, D. Jorgensen, J. Knievel, K. Knupp, W.-C. Lee, G. McFarquhar, J. Moore, R. Przybylinski, R. Rauber, B. Smull, R. Trapp, S. Trier, R. Wakimoto, M. Weisman and C. Ziegler. 2004: The Bow echo and MCV Experiment: Observations and opportunities. *Bull. Amer. Meteor. Soc.*, **85**, 1075–1093.
- Trapp, R.J., D.M. Wheatley, N.T. Atkins, R.W. Przybylinski, and R. Wolf, 2006: “Buyer Beware: Some Words of Caution on the Use of Severe Wind Reports in Postevent Assessment and Research.” *Weather and Forecasting*, **21**, 408–415.
- Wakimoto, R.M., and N.T. Atkins, 1994: Observations of the sea-breeze front during CaPE. Part I: Single-Doppler, satellite, and cloud photogrammetric analysis. *Mon. Wea. Rev.*, **122**, 1092-1114.
- Wakimoto, R.M., N.T. Atkins, and C. Liu, 1995: Explosive oceanic cyclone during ERICA IOP 5. Part II: Airborne Doppler analysis of the mesoscale circulation and frontal structure. *Mon. Wea. Rev.*, **123**, 1311-1327.
- Wakimoto, R.M., and N.T. Atkins, 1996: Observations on the origins of rotation: The Newcastle tornado during VORTEX 94. *Mon. Wea. Rev.*, **124**, 384-407.
- Wakimoto, R.M., H.V. Murphy, A. Nester, D.P. Jorgensen, and N.T. Atkins, 2006: High winds generated by bow echoes. Part I: Overview of the Omaha bow echo 5 July 2003 storm during BAMEX. *Mon. Wea. Rev.*, **134**, 2793-2812.
- Wakimoto, R.M., H.V. Murphy, C.A. Davis, and N.T. Atkins, 2006: High winds generated by bow echoes. Part II: The relationship between the mesovortices and damaging straight-line winds. *Mon. Wea. Rev.*, **134**, 2813-2829.
- Wakimoto, R.M., N. T. Atkins, and J. Wurman, 2011: The LaGrange tornado during VORTEX2. Part I: photogrammetric analysis of the tornado combined with single-Doppler radar data. *Mon. Wea. Rev.*, **139**, 2233–2258.

Wheatley, D.M., R.J. Trapp, and N.T. Atkins, 2006: Radar and damage analysis of severe bow echoes observed during BAMEX. *Mon. Wea. Rev.*, **134**, 791-806.

Conference Presentations

- Arnott, J.M., and N.T. Atkins, 2002: Tornadogenesis within quasi-linear convective systems. Part I: Radar and storm damage analysis of the 29 June 1998 derecho. *Preprints, 21st Conf. On Severe Local Storms*, San Antonio, TX, Amer. Meteor. Soc., 494-497.
- Atkins, N.T., and R.M. Wakimoto, 1990: Forecasting wet microburst activity over the southeastern U.S. Preprints, *16th Conf. on Severe Local Storms*, Kananaskis Park, Amer. Meteor. Soc., 607-612.
- Atkins, N.T., and R.M. Wakimoto, 1993: Convection initiation at the intersections of horizontal convective rolls and the sea-breeze front: A single Doppler and cloud photogrammetry perspective. Preprints, *26th Conf. on Radar Meteor.*, Norman, OK, Amer. Meteor. Soc., 498-500.
- Atkins, N.T., 1994: Detectability of meteorological phenomena by the WSR-88D for Evansville, Indiana. 17 pp,
- Atkins, N.T., and R.M. Wakimoto, 1995: Observations on the origins of rotation: The Newcastle tornado during VORTEX 94., Preprints, *27th Conf. on Radar Meteor.*, Vail, CO, Amer. Meteor. Soc., 1-3.
- Atkins, N.T., and R.M. Wakimoto, 1996: Eldora observations of the fine-scale structure of the dryline, Preprints, *7th Conf. on Mesoscale Processes*, Reading, UK, Amer. Meteor. Soc., 462-464.
- Atkins, N.T., and M.L. Weisman, 1998: The influence of pre-existing boundaries on supercell evolution, Preprints, *19th Conf. On Severe Local Storms*, Minneapolis, MN, Amer. Meteor. Soc., 334-337.
- Atkins, N.T., and J.M. Arnott, 2002: Tornadogenesis within quasi-linear convective systems. Part II: Preliminary WRF simulation results of the 29 June 1998 derecho. *Preprints, 21st Conf. On Severe Local Storms*, San Antonio, TX, Amer. Meteor. Soc., 498-501.
- Atkins, N.T., and R.W. Przybylinski, 2002: Radar and damage analysis of the 27 May 2000 tornadic derecho event. *Preprints, 21st Conf. On Severe Local Storms*, San Antonio, TX, Amer. Meteor. Soc., 567-570.
- Atkins, N.T., C.S. Bouchard, R.W. Przybylinski, R.J. Trapp, and G. Schmocker, 2004: Damaging surface wind mechanisms within the 10 June 2003 Saint Louis bow echo event during BAMEX. *Preprints, 22nd Conf. On Severe Local Storms*, Hyannis, MA, Amer. Meteor. Soc.
- Atkins, N.T., and B. Taber, 2004: Mesoscale analysis of the Cavendish, VT bow-echo tornado on 21 July 2003. *Preprints, 22nd Conf. On Severe Local Storms*, Hyannis, MA, Amer. Meteor. Soc.
- Atkins, N.T., C. Bouchard, R.J. Trapp, R.W. Przybylinski, and G.K. Schmocker, 2005: Damaging Surface Wind Mechanisms within the 10 June 2003 Saint Louis Bow Echo Event during BAMEX. *11th Conference on Mesoscale Processes*, Albuquerque, NM, Amer. Meteor. Soc., available on CD Rom.
- Atkins, N.T., 2006: On the Genesis and Strength of Mesovortices Formed within Bow Echoes. *23rd Conf. on Severe Local Storms*, St. Louis, MO, Amer. Meteor. Soc., available on CD Rom.

- Atkins, N.T., and J.J. Cunningham, 2006: The Influence of Low-Level Stable Layers on Damaging Surface Winds within Bow Echoes. *23rd Conf. on Severe Local Storms*, St. Louis, MO, Amer. Meteor. Soc., available on CD Rom.
- Atkins, N.T., and M. St. Laurent, 2008: On the Genesis of Bow Echo Mesovortices. *24th Conf. on Severe Local Storms*, Savannah GA, Amer. Meteor. Soc.
- Atkins, N.T., and M. St. Laurent, 2008: Processes That Influence The Damaging Potential of Bow Echo Mesovortices. *24th Conf. on Severe Local Storms*, Savannah GA, Amer. Meteor. Soc.
- Atkins, N.T., R.M. Wakimoto, A. McGee, R. Ducharme, and J. Wurman, 2010: The LaGrange, WY Tornado during VORTEX II. Part II: Photogrammetric Analysis of the Tornado Combined with Dual-Doppler Radar Data. *25th Conf. On Severe Local Storms*, Denver, CO, Amer. Meteor. Soc.
- Atkins, N.T., 2007: Mesovortices Formed within Bow Echoes: Their Genesis and Sensitivity to the Environment and System Cold Pool. *12th Conference on Mesoscale Processes*, Waterville Valley, NH, Amer. Meteor. Soc., available on CD Rom.
- Cunningham, J.J., and N.T. Atkins, 2006: The Influence of Low-Level Stable Layers on Damaging Surface Winds within Bow Echoes. *23rd Conf. on Severe Local Storms*, St. Louis, MO, Amer. Meteor. Soc., available on CD Rom.
- Lee, J.E., J.W. Cannon, J.A. Ronco, F. Colby, J. Schoof, P. Sisson, C. McGill, J. Edson, L. Dupigny-Giroux, N.T. Atkins, D. Taylor, B. Keim, H. Yang, C. Sawyer, M. Michaels, and J.S. Tongue, 2001. The New England Weather Observation Network: A 21st Century Vision for Environmental Monitoring and Science Education in the New England States, Preprints, *17th International Conf. on Interactive Information and Processing Systems (IIPS) for Meteorology, Oceanography, and Hydrology*, Albuquerque, NM, Amer. Meteor. Soc.
- Liu, C.-H., R.M. Wakimoto, N.T. Atkins, and F. Roux, 1995: Dynamic and thermodynamic retrievals of airborne dual-Doppler radar analyses for the ERICA IOP 4 and 5 storms., Preprints, *27th Conf. on Radar Meteor.*, Vail, CO, Amer. Meteor. Soc., 808-810.
- Przybylinski, R.W., J. Sieveking, G.K. Schmocker, and N.T. Atkins, 2006: Analysis of the 02 April 2006 Quasi-Linear Convective System (QLCS) over the Mid-Mississippi Valley Region: Storm Structure and Evolution from WSR-88D Data. *Preprints, 23rd Conf. on Severe Local Storms*, St. Louis, MO, Amer. Meteor. Soc.
- Przybylinski, R.W., J.E. Sieveking, G.K. Schmocker, and N.T. Atkins, 2006: Analysis of the 2 April 2006 Quasi-Linear Convective System (QLCS) over the Mid-Mississippi Valley Region: Storm Structure and Evolution from WSR-88D Data. *23rd Conf. on Severe Local Storms*, St. Louis, MO, Amer. Meteor. Soc., available on CD Rom.
- Przybylinski, R.W., J.S. Schaumann, D.T. Cramer, and N.T. Atkins, 2010: The 08 May 2009 Missouri Derecho: Radar Analysis and Warning Implications over Parts of Southwest Missouri. *25th Conf. On Severe Local Storms*, Denver, CO, Amer. Meteor. Soc.
- Trapp, R.J., N.T. Atkins, H.E. Fuelburg, J.G. LaDue, K.J. Pence, T.L. Smith, G.J. Stumpf, 2001: meeting summary: 20th Conference on Severe Local Storms. *Bull. Amer. Meteor. Soc.*, **82**, 2251-2258.
- Trapp, R.J., D.M. Wheatley, N.T. Atkins, and R.W. Przybylinski, 2004: A word of caution on the use of severe wind reports in post-event assessment and research. *Preprints, 22nd Conf. On Severe Local Storms*, Hyannis, MA, Amer. Meteor. Soc.

- Wakimoto, R.M., and N.T. Atkins, 1993: Airborne Doppler analyses of an intense extratropical cyclone during ERICA., Preprints, *26th Conf. on Radar Meteor.*, Norman, OK, Amer. Meteor. Soc., 282-284.
- Wakimoto, R.M., N.T. Atkins, and C.-H. Liu, 1994: Airborne Doppler analysis of the mesoscale circulation and frontal structure of an explosive oceanic cyclone during ERICA IOP 5., Proceeding, *The Life Cycles of Extratropical Cyclones, Vol. III*, Bergen, Norway, 236-241.
- Wakimoto, R.M., H.V. Murphey, D.P. Jorgensen, C.A. Davis, and N.T. Atkins, 2005: Understanding the generation of high winds associated with bow echoes: The Omaha bow echo during BAMEX. *11th Conference on Mesoscale Processes*, Albuquerque, NM, available on CD Rom.
- Wakimoto, R.M., N.T. Atkins, and J. Wurman, 2010: The LaGrange Tornado during VORTEX2. Part I: Photogrammetry analysis of the tornado combined with single-Doppler radar data. *25th Conf. On Severe Local Storms*, Denver, CO, Amer. Meteor. Soc.
- Weckwerth, T.M., N.T. Atkins and R.M. Wakimoto, 1993: Convection initiation at the intersections of horizontal convective rolls and the sea-breeze front: A detailed kinematic analysis. Preprints, *26th Conf. on Radar Meteor.*, Norman, OK, Amer. Meteor. Soc., 501-503.
- Wheatley, D.M., R.J. Trapp, and N.T. Atkins, 2004: Radar and damage analysis of bow echoes observed during BAMEX. *Preprints, 22nd Conf. On Severe Local Storms*, Hyannis, MA, Amer. Meteor. Soc.

Professional References

References are available upon request.