

EDGAR L ANDREAS

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EDUCATION

Oregon State University, Corvallis; 9/71 to 6/77
Completed Ph.D. Degree in June 1977
Major: Physical Oceanography
Minor: Applied Mathematics
Thesis Advisor: Clayton A. Paulson
Thesis Title: Observations of Velocity and Temperature
and Estimates of Momentum and Heat Fluxes in the
Internal Boundary Layer over Arctic Leads

Michigan State University, East Lansing; 9/69 to 6/71
Graduated with M.S. Degree in June 1971
Major: Physics

Knox College, Galesburg, IL; 9/65 to 6/69
Graduated with B.A. Degree in June 1969
Major: Physics

EXPERIENCE

NorthWest Research Associates (Seattle Division)
Senior Research Scientist, 1/07 to present

USA CRREL

Research Physicist, Snow and Ice Br., 12/93 to 12/06
Physicist, Snow and Ice Branch; 10/87 to 11/93
Physicist, Snow and Ice Branch, 9/81 to 9/86
Physicist, Physical Sciences Branch; 7/78 to 8/81

NOAA/ERL Wave Propagation Laboratory

National Research Council Associate; 9/86 to 9/87

Oregon State University, School of Oceanography

Research Associate; 7/77 to 6/78

Graduate Research Assistant; 1/72 to 6/77

Michigan State University, Physics Department

Teaching Assistant; 9/69 to 7/71

MEMBERSHIPS

American Geophysical Union, since 1979, Life Member
American Meteorological Society, since 1977, Fellow
Royal Meteorological Society, since 1977, FRMetS

FIELD EXPERIENCE

- Dec. 2012–Jan. 2013: Measurements of turbulent fluxes and sea spray concentration over the ocean at Mt. Desert Rock, ME
- April 2005: Turbulence measurements to study rapid atmospheric forcing, Lebanon, NH
- Sept.–Oct. 1997; May, Sept.–Oct. 1998: Measure surface fluxes over sea ice, SHEBA camp in the Arctic Ocean
- Jan.–Mar. 1992: Atmospheric boundary layer studies, Russian-American Weddell Sea drifting station
- July–Aug. 1991: Micrometeorological measurements during the Sevilleta fluxes experiment, near Socorro, NM
- Jan.–Feb. 1986: Surface-layer turbulence and optical turbulence over snow, SNOW-IV, Hollis, ME
- Jan. 1984: Surface-layer turbulence and optical turbulence over snow, SNOW-II, Grayling, MI
- Nov.–Dec. 1982: Surface-layer turbulence and optical turbulence over snow, SNOW-1B, Grayling, MI
- Jan.–Feb. 1982: Surface-layer turbulence and optical turbulence over snow, SNOW-1A, Camp Ethan Allen, VT
- Oct.–Nov. 1981: Air-sea-ice interaction studies, U.S.-U.S.S.R. Weddell Polynya Expedition
- Feb.–April 1974: Thesis research, AIDJEX Lead Experiment, Barrow, AK, and Beaufort Sea
- Aug. 1973: Technician, Hydrographic cruise off Oregon coast
- May 1972: Technician, Hydrographic and air-sea interaction cruise off Oregon coast

OTHER COURSES

Presenting Data and Information, taught by Edward Tufte, Boston, MA, 2/23/07
Time Series Analysis Methods and Applications in the Atmospheric Sciences, AMS Short Course, Long Beach, CA, 2/1 to 2/2/97
Creative Writing, Lebanon College, Lebanon, NH, 3/10 to 5/26/95
Cold Regions Land and Marine Survival, taught by LTR Training Systems, Hanover, NH, 1/30 to 2/3/95
Accounting for Uncertainty, taught by M.E. Harr, Lebanon, NH, 3/4 to 3/8/91
Professional Writing Techniques, Hanover, NH, 10/26 to 10/28/88
Probability and Statistics in Science and Engineering, taught by M.E. Harr, Hanover, NH, 12/17 to 12/21/84
Clear Technical Writing, taught by J.A. Brogan, Boston, MA, 6/11 to 6/12/84
Vaisala Sounding System, Vaisala Oy, Helsinki, Finland, 8/24 to 8/28/81
Russian, Dartmouth College, Hanover, NH, 10/22 to 12/10/80
Measurement Applications of Random Data Analysis, taught by J.S. Bendat and A.G. Piersol, San Francisco, CA, 12/12/78

AWARDS AND HONORS

2014: Presented Distinguished Lecture for Information Science and Technology Center (ISTeC) at Colorado State University
2013: Named a Fellow of the American Meteorological Society
2007: Recognized as a Distinguished Alumnus of Sterling High School, Sterling, Illinois
2004: Designated a Fellow of the Royal Meteorological Society (FRMetS)
2002: Performance Award from CRREL
2002: On-the-Spot Award from CRREL for a team effort to develop a new method to estimate reservoir evaporation
2001: Performance Award from CRREL
2001: ERDC Award for Outstanding Team Effort as member of National Missile Defense Technical Team and comparable award from CRREL
2000: Performance Award from CRREL
2000: Award of Excellence from the Boston and Northern New England Chapters of the Society for Technical Communication for my paper "Obtaining Surface Momentum and Sensible Heat Fluxes from Crosswind Scintillation"
2000: On-the-Spot Award for being CRREL's most cited author in 1999
1999: Highly Successful Performance Award from CRREL

- 1999: CRREL Special Act Award for serving 3+ years as CRREL seminar coordinator
- 1998: Exceptional Performance Award from CRREL
- 1997: Exceptional Performance Award from CRREL
- 1996: Exceptional Performance Award from CRREL
- 1995: Award of Excellence from the Boston and Northern New England Chapters of the Society for Technical Communication for my paper “The Temperature of Evaporating Sea Spray Droplets”
- 1995: Exceptional Performance Award from CRREL
- 1994: Exceptional Performance Award from CRREL
- 1993: Antarctica Service Medal
- 1993: Exceptional Performance Award from CRREL
- 1993: Award of Distinction at the Society for Technical Communication’s International Technical Publications Competition for my paper “Sea Spray and the Turbulent Air-Sea Heat Fluxes”
- 1992: Award of Distinction from the Boston and Northern New England Chapters of the Society for Technical Communication for my paper “Sea Spray and the Turbulent Air-Sea Heat Fluxes”
- 1992: Exceptional Performance Award from CRREL
- 1992: Army Research and Development Achievement Award
- 1991: Exceptional Performance Award from CRREL
- 1990: Exceptional Performance Award from CRREL
- 1990: CRREL Research and Development Achievement Award
- 1989: Exceptional Performance Award from CRREL
- 1988: Exceptional Performance Award from CRREL
- 1986–87: National Research Council Associateship at NOAA
- 1986: Exceptional Performance Award from CRREL
- 1985: Nominated for Army Research and Development Achievement Award
- 1983: Sustained Superior Performance Award from CRREL
- 1973: Inducted into The Honor Society of Phi Kappa Phi
- 1967: Knox College Colorado Outward Bound Scholarship
- 1965–69: Illinois State Scholarship

PROFESSIONAL ACTIVITIES

- American Meteorological Society's 19th Conference on Air-Sea Interaction, Judge in Best Student Paper Competition and Session Chairperson, January 2015
- National Science Foundation, Office of Polar Programs, Member of review panel for proposals submitted to the Arctic Observing Network program, March–April 2013
- Boundary-Layer Meteorology*, Member Editorial Board, November 2012–present
- American Meteorological Society's 18th Conference on Air-Sea Interaction, Judge in Best Student Paper Competition and Session Chairperson, July 2012
- National Aeronautics and Space Administration, Member of review panel for proposals submitted to the Modeling, Analysis, and Prediction program in the Earth Science Division, November–December 2010
- American Meteorological Society's 17th Conference on Air-Sea Interaction, Member Program Committee, Co-Chair of Student Program, Judge in Best Student Paper Competition, and Session Chairperson, 2009–2010
- American Meteorological Society Committee on Air-Sea Interaction, Member 2005–2011, Chairman 2009–2011
- American Meteorological Society Scientific and Technological Activities Commission, Member 2009–2011
- National Science Foundation, Office of Polar Programs, Member of review panel for proposals submitted to Arctic System Science and Arctic Natural Sciences, April 2009
- Society for Technical Communication, Special Interest Group (SIG) on Scientific Communication, Member of team for rechartering this SIG, 2008
- American Meteorological Society's 16th Conference on Air-Sea Interaction, Program Co-Chairperson, Session Chairperson, and Judge in Best Student Paper Competition, 2007–2009
- American Meteorological Society's Annual Meeting Oversight Committee, Member, 2007–2011
- American Meteorological Society's 15th Conference on Air-Sea Interaction, Program Co-Chairperson, Session Chairperson, and Judge in Best Student Paper Competition, 2006–2007
- American Meteorological Society's 14th Conference on Interaction of the Sea and Atmosphere, Member Program Committee, Session Chairperson, and Judge in Best Student Paper Competition, 2005–2006
- Polar Climate Working Group of the Community Climate System Model (CCSM), Member 2005–present

World Climate Research Programme Working Group on Surface Fluxes, Member, 2004–2007

American Meteorological Society's 7th Conference on Polar Meteorology and Oceanography, Member Program Committee and Session Chairperson, 2003.

CRREL representative on Arctic Research Consortium of the United States, 2003–2006

Short Course on Technical Writing presented at the Annual Meeting of the American Meteorological Society, February 2003, Organizer and Instructor

American Meteorological Society Committee on Polar Meteorology and Oceanography, Member 2002–2005

SHEBA Phase III Science Team, Member, 2000–2003

AGU/ASLO 2000 Ocean Sciences Meeting, Session Chairperson

Member Editorial Board of *Atmospheric Research*, 1998–2008

CRREL GS-14 Evaluation Panel, 1999

CRREL Seminar Coordinator, October 1995–February 1999

American Meteorological Society's 13th Symposium on Boundary Layers and Turbulence, Session Chairperson and Judge in Best Student Paper Competition, 1999

SHEBA Phase II Science Team, Member, 1997–2000

American Meteorological Society's 12th Symposium on Boundary Layers and Turbulence, Session Chairperson and Judge in Best Student Paper Competition, 1997

CRREL GS-12 Evaluation Panel, 1993, 1997

Guest editor of a special issue of *Atmospheric Research* (1996, Vol. 40, Nos. 2–4) on tropospheric turbulence, 1994–1995

Second Workshop on Nonstationary Random Processes and Their Applications, Member of Organizing Committee, 1994–1995

American Meteorological Society's 11th Symposium on Boundary Layers and Turbulence, Program Chairman, 1994–1995

National Science Foundation, Office of Polar Programs, Member of review panel for proposals submitted to Polar Oceans and Climate Systems, September 1994

American Meteorological Society Scientific and Technological Activities Commission, Member 1993–1995

American Meteorological Society Committee on Boundary Layers and Turbulence, Member 1990–1996, Chairman 1993–1995

American Meteorological Society's Tenth Symposium on Turbulence and Diffusion, Member of the Program Committee, 1992

Army Research Office Technical Advisory Council that monitored
the Measurement, Analysis, and Prediction of Atmospheric
Boundary Layer Turbulence Center at Penn State
University, Member 1991–1997
Ice Station Weddell Science Committee, Member 1991–1993

PROFESSIONAL ACTIVITIES (Continued)

Member of these Ph.D. thesis committees:

James A. Mueller, College of Marine and Earth Studies, University of Delaware, 2006–2009

Alexandra I. Weiss, Swiss Federal Technical Institute (ETH), Zurich, Switzerland, 2001–2002

Magdalena D. Anguelova, College of Marine Studies, University of Delaware, 1999–2002

Lionel P. Poggio, Swiss Federal Technical Institute (ETH), Zurich, Switzerland, 1997–1998

Invited seminars presented:

Colorado State University, Information Science and Technology Center (ISTeC), Fort Collins, two seminars, April 2014

University of Connecticut, Department of Marine Sciences, Groton, November 2013

Korea Polar Research Institute, Incheon, South Korea, April 2013

Workshop on Ice at the Interface: Atmosphere-Ice-Ocean Boundary Layer Processes and Their Role in Polar Change, Boulder, Colorado, June 2012

Lyndon State College, Atmospheric Sciences, Lyndonville, Vermont, April 2011

3rd Scintillometer Workshop, Wageningen, The Netherlands, April 2011

University of Rhode Island, Graduate School of Oceanography, Narragansett, April 2010

University of Delaware, College of Marine and Earth Studies, Newark, February 2007

NorthWest Research Associates, Bellevue, Washington, September 2005

Swiss Federal Institute for Snow and Avalanche Research, Davos, September 2005

British Antarctic Survey, Cambridge, England, May 2005

University of Reading, Department of Meteorology, Reading, England, May 2005

Stony Brook University, Marine Sciences Research Center, Stony Brook, New York, September 2004

University of Arizona, Department of Atmospheric Sciences, Tucson, April 2004

Oregon State University, College of Oceanic and Atmospheric Sciences, Corvallis, June 2003

Swiss Federal Technical Institute (ETH), Zurich, January 2002

University of Delaware, College of Marine Studies, Lewes, May 2001

University of Vermont, Department of Mechanical Engineering,
Burlington, November 2000

NCAR Geophysical Turbulence Program workshop on Turbulence
and the Air-Sea Interface, Boulder, Colorado, August 2000

Woods Hole Oceanographic Institution, Department of Applied
Ocean Physics and Engineering, Woods Hole, February
2000

University of Delaware, College of Marine Studies, Newark,
November 1999

Paul Scherrer Institute, Villigen, Switzerland, June 1998

Swiss Federal Technical Institute (ETH), Zurich, June 1998

Paul Scherrer Institute, Villigen, Switzerland, March 1996

Summer Institute on the Physics of Ice-Covered Seas, Savonlinna,
Finland, June 1994

Oregon Graduate Institute, Beaverton, September 1992

The Pennsylvania State University, Department of Meteorology,
University Park, March 1990

University of Connecticut, Marine Sciences Institute, Groton,
November 1987

NOAA Wave Propagation Laboratory, Boulder, Colorado, January
1987

The Pennsylvania State University, Department of Meteorology,
University Park, November 1985

JOURNAL ARTICLES

1979:

Andreas, E. L., 1979: Analysis of crossed hot-film velocity data. *DISA Information*, **24**, 15–23.

Andreas, E. L., 1979: The calibration of cylindrical hot-film velocity sensors. *Journal of Applied Mechanics*, **46**, 15–20.

Andreas, E. L., and C. A. Paulson, 1979: Velocity spectra and cospectra and integral statistics over Arctic leads. *Quarterly Journal of the Royal Meteorological Society*, **105**, 1053–1070.

Andreas, E. L., C. A. Paulson, R. M. Williams, R. W. Lindsay, and J. A. Businger, 1979: The turbulent heat flux from Arctic leads. *Boundary-Layer Meteorology*, **17**, 57–91.

1980:

Andreas, E. L., 1980: Estimation of heat and mass fluxes over Arctic leads. *Monthly Weather Review*, **108**, 2057–2063.

1981:

Andreas, E. L., 1981: The effects of volume averaging on spectra measured with a Lyman-alpha hygrometer. *Journal of Applied Meteorology*, **20**, 467–475.

Andreas, E. L., R. M. Williams, and C. A. Paulson, 1981: Observations of condensate profiles over Arctic leads with a hot-film anemometer. *Quarterly Journal of the Royal Meteorological Society*, **107**, 437–460.

1982:

Andreas, E. L., 1982: Atmospheric boundary layer measurements in the Weddell Sea. *Antarctic Journal of the United States*, **17** (5), 113–115.

Andreas, E. L., and S. F. Ackley, 1982: On the differences in ablation seasons of Arctic and Antarctic sea ice. *Journal of the Atmospheric Sciences*, **39**, 440–447.

1983:

Andreas, E. L., 1983: Comment on “Water drag coefficient of first-year sea ice” by M.P. Langleben. *Journal of Geophysical Research*, **88**, 779–780.

1984:

Andreas, E. L., J. H. Rand, and S. F. Ackley, 1984: A simple boom assembly for the shipboard deployment of air-sea interaction instruments. *Ocean Engineering*, **11**, 227–237.

Andreas, E. L., W. B. Tucker III, and S. F. Ackley, 1984: Atmospheric boundary-layer modification, drag coefficient, and surface heat flux in the Antarctic marginal ice zone. *Journal of Geophysical Research*, **89**, 649–661.

1985:

Andreas, E. L., 1985: Heat and moisture advection over Antarctic sea ice. *Monthly Weather Review*, **113**, 736–746.

Journal Articles, continued

Andreas, E. L, and A. P. Makshtas, 1985: Energy exchange over Antarctic sea ice in the spring. *Journal of Geophysical Research*, **90**, 7199–7212.

1986:

Andreas, E. L, 1986: A new method of measuring the snow-surface temperature. *Cold Regions Science and Technology*, **12**, 139–156.

Andreas, E. L, and B. Murphy, 1986: Bulk transfer coefficients for heat and momentum over leads and polynyas. *Journal of Physical Oceanography*, **16**, 1875–1883.

Andreas, E. L, and B. Murphy, 1986: Calibrating cylindrical hot-film anemometer sensors. *Journal of Atmospheric and Oceanic Technology*, **3**, 283–298.

Makshtas, A. P., P. V. Bogorodskii, and E. L. Andreas, 1986: Small-scale air-sea interaction in the vicinity of Maud Rise (in Russian). *Information Bulletin of the Soviet Antarctic Expeditions*, **108**, Arctic and Antarctic Research Institute, Leningrad, 67–71.

1987:

Andreas, E. L, 1987: A theory for the scalar roughness and the scalar transfer coefficients over snow and sea ice. *Boundary-Layer Meteorology*, **38**, 159–184.

Andreas, E. L, 1987: Comment on “Atmospheric boundary layer modification in the marginal ice zone” by T.J. Bennett, Jr., and K. Hunkins. *Journal of Geophysical Research*, **92**, 3965–3968.

Andreas, E. L, 1987: On the Kolmogorov constants for the temperature-humidity cospectrum and the refractive index spectrum. *Journal of the Atmospheric Sciences*, **44**, 2399–2406.

Andreas, E. L, 1987: Spectral measurements in a disturbed boundary layer over snow. *Journal of the Atmospheric Sciences*, **44**, 1912–1939.

1988:

Andreas, E. L, 1988: Atmospheric stability from scintillation measurements. *Applied Optics*, **27**, 2241–2246.

Andreas, E. L, 1988: Estimating averaging times for point and path-averaged measurements of turbulence spectra. *Journal of Applied Meteorology*, **27**, 295–304.

Andreas, E. L, 1988: Estimating C_n^2 over snow and sea ice from meteorological data. *Journal of the Optical Society of America A*, **5**, 481–495.

1989:

Andreas, E. L, 1989: A year of Bowen ratios over the frozen Beaufort Sea. *Journal of Geophysical Research*, **94**, 12,721–12,724.

Andreas, E. L, 1989: Comments on “A physical bound on the Bowen ratio.” *Journal of Applied Meteorology*, **28**, 1252–1254.

Andreas, E. L, 1989: The refractive index structure parameter, C_n^2 , for a year over the frozen Beaufort Sea. *Radio Science*, **24**, 667–679.

Journal Articles, continued

Andreas, E. L, 1989: Two-wavelength method of measuring path-averaged turbulent surface heat fluxes. *Journal of Atmospheric and Oceanic Technology*, **6**, 280–292.

Schnell, R. C., R. G. Barry, M. W. Miles, E. L. Andreas, L. F. Radke, C. A. Brock, M. P. McCormick, and J. L. Moore, 1989: Lidar detection of leads in Arctic sea ice. *Nature*, **339**, 530–532.

1990:

Andreas, E. L, 1990: Three-wavelength method of measuring path-averaged turbulent heat fluxes. *Journal of Atmospheric and Oceanic Technology*, **7**, 801–814.

Andreas, E. L, 1990: Time constants for the evolution of sea spray droplets. *Tellus*, **42B**, 481–497.

Andreas, E. L, M. W. Miles, R. G. Barry, and R. C. Schnell, 1990: Lidar-derived particle concentrations in plumes from Arctic leads. *Annals of Glaciology*, **14**, 9–12.

1991:

Andreas, E. L, 1991: Using scintillation at two wavelengths to measure path-averaged heat fluxes in free convection. *Boundary-Layer Meteorology*, **54**, 167–182.

1992:

Andreas, E. L, 1992: Sea spray and the turbulent air-sea heat fluxes. *Journal of Geophysical Research*, **97**, 11,429–11,441.

Andreas, E. L, 1992: Uncertainty in a path-averaged measurement of the friction velocity u_* . *Journal of Applied Meteorology*, **31**, 1312–1321.

Andreas, E. L, K. J. Claffey, A. P. Makshtas, and B. V. Ivanov, 1992: Atmospheric sciences on Ice Station Weddell. *Antarctic Journal of the United States*, **27** (5), 115–117.

Andreas, E. L, J. R. Gosz, and C. N. Dahm, 1992: Can long-path FTIR spectroscopy yield gas flux measurements through a variance technique? *Atmospheric Environment*, **26A**, 225–233.

Serreze, M. C., J. A. Maslanik, M. C. Rehder, R. C. Schnell, J. D. Kahl, and E. L. Andreas, 1992: Theoretical heights of buoyant convection above open leads in the winter Arctic pack ice cover. *Journal of Geophysical Research*, **97**, 9411–9422.

1993:

Andreas, E. L, K. J. Claffey, and A. P. Makshtas, 1993: Low-level atmospheric jets and inversions on Ice Station Weddell. *Antarctic Journal of the United States*, **28** (5), 274–276.

Andreas, E. L, M. A. Lange, S. F. Ackley, and P. Wadhams, 1993: Roughness of Weddell Sea ice and estimates of the air-ice drag coefficient. *Journal of Geophysical Research*, **98**, 12,439–12,452.

ISW Group, 1993: Weddell Sea exploration from ice station. *Eos, Transactions, American Geophysical Union*, **74**, 121–126.

Journal Articles, continued

1994:

Andreas, E. L., 1994: Comments on “On the contribution of spray droplets to evaporation” by Lutz Hasse. *Boundary-Layer Meteorology*, **68**, 207–214.

Andreas, E. L., 1994: Reply. *Journal of Geophysical Research*, **99**, 14,345–14,350.

Andreas, E. L., and K. J. Claffey, 1994: Drifted snow affects momentum exchange over sea ice. *Antarctic Journal of the United States*, **29** (5), 89–91.

1995:

Andreas, E. L., 1995: Air-ice drag coefficients in the western Weddell Sea: 2. A model based on form drag and drifting snow. *Journal of Geophysical Research*, **100**, 4833–4843.

Andreas, E. L., 1995: The temperature of evaporating sea spray droplets. *Journal of the Atmospheric Sciences*, **52**, 852–862.

Andreas, E. L., and K. J. Claffey, 1995: Air-ice drag coefficients in the western Weddell Sea: 1. Values deduced from profile measurements. *Journal of Geophysical Research*, **100**, 4821–4831.

Andreas, E. L., J. B. Edson, E. C. Monahan, M. P. Rouault, and S. D. Smith, 1995: The spray contribution to net evaporation from the sea: A review of recent progress. *Boundary-Layer Meteorology*, **72**, 3–52.

1996:

Andreas, E. L., 1996: Reply. *Journal of the Atmospheric Sciences*, **53**, 1642–1645.

Andreas, E. L., and B. A. Cash, 1996: A new formulation for the Bowen ratio over saturated surfaces. *Journal of Applied Meteorology*, **35**, 1281–1289.

Jones, K. F., J. Richter-Menge, D. S. Sodhi, and E. L. Andreas, 1996: Book review: *Ice and Construction*. *Quarterly Journal of the Royal Meteorological Society*, **112**, 792–793.

Thirriot, C., and E. L. Andreas, 1996: Editorial. *Atmospheric Research*, **40**, 109–110.

Treviño, G., and E. L. Andreas, 1996: On wavelet analysis of nonstationary turbulence. *Boundary-Layer Meteorology*, **81**, 217–288.

1997:

Andreas, E. L., and G. Treviño, 1997: Using wavelets to detect trends. *Journal of Atmospheric and Oceanic Technology*, **14**, 554–564.

1998:

Andreas, E. L., 1998: A new sea spray generation function for wind speeds up to 32 m/s. *Journal of Physical Oceanography*, **28**, 2175–2184.

Andreas, E. L., R. J. Hill, J. R. Gosz, D. I. Moore, W. D. Otto, and A. D. Sarma, 1998: Statistics of surface-layer turbulence over terrain with metre-scale heterogeneity. *Boundary-Layer Meteorology*, **86**, 379–408.

Andreas, E. L., R. J. Hill, J. R. Gosz, D. I. Moore, W. D. Otto, and A. D. Sarma, 1998: Stability dependence of the eddy-accumulation coefficients for momentum and scalars. *Boundary-Layer Meteorology*, **86**, 409–420.

Makshtas, A. P., V. F. Timachev, and E. L. Andreas, 1998: Structure of the atmospheric lower layer over the Weddell Sea ice (in Russian). *Meteorologija i Hidrologija*, **10**, 92–102. English translation in Makshtas, A. P., V. F. Timachev, and E. L. Andreas, 1998: Structure of the lower atmospheric layer over ice cover of the Weddell Sea. *Russian Meteorology and Hydrology*, **10**, 68–75.

1999:

Andreas, E. L., and B. A. Cash, 1999: Convective heat transfer over wintertime leads and polynyas. *Journal of Geophysical Research*, **104**, 25,721–25,734.

Jordan, R. E., E. L. Andreas, and A. P. Makshtas, 1999: The heat budget of snow-covered sea ice at North Pole 4. *Journal of Geophysical Research*, **104**, 7785–7806.

Makshtas, A. P., E. L. Andreas, P. N. Svyaschennikov, and V. F. Timachev, 1999: Accounting for clouds in sea ice models. *Atmospheric Research*, **52**, 77–113.

Perovich, D. K., E. L. Andreas, J. A. Curry, H. Eiken (sic), C. W. Fairall, T. C. Grenfell, P. S. Guest, J. Intrieri, D. Kadko, R. W. Lindsay, M. G. McPhee, J. Morison, R. E. Moritz, C. A. Paulson, W. S. Pegau, P. O. G. Persson, R. Pinkel, J. A. Richter-Menge, T. Stanton, H. Stern, M. Sturm, W. B. Tucker III, and T. Uttal, 1999: Year on ice gives climate insights. *Eos, Transactions, American Geophysical Union*, **41**, 481–486.

Perovich, D. K., E. L. Andreas, J. A. Curry, H. Eiken (sic), C. W. Fairall, T. C. Grenfell, P. S. Guest, J. Intrieri, D. Kadko, R. W. Lindsay, M. G. McPhee, J. Morison, R. E. Moritz, C. A. Paulson, W. S. Pegau, P. O. G. Persson, R. Pinkel, J. A. Richter-Menge, T. Stanton, H. Stern, M. Sturm, W. B. Tucker III, and T. Uttal, 1999: Year on ice gives climate insights. *Earth in Space*, **12**, 8–12.

Treviño, G., and E. L. Andreas, 1999: Comment on “Time-frequency analysis with the continuous wavelet transform,” by W. Christopher Lang and Kyle Forinash [*Am. J. Phys.* **66** (9), 794–797 (1998)]. *American Journal of Physics*, **67**, 934–935.

2000:

Andreas, E. L., 2000: Obtaining surface momentum and sensible heat fluxes from crosswind scintillation. *Journal of Atmospheric and Oceanic Technology*, **17**, 3–16.

Andreas, E. L., K. J. Claffey, and A. P. Makshtas, 2000: Low-level atmospheric jets and inversions over the western Weddell Sea. *Boundary-Layer Meteorology*, **97**, 459–486.

Andreas, E. L., and E. C. Monahan, 2000: The role of whitecap bubbles in air-sea heat and moisture exchange. *Journal of Physical Oceanography*, **30**, 433–442.

Andreas, E. L., and G. Treviño, 2000: Comments on “A physical interpretation of von Kármán’s constant based on asymptotic considerations—A new value.” *Journal of the Atmospheric Sciences*, **57**, 1189–1192.

- Beesley, J. A., C. S. Bretherton, C. Jakob, E. L. Andreas, J. M. Intrieri, and T. A. Uttal, 2000: A comparison of cloud and boundary layer variables in the ECMWF forecast model with observations at the Surface Heat Budget of the Arctic Ocean (SHEBA) ice camp. *Journal of Geophysical Research*, **105**, 12,337–12,349.
- Overland, J. E., S. L. McNutt, J. Groves, S. Salo, E. L. Andreas, and P. O. G. Persson, 2000: Regional sensible and radiative heat flux estimates for the winter Arctic during the Surface Heat Budget of the Arctic Ocean (SHEBA) experiment. *Journal of Geophysical Research*, **105**, 14,093–14,102.
- Poggio, L. P., M. Furger, A. S. Prévôt, W. K. Graber, and E. L. Andreas, 2000: Scintillometer wind measurements over complex terrain. *Journal of Atmospheric and Oceanic Technology*, **17**, 17–26.
- Treviño, G., and E. L. Andreas, 2000: Averaging intervals for spectral analysis of nonstationary turbulence. *Boundary-Layer Meteorology*, **95**, 231–247.
- 2001:
- Andreas, E. L., and K. A. Emanuel, 2001: Effects of sea spray on tropical cyclone intensity. *Journal of the Atmospheric Sciences*, **58**, 3741–3751.
- Andreas, E. L., M. J. Pattison, and S. E. Belcher, 2001: “Production rates of sea-spray droplets” by M. J. Pattison and S. E. Belcher: Clarification and elaboration. *Journal of Geophysical Research*, **106**, 7157–7161.
- 2002:
- Andreas, E. L., 2002: Book review: *Wind Stress over the Ocean*. *Atmospheric Research*, **62**, 171–173.
- Andreas, E. L., 2002: Parameterizing scalar transfer over snow and ice: A review. *Journal of Hydrometeorology*, **3**, 417–432.
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