

December 2013

**OLA P. G. PERSSON**

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**EDUCATION**

Pennsylvania State University; 1/87 to 8/91; Ph.D. August 1991  
Major: Meteorology; Thesis Advisor: Thomas T. Warner  
University of Washington; 9/77 to 12/80; M.S. December 1980  
Major: Atmospheric Sciences; Thesis Advisor: Peter V. Hobbs  
Pennsylvania State University; 9/73 to 3/77; Two B.S. Degrees March 1977  
Majors: Mathematics and Meteorology, Summa cum laude

**EMPLOYMENT**

University of Colorado, CIRES/ NOAA/ETL  
Research Associate (Scientist III); 1/98 to present  
University of Colorado, CIRES/ NOAA/ETL  
Research Associate (Scientist II); 1/91 to 1/98  
National Center for Meteorological Research, France  
Visiting Scientist, Mesoscale Division; 12/92 to 1/94  
Pennsylvania State University, Department of Meteorology  
Post-doctoral Scholar; 5/91 to 8/91  
Graduate Research Assistant; 1/87 to 4/91  
Swedish Meteorological and Hydrological Institute  
State Meteorologist, Met. Res. Section; 6/84 to 12/86  
Oregon State University, Department of Atmospheric Sciences  
Research Assistant; 10/80 to 5/84  
University of Washington, Department of Atmospheric Sciences  
Graduate Research Assistant; 9/77 to 9/80  
Tarfala Glaciological Res. Station, Kiruna, Sweden  
Summer research assistant; 5/77 to 8/77  
RISØ National Laboratory, Roskilde, Denmark  
Temporary research assistant; 3/77 to 4/77.  
Pennsylvania State University, Department of Meteorology  
Part-time undergraduate research assistant; 6/74 to 2/77.

**EDUCATIONAL AND PROFESSIONAL AFFILIATIONS, HONORS, AWARDS**

**Memberships:** American Geophysical Union; American Meteorological Society; Nordic Meteorological Society; The Society of Chi Epsilon Pi (Meteorology); Treasurer 1988-1989; Phi Beta Kappa; Phi Kappa Phi; The Society of Pi Mu Epsilon (Math)  
**Awards:** Coauthor on 2010 OAR Outstanding Scientific Paper; 2008 AGU Editor's Citation for Excellence in Refereeing for Journal of Geophysical Research-Atmospheres; Coauthor on OAR's Outstanding Scientific Paper of 2004, a lead scientist on research team receiving 1998 Department of Commerce Silver Medal to the OAR/ETL/Meteorological Applications and Assessment Division and NMAO/Aircraft Operations Center "For the extraordinary response to NOAA's call to study and forecast the unusual weather associated with the El Nino of 1997/98," (1998); NOAA Silver Medal Award for

Scientific/Engineering Achievement; Edwin L. Drake Memorial Scholarship (Pennsylvania State University); Evan Johnson Math Award (Pennsylvania State University); President's Freshman Award (Pennsylvania State University)

**Visiting Scientist:** National Center for Meteorological Research (CNRM), Toulouse, France, 12/92- 1/94; International Meteorological Institute (IMI), University of Stockholm, Stockholm, Sweden, 5/00 – 8/00

## PRINCIPAL RESEARCH TOPICS

**Mesoscale meteorology:** Mesoscale structure of extratropical cyclones; relation between the simulation and theory of conditional symmetric instability; coastal and topographic influences on mesoscale dynamics and precipitation; remote sensing of mesoscale atmospheric structures.

**Atmospheric boundary-layers:** Observations of surface fluxes in maritime, high-wind regimes; observations of surface fluxes in polar climates; simulations of maritime and polar boundary layers; surface-flux and boundary-layer effects on mesoscale atmospheric structure in maritime and polar environments; flow in complex terrain.

**Polar meteorology:** Surface energy budgets over the polar pack ice; structure of the Arctic boundary layer; relationship between the surface energy budget, clouds, and the surface; synoptic and mesoscale disturbances in the Arctic.

**Applied meteorology:** Relation of airflow in complex terrain to wind energy issues; development of real-time tools from remote sensors for operational forecasting.

## FIELD EXPERIENCE

2007-2008: PI for international Arctic Summer Cloud-Ocean Study (ASCOS) and Arctic Mechanisms of Interaction Between the Surface and Atmosphere (AMISA) using Swedish icebreaker Oden and NASA DC-8 near the North Pole

2005-2007: PI for deployment of surface flux instrumentation in the Arctic for the SEARCH Project

Mar. 2001-Mar. 2003: PI on subcontract to deploy boundary layer remote sensors on Swedish icebreaker Oden during Arctic Ocean Expedition-2001

Jan.-Feb. 2002: PI for obtaining coincident aircraft and QuikScat wind and flux measurements in extratropical cyclones for the Pacific Landfalling Jets Experiment (PACJET).

Jan.- Feb. 2001: Flight scientist for P-3 measurements during Pacific Landfalling Jets (PACJET) Experiment

Apr., July-Aug 1998: Chief scientist for Atmospheric Surface Flux Group at the SHEBA ice camp

Jan.-Mar. 1998: Co-chief scientist on NOAA P-3 aircraft during California Land-Falling Jets Experiment (CALJET) studying cyclonic storms in the eastern Pacific Ocean

Sept. 1997-Oct. 1998: Execution of surface flux and energy measurements on the Arctic pack ice during the Surface Heat Budget of the Arctic Ocean (SHEBA).

Dec. 1996-Jan. 1997: Chief scientist on R/V Knorr during Fronts and Atlantic Storm Tracks Experiment (FASTEX)

June-July 1996: Studies of interactions between atmospheric flow and coastal topography, COAST experiment, California

Mar.-Apr. 1992: Arctic Leads Experiment (LEADEX), ice camp in Beaufort Sea and on NOAA P-3

Oct. 1980 - May 1984: Field trip leader and co-PI for wind energy assessment in the Bonneville Power Administration area, emphasizing the Oregon Coast and the Columbia Gorge

Jan.-Feb. 1978; Jan.-Feb. 1979: Cyclones and Extratropical Storms (CYCLES); graduate assistant on NCAR Sabreliner, UW B-23, NCAR Electra; Pacific Northwest coast

## COMMITTEES

American Geophysical Union session co-chair (poster session A11K), Dec. 2012.

Invited member of U.S. delegation to UK-US Arctic Research Workshop, Univ. of Cambridge, UK, Oct. 9-11, 2012, to identify key themes and activities for joint UK/US collaborations;

Ad Hoc Committee for evaluating the potential and design of a program for a Multidisciplinary drifting Observatory for the Study of Arctic Climate (MOSAiC), funded by International Arctic Science Committee (IASC), Nov. 2011-ongoing.

American Meteorological Society Coastal Environment Committee, Jan. 2004-Jan. 2010.

Scientific Steering Committee for Coastal Ocean Processes (CoOP) Program, National Science Foundation (interdisciplinary research within continental margin systems) Jan. 2003-Jan 2006.

Graduate Advisor for Matthew Shupe (Ph.D., ATOC, Univ. of Colorado) and Cassandra Wheeler (M. Sc., ATOC, Univ. of Colorado)

Graduate Committee for Jeffrey Mirocha (Ph.D., M.S., PAOS, Univ. of Colorado, 2005), Nicholas Cullen (Ph.D., Geography, Univ. of Colorado, 2003), and Sandra Starkweather (Ph.D., Geography, Univ. of Colorado, 2004)

## DATA SETS ASSEMBLED/PROCESSED

Persson, P. Ola G., 2008-current: PI in charge of processing of cloud and boundary-layer remote sensing data from ship-based sensors deployed during the Arctic Summer Cloud-Ocean Study (ASCOS) near the North Pole. Part of team processing data from entire ASCOS field program. (<http://www.ascos.se/> or [ftp://ftp.etl.noaa.gov/et6/cruises/ASCOS\\_2008/ODEN](ftp://ftp.etl.noaa.gov/et6/cruises/ASCOS_2008/ODEN) )

Persson, P. Ola G., 2008-current: Co-PI in charge of processing of in-situ NASA DC-8 aircraft data deployed during the AMISA experiment near the North Pole. In-situ data processing and analysis being done in collaboration with the University of Leeds. Anticipate collaboration in analysis of remote sensing data collected from NASA DC-8.

Persson, P. Ola G., 2006-current: Surface Turbulent Flux Data from NOAA Long-term Observatory for the Study of Environmental Arctic Change (SEARCH) at Alert and Eureka, Nunavut. Archived at the NOAA Earth System Research Laboratory, Boulder, CO, USA (e.g., <ftp://ftp.etl.noaa.gov/et6/archive/alert/sonicati/> or <ftp://ftp.etl.noaa.gov/et6/eureka/flux/> ).

Persson, P. Ola G., and B. Walter, 2004: Aircraft Data from the Pacific Landfalling Jets Experiment (PACJET) 2001-2002. Archived at the NOAA Earth System Research Laboratory (<ftp://ftp.etl.noaa.gov/user/opersson/Pacjet/>).

Persson, P. Ola G., V. Leuskiy, and A. B. White, 2003: Wind Profiler, Sodar, Scanning Radiometer, and S-Band Radar Data from the Arctic Ocean Experiment -2001 (AOE-2001), July-August 2001. Archived at the NOAA Earth System Research Laboratory, Boulder, CO, USA, (<ftp://ftp.etl.noaa.gov/user/opersson/aoe/> ) and the Meteorology Dept., University of Stockholm, Stockholm, Sweden

Persson, P. Ola G., C. W. Fairall, E. L. Andreas, and P. S. Guest, 2001: Atmospheric Boundary-Layer and Surface Energy Budget Data from the Surface Heat Budget of the Arctic Ocean Experiment (SHEBA), Oct. 1997-Oct. 1998. Archived at NOAA Earth System research Laboratory (<ftp://ftp.etl.noaa.gov/user/opersson/sheba/>) and SHEBA Data Base (<http://sheba.apl.washington.edu/>).

Persson, P. Ola G., J. E. Hare, and C. W. Fairall, 2001: Turbulence, Sounding, and Wind Profiler Data from the Fronts and Atlantic Storm Tracks Experiment (FASTEX), Dec. 1996-Jan 1997. Archived at the NOAA Earth System Research Laboratory, Boulder, CO, USA (<ftp://ftp.etl.noaa.gov/user/cfairall/fluxdata/fastex/> ) and the FASTEX Archives, Toulouse, France. (<http://www.cnrm.meteo.fr/dbfastex/> )

- F. M. Ralph, P. Ola G. Persson, A. B. White, and P. Neiman, 2000: Aircraft, Wind Profiler, and S-Band Radar Data from the California Landfalling Jets Experiment (CALJET) 1998. Archived at the NOAA Earth System Research Laboratory.
- Fairall, C. W., D. Ruffieux, P. O. G. Persson, and D. Wolfe, 1995: Atmospheric Boundary-layer and Sounding Data for the Leads Experiment 1992 (LEADDEX92), Beaufort Sea, March-April 1992. Archived at the NOAA Earth System Research Laboratory, Boulder, CO.
- Baker, R., J. Wade, P. O. G. Persson, and R. Wittrup, 1984: Hourly Wind Data for Wind Resource Assessment in the Cape Blanco, OR, and Goodnoe Hills, WA, Areas, 1980-1984. Archived at the Bonneville Power Administration, Portland, OR and Wind Resource Assessment Group, Atmospheric Sciences Dept., Oregon State University, Corvallis, OR.

## PUBLICATIONS

### Refereed Publications: Submitted

- de Boer, G., O. Persson, M. D. Shupe, P. M. Caldwell, S. E. Bauer, J. S. Boyle, S. A. Kelin, and M. Tjernström, 2013: Near-surface meteorology during ASCOS: Evaluation of representation in reanalyses and GCMS. *Atmos. Chem. Phys. Discuss.*, **13**, 19421-19470.
- Tjernström, M., C. Leck, C. Birch, B. Brooks, I. Brooks, L. Bäcklin, R. Chang, E. Granath, M. Graus, J. Heintzenberg, A. Held, A. Hind, S. de la Rosa Høhn, P. Johnston, J. Knulst, M. Westberg, G. de Leeuw, L. Di Liberto, M. Martin, P. Matrai, T. Mauritsen, M. Müller, S. Norris, M. Orellana, D. Orsini, J. Paatero, O. Persson, Q. Gao, C. Rauschenberg, Z. Ristovski, J. Sedlar, M. Shupe, B. Sierau, A. Sirevaag, S. Sjögren, O. Stetzer, E. Swietlicki, M. Szczodrak, P. Vaattovaara, N. Wahlberg, and C. Wheeler, 2012: The Arctic Summer Cloud-Ocean Study (ASCOS): Overview and experimental design. *Atmos. Chem. Phys. Discuss.*, **13**, 13541-13652.

### Refereed Publications: Published or accepted

#### 2013:

- Solomon, A., M. Shupe, O. Persson, H. Morrison, T. Yamaguchi, P. Caldwell, and G. de Boer, 2013: The Sensitivity of Springtime Arctic Mixed-Phase Stratocumulus Clouds to Surface Layer and Cloud-Top Inversion Layer Moisture Sources. *J. Atmos. Sci.* doi:10.1175/JAS-D-13-0179.1, in press.
- Shupe, M. D., P. O. G. Persson, I. M. Brooks, M. Tjernström, J. Sedlar, T. Mauritsen, S. Sjögren, and C. Leck 2013: Cloud and boundary layer interactions over the Arctic sea-ice in late summer. *Atmos. Chem. Phys.*, **13**, 9379-9399.
- Grachev, A. A., E. L. Andreas, C. W. Fairall, P. S. Guest, and P. O. G. Persson, 2013: The critical Richardson number and limits of applicability of the local similarity theory in the stable boundary layer. *Bound.-Layer Meteor.*, **147** (1), 51-82, DOI 10.1007/s10546-012-9771-0.

#### 2012:

- Persson, P. O. G., 2012: Onset and end of the summer melt season over sea ice: Thermal structure and surface energy perspective from SHEBA. *Clim. Dynamics*, **39**, 1349-1371, DOI: 10.1007/s00382-011-1196-9.
- Tjernström, M., C. E. Birch, I. M. Brooks, M. D. Shupe, P. O. G. Persson, J. Sedlar, T. Mauritsen, C. Leck, J. Paatero, M. Szczodrak, and C. R. Wheeler, 2012: Meteorological conditions in the central Arctic summer during the Arctic Summer Cloud Ocean Study (ASCOS). *Atmos. Chem. Phys.*, **12**, 6863-6889, doi:10.5194/acp-12-1-2012.
- Grachev, A. A., E. L. Andreas, C. W. Fairall, P. S. Guest, and P. O. G. Persson, 2012: Outlier problem in evaluating similarity functions in the stable atmospheric boundary layer. *Boundary-Layer Meteorol.*, **144**(2), 137-155, doi: 10.1007/s10546-012-9714-9.
- Birch, C. E., I. M. Brooks, M. Tjernstrom, M. D. Shupe, T. Mauritsen, J. Sedlar, A. P. Lock, P. Earnshaw, P.O.G. Persson, S.F. Milton, and C. Leck, 2012: Modelling atmospheric structure, cloud and their response to CCN in the Central Arctic: ASCOS case studies. *Atmos. Chem. Phys.*, **12**, 3419-3435 doi:10.5194/acp-12-3419-2012.
- Rinke, A., Y. Xin, L. Bian, Y. Ma, K. Dethloff, P. O. G. Persson, C. Lüpkes, and C. Xiao, 2012: Evaluation of atmospheric boundary layer-surface process relationships in a regional model along an East Antarctic traverse. *J. Geophys. Res.*, **117**, D09121, doi:10.1029/2011JD016441.

#### 2011:

- Solomon, A., M. Shupe, P. O. G. Persson and H. Morrison, 2011: Moisture and dynamical interactions maintaining decoupled Arctic mixed-phase stratocumulus in the presence of a humidity inversion. *Atmos. Chem. Phys.*, **11**, doi:10.5194/acp-11-10127-2011, 10127-10148.
- Mauritsen, T., J. Sedlar, M. Tjernström, C. Leck, M. Martin, M. Shupe, S. Sjogren, B. Sierau, P. O. G. Persson, and I. M. Brooks, 2011: An Arctic CCN-limited cloud-aerosol regime. *Atmos. Chem. Phys.*, **11**, 165-173.
- Sedlar, J., M. Tjernström, T. Mauritsen, M. Shupe, P. O. G. Persson, I. M. Brooks, C. E. Birch, C. Leck, A. Sirevaag, and M. Nicolaus, 2011: A transitioning Arctic surface energy budget: the impacts of solar zenith angle, surface albedo and cloud radiative forcing. *Clim. Dynamics*. **37**:1643-1660, DOI 10.1007/s00382-010-0937-5
- 2010:**
- Han, M., S. Braun, W. S. Olson, P. O. G. Persson, and J.-W. Bao, 2010: Application of TRMM PR and TMI measurements to assess cloud microphysical schemes in the MM5 model for a winter storm. *J. Appl. Meteor. and Climatology*, **49**, 1129-1148.
- Mauritsen, T., J. Sedlar, M. Tjernström, C. Leck, M. Martin, M. Shupe, S. Sjogren, B. Sierau, P. O. G. Persson, I. M. Brooks, and E. Swietlicki, 2010: Aerosols indirectly warm the Arctic. *Atmos. Chem. Phys. Disc.*, **10**, 16,775-16,796.
- Andreas, E. L, T. W. Horst, A. A. Grachev, P. O. G. Persson, C. W. Fairall, P. S. Guest, and R. E. Jordan, 2010: Parameterising turbulent exchange over summer sea ice and the marginal ice zone. *Quart. J. Roy. Meteor. Soc.*, **136B**, 927-943.
- Andreas, E. L, P. O. G. Persson, R. E. Jordan, T. W. Horst, P. S. Guest, A. A. Grachev, and C. W. Fairall, 2010: Parameterizing turbulent exchange over sea ice in winter. *J. Hydrometeor.* , **11**, 87-104.
- 2009:**
- Birch, C. E., I. M. Brooks, M. Tjernström, S. F. Milton, P. Earnshaw, S. Söderberg, and P. O. G. Persson, 2009: The performance of a global and mesoscale model over the central Arctic Ocean during late summer. *J. Geophys. Res.*, **114**, D13104, doi:10.1029/2008JD010790
- Solomon, A, H Morrison, O Persson, M Shupe, and J-W Bao, 2009: Investigation of microphysical parameterizations of snow and ice in Arctic clouds during M-PACE through model-observation comparisons. *Mon. Wea. Rev.*, **137**, 3110-3128
- Han, M., S. A. Braun, P. O. G. Persson, and J.-W. Bao, 2009: Along-front variability of precipitation associated with a midlatitude frontal zone: TRMM observation and MM5 simulation. *Mon. Wea. Rev.*, **137**(3), 1008-1028.
- 2008:**
- Bao , J.-W., S. A. Michelson, P. O. G. Persson, I. V. Djalalova , and J. M. Wilczak, 2008: Observed and WRF-simulated low-level winds in a high-ozone episode during the Central California Ozone Study. *J. Appl. Meteor. and Climatol.*, **47**, 2372-2394.
- Andreas, Edgar L, P. Ola G. Persson, and Jeffery E. Hare, 2008: A bulk turbulent air-sea flux algorithm for high-wind, spray conditions. *J. Phys. Ocean*, **38**, 1581-1596.
- Shupe, M. D., P. Kollias, P. O. G. Persson, and G. M. McFarquhar, 2008: Vertical motions in Arctic mixed-phase stratus. *J. Atmos. Sci*, **65**, 1304-1322.
- Grachev, A. A., E. L. Andreas, C. W. Fairall, P. S. Guest, and P. O. G. Persson, 2008: Turbulent measurements in the stable atmospheric boundary layer: 10 years of the SHEBA Experiment. *Acta Geophysica*, **56**(1), 142-166.
- 2007:**
- Grachev, A. A., E. L. Andreas, C. W. Fairall, P. S. Guest, and P. O. G. Persson, 2007: On the turbulent Prandtl number in the atmospheric stable boundary layer. *Boundary-Layer Meteor.*, **125**(2), 329 - 341.
- Grachev, A. A., E. L. Andreas, C. W. Fairall, P. S. Guest, and P. O. G. Persson, 2007: SHEBA flux-profile relationships in the stable atmospheric boundary layer. *Boundary-Layer Meteor.*, DOI: 10.1007/s10546-007-9177-6, **124**(3), 315 - 333.
- 2006:**
- Andreas, E. L., K. J. Claffey, R. E. Jordan, C. W. Fairall, P. S. Guest, P. O. G. Persson, and A. A. Grachev, 2006: Evaluations of the von Kármán constant in the atmospheric surface layer. *J. Fluid Mech*, **559**, 117-149.
- 2005:**
- Grachev, A. A., C. W. Fairall, P. O. G. Persson, E. L. Andreas, and P. S. Guest, 2005: Stable boundary-layer scaling regimes: The SHEBA data. *Boundary-Layer Meteor.*, **116** (2), 201-235, DOI 10.1007/s10546-004-2729-0.

- Persson, P. O. G., P. J. Neiman, B. Walter, and M. Ralph, 2005: Contributions from California coastal-zone surface fluxes to heavy coastal precipitation: A CALJET case study during the strong El Niño of 1998. *Mon. Wea. Rev.*, **133**, 1175-1198.
- Persson, P. O. G., J. E. Hare, C. W. Fairall, and William Otto, 2005: Air-sea interaction processes in warm and cold sectors of extratropical cyclonic storms observed during FASTEX. *Quart. J. Roy. Meteor. Soc.*, **131**, 877-912, doi:10.1256/qj.03.181.
- 2004:**
- Tjernström, Michael, Caroline Leck, P. Ola G. Persson, Michael L. Jensen, Steven P. Oncley, and Admir Targino, 2004: The summertime Arctic atmosphere: Meteorological measurements during the Arctic Ocean Experiment 2001 (AOE-2001). *Bull. Amer. Meteor. Soc.*, **85**, 1305-1321.
- Neiman, P. J., P. O. G. Persson, F. M. Ralph, D. P. Jorgensen, A. B. White, and D. E. Kingsmill, 2004: Modifications of fronts and precipitation by coastal blocking during an intense land-falling winter storm in Southern California: Observations during CALJET. *Mon. Wea. Rev.*, **132**, 242-273.
- 2003:**
- Jorgensen, David P., Zhaoxia Pu, P. Ola G. Persson, and Wei-Kuo Tao, 2003: Variations associated with cores and gaps of a Pacific narrow cold frontal rainband. *Mon. Wea. Rev.*, **131**, 2705-2729.
- Ralph, F. M., P. J. Neiman, D. E. Kingsmill, P. O. G. Persson, A. B. White, E. T. Strem, E. D. Andrews, and R. C. Antweiler, 2003. The impact of a prominent rain shadow on flooding in California's Santa Cruz Mountains: A CALJET case study and sensitivity to the ENSO cycle. *J. Hydrometeor.*, **4**, 1243-1264.
- Andreas, E. L., C. W. Fairall, P. Ola G. Persson, P. S. Guest, 2003: Probability distributions for the inner scale and the refractive index structure parameter and their implications for flux averaging. *J. Appl. Meteor.*, **42**, 1316-1329.
- White, A. B., P. J. Neiman, F. M. Ralph, D. E. Kingsmill, and P. O. G. Persson, 2003. Coastal orographic rainfall processes observed by radar during the California Land-falling Jets Experiment. *J. Hydrometeor.*, **4**, 264-282.
- 2002:**
- Persson, P. O. G., C. W. Fairall, E. L. Andreas, P. S. Guest, and D. K. Perovich, 2002: Measurements near the Atmospheric Surface Flux Group tower at SHEBA: Near-surface conditions and surface energy budget. *J. Geophys. Res.* **107**(C10), 8045, doi:10.1029/2000JC000705.
- Intrieri, J., C. W. Fairall, M. D. Shupe, P. O. G. Persson, E. L. Andreas, P. S. Guest, and R. E. Moritz, 2002: An annual cycle of Arctic surface cloud forcing at SHEBA. *J. Geophys. Res.* **107** (C10), 8039, doi:10.1029/2000JC000439.
- Andreas, E.L., P.S. Guest, P.O.G. Persson, C.W. Fairall, T.W. Horst, R.E. Moritz, and S. R. Semmer, 2002: Near-surface water vapor over polar sea ice is always near ice-saturation, *J. Geophys. Res.*, **107** (C8), doi:10.1029/2000JC000411.
- Uttal, T., J. A. Curry, M. G. McPhee, D. K. Perovich, R. E. Moritz, J. A. Maslanik, Peter S. Guest, H. L. Stern, J. A. Moore, R. Turenne, A. Heiberg, M. C. Serreze, D. P. Wylie, O. G. Persson, C. A. Paulson, C. Halle, J. H. Morison, P. A. Wheeler, A. Makshtas, H. Welch, M. D. Shupe, J. M. Intrieri, K. Stamnes, R. W. Lindsey, R. Pinkel, W. S. Pegau, T. P. Stanton, and T. C. Grenfeld, 2002: The surface heat budget of the Arctic, *Bull. Amer. Meteor. Soc.*, **83**, 255-275.
- Neiman, P.J., F.M. Ralph, A.B. White, D.A. Kingsmill, and P.O.G. Persson, 2002: The statistical relationship between upslope flow and rainfall in California's coastal mountains: Observations during CALJET. *Mon. Wea. Rev.*, **130**, 1468-1492.
- 2001:**
- Wang, S., Q. Wang, R. E. Jordan, and P. O. G. Persson, 2001: Interactions among longwave radiation of clouds, turbulence and snow surface temperature in the Arctic: A model sensitivity study. *J. Geophys. Res.* **106** (D14), 15,323-15,333.
- 2000:**
- Overland, J. E., S. 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 SHEBA. *J. Geophys. Res.*, **105** (C6), 14,093-14,102.
- Ralph, F.M., P.J. Neiman, P.O.G. Persson, J.M. Bane, M.L. Cencillo, J.M. Wilczak, and W. Nuss, 2000: Kelvin waves and internal bores on the marine boundary layer inversion and their relationship to coastally trapped wind reversals. *Mon. Wea. Rev.*, **128**, 283-300.

**1999:**

Joly, A., K. A. Browning, P. Bessemoulin, J.-P. Cammas, G. Caniaux, J.-P. Chalon, S. A. Clough, R. Dirks, K. A. Emanuel, L. Eymard, R. Gall, T. Hewson, P. H. Hildebrand, D. Jorgensen, F. Lalaurette, R. H. Langland, Y. Lemaître, P. Mascart, J. A. Moore, P. O. G. Persson, F. Roux, M. A. Shapiro, C. Snyder, Z. Toth, and R. Wakimoto, 1999: Overview of the field phase of the Fronts and Atlantic Storm-Track Experiment (FASTEX) project. *Quart. J. Roy. Meteor. Soc.*, **125**, 3131-3163.

Perovich, D., E. Andreas, J. Curry, H. Eiken, C. Fairall, T. Grenfell, P. Guest, J. Intrieri, D. Kadko, R. Lindsay, M. McPhee, J. Morison, R. Moritz, C. Paulson, S. Pegau, O. Persson, R. Pinkel, J. Richter-Menge, T. Stanton, H. Stern, M. Sturm, W. Tucker, and T. Uttal, 1999: SHEBA: The surface heat budget of the Arctic Ocean. *EOS, Transactions, American Geophysical Union*, **80**, 481-486.

Pinto, J. O., J. A. Curry, A. H. Lynch, and P. O. G. Persson, 1999: Modeling clouds and radiation for the November 1997 period of SHEBA using a column climate model, *J. Geophys. Res.*, **104**, 6661-6678.

**1998:**

Fairall, C.W., P.O.G. Persson, E.F. Bradley, R.E. Payne, and S.A. Anderson, 1998: A new look at calibration and use of Eppley precision infrared radiometers Part I: Theory and application. *J. Atmos. Ocean. Tech.*, **15**, 1230-1243.

Ralph, F.M., L. Armi, J.M. Bane, C. Dorman, W.D. Neff, P.J. Neiman, W. Nuss, and P.O.G. Persson, 1998: Observations and analysis of the 10-11 June 1994 coastally trapped disturbance. *Mon. Wea. Rev.*, **126**, 2435-2465.

**1997:**

Joly, A., D. Jorgensen, M. A. Shapiro, A. Thorpe, P. Bessemoulin, K. A. Browning, J.-P. Cammas, J.-P. Chalon, S. A. Clough, K. A. Emanuel, L. Eymard, R. Gall, P. H. Hildebrand, R. H. Langland, Y. Lemaître, P. Lynch, J. A. Moore, P. O. G. Persson, C. Snyder, and R. Wakimoto, 1997: The Fronts and Atlantic Storm-Track Experiment (FASTEX): Scientific objectives and experimental design. *Bull. Amer. Meteor. Soc.*, **78**, 1917-1940.

Persson, P. Ola G., Ruffieux, D. R., and C. W. Fairall 1997: Recalculations of ice pack and lead surface energy budgets during the Arctic Leads Experiment (LEADDEX) 1992. *J. Geophys. Res.*, **102**, 25,085-25,089.

Lindsay, R.W., J. A. Francis, P. O. G. Persson, D.A. Rothrock, and A. J. Schweiger, 1997: Surface turbulent fluxes over pack ice inferred from TOVS observations. *Annals of Glaciology*, **25**, 393-399.

**1996:****1995:**

Persson, P. Ola G., and Thomas T. Warner, 1995: The nonlinear evolution of idealized, unforced, conditional symmetric instability: A numerical study. *J. Atmos. Sci.*, **52**, 3449-3474.

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#### **2012:**

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- de Boer, G., H. Morrison, A. Solomon, and O. P. Persson, 2012: Relationships between large-scale meteorological conditions and surface radiative state in the Arctic. Abstract A23C-0242, poster presented at 2012 Fall Meeting, San Francisco, Calif., USA, 3-7 Dec.
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**Solomon, A., M. D. Shupe, P. O. G. Persson, and H. Morrison, 2012:** The role of cloud-top humidity inversions in the maintenance of Arctic mixed-phase stratocumulus. Oral presentation, *IPY 2012 Conference*, Montreal, 22-27 April, 2012. Session 2.5.5 Improved projections and forecasts from climate and weather models.

**Tjernström, M., I. M. Brooks, C. E. Birch, G. Canut, P. O. G. Persson, M. D. Shupe, T. Mauritsen, and J. Sedlar, 2012:** Central summer Arctic low-level cloud and boundary-layer processes.. Oral presentation, *IPY 2012 Conference*, Montreal, 22-27 April, 2012. Session 1.5.2 Polar observing systems, including observations from space.

**de Boer, G., P. O. G. Persson, and M. D. Shupe, 2012:** Understanding the impact of Arctic cloud regimes on the surface energy budget: Observations from IPY and beyond. Oral presentation, *IPY 2012 Conference*, Montreal, 22-27 April, 2012. Session 1.5.2 Polar observing systems, including observations from space.

**Shupe, M., O. Persson, A. Solomon, I. Brooks, and G. Canut, 2012:** Turbulence profiles and cloud-surface coupling in Arctic stratiform clouds. DOE, Atmospheric System Research Workshop, March 19-22.

**deBoer, G., A. Solomon, O. Persson, M. Shupe, 2012:** Linking atmospheric state to Arctic cloud cover and radiative budget. WCRP CMIP5 Workshop, Honolulu, HI, March 5-9, 2012.

**2011:**

- Persson, O.**, A. Solomon, M. Shupe, and H. Morrison, 2011: Arctic process studies using a fine-resolution WRF. Oral presentation, WRF Polar Workshop, Byrd Polar Institute, Columbus, OH, Nov. 2-3, 2011.
- Persson, P. O. G.**, 2011: Proposed Arctic field program. Invited presentation at Climate and Cryosphere (*CLiC Meeting*), Boulder, CO Nov. 1, 2011.
- Persson, P. O. G.**, and M. Shupe, 2011: AIDA Measurement Design. Presentation at *IASC Workshop on an Arctic Drifting Observatory*, Potsdam, Germany Sep. 26-27.
- Persson, P. O. G.**, 2011: Selected atmosphere, boundary-layer, ice, and ocean interactions from SHEBA and elsewhere. Presentation at *IASC Workshop on an Arctic Drifting Observatory*, Potsdam, Germany Sep. 26-27.
- Persson, P. O. G.**, A. Solomon, and A. Sirevaag, 2011: Onset and end of the summer melt season over sea ice: Observations of thermal structure, surface energy fluxes, and synoptic influence. Presentation 4.8, *11<sup>th</sup> Conf. on Polar Meteorology and Oceanography.*, Boston, MA May 2-5.
- Solomon, A.**, M. Shupe, P. O. G. Persson, and H. Morrison, 2011: Maintenance of springtime Arctic mixed-phase stratocumulus in nested LES simulations. Presentation 6.6, *11<sup>th</sup> Conf. on Polar Meteorology and Oceanography.*, Boston, MA May 2-5.

**2010:**

- Persson, P. O. G.**, 2010: The ASCOS/AMISA Field Program: A Template for Needed Arctic Research. Presentation at Raytheon, Nov. 18.
- Solomon, A.**, M. Shupe, O. Persson, H. Morrison, and J.-W. Bao, 2010: Mesoscale simulations of Arctic mixed-phase stratocumulus observed during the M-PACE and ISDAC campaigns. Seminar, Texas A&M University, College Station, TX, Oct 5.
- Persson, P. O. G.**, A. Solomon, M. Shupe, H. Morrison, J. Maslanik, and C. Birch, 2010: Interactions in the cloud-atmospheric boundary layer-surface (CAS) system over Arctic sea ice in observations and WRF simulations. Oral presentation, 17<sup>th</sup> Conference on Air-Sea Interaction, Sep. 27-Oct. 1, Annapolis, MD
- Persson, P. O. G.**, A. Solomon, M. Shupe, H. Morrison, and C. Birch 2010: Impacts of cloud microphysics and surface characteristics on the Arctic cloud-atmospheric boundary layer-surface (CAS) system in observation and WRF simulations. Oral presentation, 19<sup>th</sup> Symp. Boundary Layers and Turbulence, 2-6 August, Keystone, CO
- Grachev, A.**, E. Andreas, C. Fairall, P. Guest, and O. Persson, 2010: Outlier problem for gradient-based scaling in the stable boundary layer. *Presentation, Symp. On Boundary Layers and Turbulence*, Keystone, CO, Aug. 2-6.
- Shupe, M.**, O. Persson, T. Mauritsen, and I. Brooks, 2010: Dynamical-microphysical interactions in Arctic mixed-phase clouds. Presentation, *13<sup>th</sup> Conf. on Cloud Physics and Atmospheric Radiation*, American Meteorological Society, Portland, OR, June 28 - July 2.
- Sedlar, J.**, M. Tjernström, T. Mauritsen, I. Brooks, C. Birch, M. Shupe, A. Sirevaag, P. O. G. Persson, and C. Leck, 2010: The Arctic energy budget transition from summer melt to autumn freeze-up: Cloud radiative forcing. Presentation, *International Polar Year Science Conference*, Oslo, Norway, 8-12 June.
- Gasiewski, A. J.**, A. Chaturvedi, E. McIntyre, D. Kraft, O. Persson, M. Tjernstrom, M. Beaubian, and W. Jeffries, 2010: Use of a new generation of dropsondes during the 2008 Arctic Mechanisms of Interaction Between the Surface and Atmosphere (AMISA) campaign. Presentation, *International Polar Year Science Conference*, Oslo, Norway, 8-12 June.
- Martin, P.**, A. J. Gasiewski, O. P. G. Persson, 2010: Classification Of Sea Ice Video Imagery During AMISA08. Presentation, *International Polar Year Science Conference*, Oslo, Norway, 8-12 June.
- Gasiewski, A. J.**, E. McIntyre, D. Kraft, O. Persson, V. Leusky, M. Tjernstrom, M. Tian and A. Chaturvedi, 2010: Radiometric observations of the Arctic environment during the 2008 Arctic Mechanisms of Interaction Between the Surface and Atmosphere (AMISA) Campaign. Presentation, *International Polar Year Science Conference*, Oslo, Norway, 8-12 June.
- Persson, P. O. G., M. Shupe, E. Sukovich, B. J. Brooks, I. M. Brooks, T. Mauritsen, J. Sedlar, **M. Tjernström**, and A. Gasiewski, 2010: Observations of Arctic clouds, boundary-layer structure, and surface energy fluxes during the 2008 ASCOS/AMISA field programs. Presentation, *International Polar Year Science Conference*, Oslo, Norway, 8-12 June.
- Persson, P. O. G., 2010: Sea-Ice Forecasting and the Cloud - Atmospheric Boundary Layer – Surface (CAS) System, *Workshop on Sea Ice Forecasting, Boulder, Colorado, May 11-12*
- Persson, P. Ola G.**, 2010: Arctic Research: A Check-up for the Canary in the Coal Mine. Lecture presented at Foxdale Retirement Community, State College, PA, March 29, 2010..

- Persson, P. O. G., A. Grachev, C. Fairall, I. M. Brooks, T. Mauritsen, C. Birch, J. Sedlar, M. Tjernstrom, A. Solomon, and C. Wheeler, 2010: Turbulent and radiative fluxes over Arctic sea ice: Measurements, interactions, and comparisons to models. Oral presentation, *CLIVAR Workshop on High Latitude Surface Fluxes*, Boulder, CO, 17-19 March.
- Persson, P. O. G.**, and R. Stone, 2010: Mesoscale Influences on Climate-Change Observations at an Arctic Site. Oral presentation, *2010 State of the Arctic Conference*, Miami, FL, 16-19 March.
- Persson, P. O. G.**, 2010: Proposed Studies with the ASCOS Data. Oral presentation at the ASCOS 3rd Post-Field Program Workshop., Stockholm, Sweden, March 3-6.
- Persson, P. O. G.**, 2010: "The Cloud-Atmospheric Boundary Layer-Surface (CAS) System Over Arctic Sea Ice: Interactions in Observations and Models". Invited seminar presented at the Alfred Wegener Institute, Potsdam, Germany, March 1.
- Smith, L., J. Hare, O. Persson, C. Fairall, S. Buhr, S. Lynds and M. McCaffrey, 2010: Reaching out to scientists: A model for integrating scientists' research into teacher professional development. AGU/ASLO/TOS Ocean Sciences Meeting, Portland, OR, Feb. 22-26.
- 2009:**
- Persson, P. Ola G.**, 2009: Arctic Field Research. Lecture presented at Frasier Meadows Nursing Home, Boulder, CO. November 21, 2009.
- Persson, P. Ola G.**, M. Shupe, M. Tjernström, I. M. Brooks, R. Stone, 2009: (New) Observing methods for the Arctic atmosphere. Invited Presentation, Session 5, *DAMOCLES International Symposium on the Arctic Climate System*, Brussels, 10-12 November, 2009.
- Persson, P. Ola G.**, A. Solomon, M. Shupe, J.-W. Bao, and H. Morrison, 2009: Impact of synoptic and mesoscale disturbances on the end of the summer melt season over sea ice. Presentation J14.8, *MOCA-09, AIMS/AISPO/AICS 2009 Joint Assembly*, Montreal, Canada, July 20-29.
- Persson, P. Ola G.**, A. Solomon, M. Shupe, H. Morrison, E. L. Andreas, and J.-W. Bao, 2009: Impacts of improved cloud microphysics and surface flux schemes on WRF simulations in the Arctic. Presentation J02.6, *MOCA-09, AIMS/AISPO/AICS 2009 Joint Assembly*, Montreal, Canada, July 20-29.
- Persson, P. Ola G.**, V. Leuski, M. Shupe, M. Tjernström, and I. M. Brooks, 2009: High-temporal resolution observations of the thermal and kinematic vertical structure in the Arctic boundary-layer during the Arctic Summer Cloud-Ocean Study (ASCOS). Presentation J14.10, *MOCA-09, AIMS/AISPO/AICS 2009 Joint Assembly*, Montreal, Canada, July 20-29.
- Brooks, I. M.**, M. Tjernström, C. Leck, P. O. G. Persson, M. Shupe, C. E. Birch, B. J. Brooks, T. Mauritsen, J. Sedlar, A. Sirevaag, S. Norris, and P. Matrai, 2009: The Arctic Summer Cloud-Ocean Study – ASCOS. Oral presentation, *United Kingdom Arctic Science Conference*, July 13-15, Southampton, UK.
- Persson, P. O. G.**, E. Sukovich, A. Gasiewski, B. J. Brooks, A. Chaturvedi, M. Shupe, and M. Tjernström, 2009: Aircraft observations during the ASCOS/AMISA field program: Overview of the synoptic/mesoscale environment, boundary-layer structure, and cloud microphysics. Presentation 10.3, *10<sup>th</sup> Polar Meteorology and Oceanography Conference*, Madison, WI, May 18-21.
- Persson, P. O. G.**, V. Leuski, M. Shupe, I. M. Brooks, and M. Tjernström, 2009: High-temporal resolution observations of the thermal and kinematic vertical structure in the Arctic boundary layer during ASCOS. Presentation 9.4, *10<sup>th</sup> Polar Meteorology and Oceanography Conference*, Madison, WI, May 18-21.
- Shupe, M.**, O. Persson, P. Johnston, C. Wheeler, M. Tjernström, 2009: Surface-based remote-sensing of clouds during ASCOS. Presentation 10.1, *10<sup>th</sup> Polar Meteorology and Oceanography Conference*, Madison, WI, May 18-21.
- Gasiewski, A.**, E. McIntyre, D. M. Kraft, O. Persson, V. Leusky, M. Tjernström, M. Tian, and A. Chaturvedi, 2009: Radiometric observations of the Arctic environment during the 2008 Arctic Mechanisms of Interaction between the Surface and the Atmosphere (AMISA) campaign. Presentation 10.4, *10<sup>th</sup> Polar Meteorology and Oceanography Conference*, Madison, WI, May 18-21.
- Gasiewski, A.**, A. Chaturvedi, E. McIntyre, D. M. Kraft, O. Persson, M. Tjernström, M. Beaubien, and W. Jeffries, 2009: Use of a new generation of dropsondes during the 2008 Arctic Mechanisms of Interaction between the Surface and the Atmosphere (AMISA) campaign. Presentation 10.5, *10<sup>th</sup> Polar Meteorology and Oceanography Conference*, Madison, WI, May 18-21.

- Birch, C. E.**, I. M. Brooks, S. F. Milton, P. Earnshaw, M. Tjernström, and O. Persson, 2009: An evaluation of the U. K. Met Office Unified Model over the central Arctic Ocean during ASCOS. Presentation 10.6, *10<sup>th</sup> Polar Meteorology and Oceanography Conference*, Madison, WI, May 18-21.
- Persson, P. O. G.**, J.-W. Bao, M. Shupe, C. Wheeler, A. A. Grachev, and C. W. Fairall, 2009: Process relationships useful for evaluating model performance in the Arctic. Presentation 14.4, *10<sup>th</sup> Polar Meteorology and Oceanography Conference*, Madison, WI, May 18-21.
- Solomon, A. B.**, M. Shupe, O. Persson, H. Morrison, and J. W. Bao, 2009: The radiative and dynamical impact of aerosols on mixed-phase clouds observed during ISDAC and M-PACE. Presentation 14.8, *10<sup>th</sup> Polar Meteorology and Oceanography Conference*, Madison, WI, May 18-21.
- Persson, Ola**, 2009: The Disappearing Arctic Sea Ice and the Role of the Atmosphere. Lecture for the Scientist Lecture Series for the Colorado Collaborative and part of the Center for Ocean Sciences Education Excellence (COSEE) West. May 9, University of Colorado, Boulder, CO.
- Persson, P. O. G.**, E. Sukovich, V. Leuski, A. Gasiewski, D. Cavalieri, and A. Chaturvedi, 2009: Integrating AMISA/ASCOS data to obtain a meteorological perspective of the AMISA DC-8 flights. Presentation, *First ASCOS Workshop*, Lund, Sweden, March 30-April 3.
- Persson, P. O. G.**, A. J. Gasiewski, A. Chaturvedi, and E. Sukovich, 2009: The 2008 Arctic Mechanisms of Interaction Between the Surface and Atmosphere (AMISA) campaign: Observation summary and data processing update. Presentation, *First ASCOS Workshop*, Lund, Sweden, March 30-April 3.
- Shupe, M., **O. Persson**, P. Johnston, and D. Hazen, 2009: Clouds during ASCOS. Presentation, *First ASCOS Workshop*, Lund, Sweden, March 30-April 3.
- 2008:**
- Persson, P. O. G., A. Solomon, M. Shupe, and A. Gasiewski, 2008: Arctic storms and their links to surface energy budget changes at the onset and end of the summer melt season over pack ice. Presentation at *AGU Session on Extratropical and High-Latitude Storms: Synoptic-scale Perspective and Links to Climate Variability, Change, and Impact*, San Francisco, CA, Dec. 19.
- Morrison, Hugh, P. Zuidema, G. McFarquhar, A. Solomon, M. Shupe, O. Persson, and J.-W. Bao, 2008: Observations and modeling of snow microphysics in Arctic mixed-phase clouds. *Proceedings, Conference on Arctic Change 2008*, Quebec City, Canada, 9-12 December.
- Andreas, E. L., A. A. Grachev, C. W. Fairall, P. O. G. Persson, P. S. Guest, T. W. Horst, and R. E. Jordan, 2008: A new bulk flux algorithm to predict turbulent surface fluxes over summer sea ice and the marginal ice zone. *Abstracts, 8th Annual Meeting of the European Meteorological Society*, Amsterdam, The Netherlands, 29 September–3 October, [Available at [www.cosis.net/abstracts/EMS2008/00090/EMS2008-A-00090-1.pdf](http://www.cosis.net/abstracts/EMS2008/00090/EMS2008-A-00090-1.pdf)].
- Andreas, E. L., P. O. G. Persson, and J. E. Hare, 2008: A bulk turbulent air-sea flux algorithm for high-wind, spray conditions. *Abstracts, 8th Annual Meeting of the European Meteorological Society*, Amsterdam, The Netherlands, 29 September–3 October, [Available at [www.cosis.net/abstracts/EMS2008/00037/EMS2008-A-00037-1.pdf](http://www.cosis.net/abstracts/EMS2008/00037/EMS2008-A-00037-1.pdf)].
- Persson, P. O. G., A. Solomon, A., M. Shupe, H. Morrison, and J.-W. Bao, 2008: Effect of microphysical parameterization on the simulation of high-latitude surface energy budget and boundary-layer structure. Presentation 13B.6, 18<sup>th</sup> Symposium on Boundary Layers and Turbulence, Stockholm, Sweden, 9-13 June. [Available at <http://ams.confex.com/ams/htsearch.cgi>].
- Grachev, A, E. L. Andreas, C. W. Fairall, P. S. Guest, and P. O. G. Persson, 2008: Small-scale turbulence in very stable atmospheric conditions. Presentation 4.4, 18<sup>th</sup> Symposium on Boundary Layers and Turbulence, Stockholm, Sweden, 9-13 June 2008. [Available at <http://ams.confex.com/ams/htsearch.cgi>].
- Solomon, A., O. Persson, M. Shupe, H. Morrison, J.-W. Bao, 2008: Validating WRF for mesoscale Arctic climate studies. Presentation, Arctic System Model Workshop, Boulder, Colorado, May 19-21.
- Bromwich, D., O. Persson, and J. Cassano, 2008: Atmospheric observational needs for model validation. Presentation, Arctic System Model Workshop, Boulder, Colorado, May 19-21.
- Solomon, A., O. Persson, M. Shupe, H. Morrison, and J.-W. Bao, 2008: Effect of microphysical parameterization on the simulation of high-latitude surface energy budget and boundary-layer structure. Presentation AS2.04-1, Conference on High Latitude Boundary Layers at the European Geophysical Union Meeting. Vienna, Austria, April 14-18.

- Grachev, A. A., P. O. G. Persson, C. W. Fairall, and T. Uttal, 2008: Boundary-layer measurements and surface fluxes at study of environmental Arctic change (SEARCH) sites in Northern Canada. Poster, Conference on High Latitude Boundary Layers at the European Geophysical Union Meeting. Vienna, Austria, April 14-18.
- Grachev, A., E. Andreas, C. Fairall, P. Guest, and O. Persson, 2008: Gradient-based z-less similarity in the stable atmospheric boundary layer (the SHEBA data). Poster, Conference on High Latitude Boundary Layers at the European Geophysical Union Meeting. Vienna, Austria, April 14-18.
- Persson O., and R. Stone, 2008: Two years of high-resolution surface energy budget measurements at the Alert SEARCH site: Atmosphere-snow-soil interactions. Presentation in Session AS2.04, Conference on High Latitude Boundary Layers at the European Geophysical Union Meeting. Vienna, Austria, April 14-18.
- Persson, P. O. G., M. Shupe, J. Jordan, P. Johnston, C. Wheeler, and M. Tjernstrom, 2008: Remote sensing by CIRES/NOAA at ASCOS. Presentation, ASCOS Planning Workshop, Landskrona, Sweden, April 8-10.

#### 2007:

- Solomon, A., O. Persson, M. Shupe, H. Morrison, and J.-W. Bao, 2007: Mesoscale simulations of polar clouds during M-PACE. Poster presented at CMOS-CGU-AMS Congress 2007, Polar Clouds and Aerosols: Properties, Processes, and Climatic Significance (A06).
- Persson, O., 2007: "Regional Climate Modeling", ESRL Review of the Regional and Local-Scale Assimilation and Modeling Theme, NOAA Earth System Research Laboratory, October 4, Boulder, CO.
- Persson, O., 2007: "Arctic Boundary Layers and Clouds", Panelist for ESRL Review of the Boundary Layer Theme, NOAA Earth System Research Laboratory, May 10, Boulder, CO.
- Grachev, A., E. Andreas, C. Fairall, P. Guest, and O. Persson, 2007: Influence of stability on the turbulent Prandtl number in the stable atmospheric boundary layer. *Abstracts, European Geophysical Union Meeting, Session AS2.04: Boundary Layers in High Latitudes: Observations and Modeling* Vienna, Austria, April 15-20.

#### 2006:

- Persson, O., 2006: Invited panel member for session on "Climate Change in the Arctic –A Bellwether for the Planet?", NOAA Earth System Research Laboratory Dedication Topical Review "Serving Society Through Science", August 23-24, Boulder, CO.
- Persson, O., 2006: "Pack Ice Energy Budget: Relationship to Atmospheric Structure and Impact on Pack Ice Mass Balance". Presentation at Global Hawk Instruments Meeting, July 27, Boulder, CO.
- Persson, O., R. Stone, M. Shupe, and T. Uttal, 2006: "Investigating Interactions of Surface Energy Budget, Boundary Layer Structure, and Synoptic/Orographic Influences at Climate Monitoring Observatories for the Study of Environmental Arctic Change (SEARCH)". Presentation at NOAA/Global Monitoring Division Science Review, Boulder, CO, April 26-28.
- Persson, O., R. Stone, M. Shupe, and T. Uttal, 2006: Investigating Interactions of Surface Energy Budget, Boundary Layer Structure, and Synoptic/Orographic Influences at Climate Monitoring Observatories for the Study of Environmental Arctic Change (SEARCH). *Abstracts, European Geophysical Union Meeting*, Vienna, Austria, April 2-7.
- Persson, O., Arctic Research at ESRL/PSD: A Quick Look at Past and Present. Presentation at NOAA/Physical Science Division Science Day, Boulder, CO, March 9.
- Geernaert, G. L., and P. O. G. Persson, 2006: The ocean surface wind stress vector direction: Paradigms, observations. challenges, predictability? *Abstracts, AGU Ocean Sciences Meeting*, Feb. 20-24, Honolulu, Hawaii.

#### 2005:

- Persson, P. Ola G., J.-W. Bao, S. Braun, D. Jorgensen, B. Walter, and M. Han, 2005: Comparisons of simulated kinematic and moisture fields with airborne in-situ and Doppler radar observations in a convective cold front over the eastern Pacific Ocean. *Poster, Precipitation Measurement Missions (PMM) Meeting*, 11-15 December, 2005, Monterey, CA.
- Persson, P. Ola G., 2005: "Meteorological Processes at the End of the Arctic Summer Melt Season for SHEBA and AOE." Presentation at AOE/ASCOS Meeting, Dec. 8-10, Stockholm, Sweden.
- Persson, P. Ola G., and R. Stone, 2005: "Plans For Surface Energy Budget and Turbulent Flux Measurements in an Arctic Complex-Terrain Environment." Presentation at the CANDAC Workshop, Toronto, April 18-19.

Persson, P. O. G., B. Walter, and J. Hare, 2005: Maritime differences between wind direction and stress: Relationships to atmospheric fronts and implications for QuikScat winds. Poster, *NASA Ocean Vector Wind Science Team Meeting*, 22-24 March, Seattle, WA.

Persson, P. Ola G., 2005: "Measuring Causes/Consequences Of Changes in the Pack Ice Extent and Thickness." Presentation at the Sea Ice Mass Budget of the Arctic (SIMBA) Workshop, Seattle, Feb. 28-Mar. 2.

#### **2004:**

Persson, P. Ola G., and 18 others, 2004: "A Proposed Arctic Ocean Field Program During the International Polar Year 2007-2008." Presentation at the annual AGU Meeting, Montreal, Canada, May 17-21.

Persson, Ola P. G., 2004: "The Relationship of the Onset and End of the Melt Season at SHEBA to Synoptic Activity", International Mini-Conference on the Central Arctic: Battleground of Natural and Man-Made Climate Forcing, Jan. 7-9, Lamont-Doherty Earth Observatory, Palisades, NY.

#### **2003:**

Persson, Ola P., 2003: "Surface Energy Budget Requirements for Pack Ice Change Attribution During SEARCH", Poster at the SEARCH Open Science Meeting, Oct. 27-30, Seattle, WA.

Bao, J.-W., P. O. G. Persson, and S. A. Michelson, 2003: "A Paradigm of Meteorological Model Evaluation for Environmental Sciences." Workshop on Short-to-Medium Range Regional NWP in the Arctic and Antarctic, Oct. 8-10, Fairbanks, AK.

#### **2002:**

Cassano, J., A. Lynch, J. Curry, and O. Persson, 2002: SL-MIP (Surface Layer Model Intercomparison Project): Results using SHEBA Observations. *Proceedings, 16th IAHR International Symposium on Ice*, Dunedin, New Zealand, Dec. 2002.

#### **2001:**

Persson, Ola, 2001: "Considerations Applicable to an Arctic Observing System for SEARCH", SEARCH Workshop, Nov. 27-29, Seattle, WA.

Persson, Ola, 2001: "Boundary Layer Impacts on Fronts, Cyclones, and Precipitation", Presentation at the PACJET Workshop, Monterey, CA Oct 24-26, 2001.

Persson, Ola, 2001: Persson, Ola, 2001: "Status Report: GCM-Scale Surface Fluxes and Flux Parameterizations Determined from SHEBA Observations and a Nested Mesoscale Model", SHEBA Workshop, July 11-13, 2001, Boulder, CO.

Persson, Ola, 2001: "Late-summer synoptic-scale modulation of the near-surface environment over the Arctic pack ice." Seminar presented at the Dept. of Meteorology, Univ. of Stockholm, Sweden. May 3, 2001.

Ralph, F. M., D. Reynolds, O. Persson, W. Nuss, D. Kingsmill, Z. Toth, W. Blier, C. Velden, P. Neiman, A. White, J.-W. Bao, D. Miller, D. Jorgensen, J. McFadden, J. Dostalek, and S. Weygandt, 2001. Improving the understanding and prediction of heavy rain in land-falling Pacific winter storms: The CALJET and PACJET Experiments. Poster presented at *Conf. on Precipitation Extremes: Prediction, Impacts, and Responses*, 14-19 January, Albuquerque, New Mexico.

#### **2000:**

Neiman, Paul J., F. Martin Ralph, Allen B. White, and P. Ola G. Persson, 2000: Observations of orographically enhanced precipitation along the West Coast of the United States during the CALJET field program. *Preprints, 9th Conf. on Mountain Met.*, Aspen, CO, 7-11 Aug.

Ralph, M., P. Neiman, D. Kingsmill, J.-W. Bao, O. Persson, S. Michelson and A. White, 2000: Comparison of flooding in adjacent mountainous coastal watersheds during a land falling Pacific winter storm. *Preprints, 9th Conf. on Mountain Met.*, Aspen, CO, 7-11 Aug.

Ralph, F. Martin, P. J. Neiman, P. O. G. Persson, and L. Nance, 2000: Blocking by California's coastal mountains in winter as revealed using island and coastal boundary layer wind profilers. *Preprints, 9th Conf. on Mountain Met.*, Aspen, CO, 7-11 Aug.

Fairall, Chris W., P. Ola G. Persson, E. L. Andreas, P. S. Guest 2000: Stable Surface-layer Flux Profile Relationships in the Arctic from the SHEBA Experiment. *Preprints, 14th Symp. on Bound. Layers and Turb.*, Aspen, CO 7-11 Aug.

Persson, Ola, 2000: "Observations of Large Thermal transitions During the Arctic Night from a Suite of Sensors at SHEBA." Seminar presented at the Dept. of Meteorology, Univ. of Stockholm, Sweden. May 29, 2000.

Persson, O., J.-W. Bao, S. Michelson, P. Neiman, M. Ralph, and B. Walter 2000: Critical verification of synoptic/mesoscale structures and processes in MM5 during CALJET. Presentation at the Northwest Weather Workshop 2000, Seattle, WA, 4-5 Feb.

**1999:**

Fairall, C.W., J.M. Intrieri, P.O.G. Persson, E.L. Andreas, and P.S. Guest, 1999a: Cloud forcing of the surface energy budget on the Arctic ice cap: One year of data from SHEBA. Presented at AGU Fall Meeting, San Francisco, CA, 13-17 December 1999. (Abstract in supplement to *Eos, Trans., AGU*, **80** [46], F202.)

Guest, P.S., E.L. Andreas, C. W. Fairall, P.O.G. Persson, 1999: The annual budget of the surface heat flux over thick ice during SHEBA. Presented at AGU Fall Meeting, San Francisco, CA, 13-17 December 1999. (Abstract in supplement to *Eos, Trans., AGU*, **80** [46], F202.)

McNutt, S.L., Overland, J.E., J. Groves, S. Salo, E.L. Andreas, P.O.G. Persson, 1999: Influence of surface inhomogeneity on sensible heat and long-wave radiative fluxes. Presented at AGU 1999 Fall Meeting, San Francisco, CA, 13-17 December 1999. (Abstract in supplement to *Eos, Trans., AGU*, **80** [46], F202.)

Persson, O., C. Fairall, E. Andreas, P. Guest, J. Intrieri, and A. Keane, 1999: The Surface Heat Budget of the Arctic Ocean (SHEBA). A poster presented at the CIRES/NOAA review, October 18-20, 1999.

Guest, P.S., E.L. Andreas, C.W. Fairall, P.O.G. Persson, and J.M. Intrieri, 1999: What was the surface heat budget during SHEBA? Agenda and Abstracts, The Arctic System Science (ARCSS) Ocean-Atmosphere-Ice Interactions (OAI) All Hands Meeting and Planning Workshop, Virginia Beach, Virginia, 20-22 October, 1999, 30.

Fairall, C.W., P.O.G. Persson, E.L. Andreas, and P.S. Guest, 1999: Surface-layer flux profile relationships in the Arctic from the SHEBA experiment. Presented at IUGG99, General Assembly of the International Union of Geodesy and Geophysics, Symposium on High-Latitude Surface/Atmospheric Interactions, Birmingham, England, 18-30 July 1999.

Intrieri, J.M., C.W. Fairall, P.O.G. Persson, E.L. Andreas, and P.S. Guest, 1999: Surface energy budgets and cloud forcing of the Arctic ice cap: One year of data from the SHEBA experiment. Presented at IUGG99, General Assembly of the International Union of Geodesy and Geophysics, Symposium on Radiation and Clouds in Polar Regions, Birmingham, England, 18-30 July 1999.

Ralph, F. M., P. J. Neiman, and P. O. G. Persson, 1999: Blocking effects of coastal mountains in landfalling Pacific cyclones during CALJET. Presentation at the 8<sup>th</sup> Conf. On Mesoscale Processes, Boulder, CO 28 June-1 July, 1999.

Persson, O., P. Neiman, M. Ralph, B. Smull, and B. Walter, 1999: The mesoscale structure of a developing frontal wave and the associated low-level jet region. Presentation at the 8<sup>th</sup> Conf. On Mesoscale Processes, Boulder, CO 28 June-1 July, 1999.

Persson, O., 1999: P-3 Flight-level Observations of the Low-level Jet Region of February 2-3. Presented at the 2<sup>nd</sup> CALJET Workshop, May 24-25, Monterey, CA.

"A First Look at the Annual Surface Energy Budget at SHEBA." NOAA Environmental Technology Weekly Seminar, David Skaggs Building, May 17, 1999.

"P-3 Flight-level Observations of the Low-level Jet Region on February 2-3, 1998". CALJET Workshop, Monterey, CA, May 24-25, 1999.

"Summertime Measurements of the Arctic Boundary Layer during SHEBA". Invited talk at the preparation workshop for the 2001 Scandinavian Arctic Research Program. Tampere, Finland, April 28, 1999.

"A Year on the Arctic Ice: Atmospheric and Surface Measurements for Understanding the Annual Surface Energy Budget at SHEBA". Invited seminar at the Meteorological Institute at Stockholm University, April 26, 1999.

"A Year on the Ice: NOAA/ETL Contributions to the SHEBA Project." Inaugural seminar in the Dr. C. Gordon Little Conference Room, David Skaggs Research Center, Boulder, CO, April 5, 1999.

"Observations of Atmospheric Structure and Fluxes." Invited talk at the *SHEBA/FIRE Workshop*, Jan. 25-28 1999, Tucson, AZ.

Andreas, E. A., C. W. Fairall, P. S. Guest, and P. O. G. Persson, 1999: Comparing eddy-correlation and scintillometer measurements of momentum and sensible heat fluxes during SHEBA. Poster at Fifth Conf. on Polar Meteor. And Ocean., Jan. 10-15, 1999, Dallas, TX.

**1998:**

Persson, P. Ola G., and B. Walter, 1998: Airborne measurements of air-sea fluxes in the eastern Pacific Ocean

during an El Nino winter. Presented at the NOAA El Nino Rapid Response Workshop, May 18-20, 1998, La Jolla, CA.

#### 1997:

Persson, P. Ola G., J. E. Hare, A. B. White, C. W. Fairall, and M. Mulhern, 1997: Observations of mid-oceanic surface fluxes and boundary layer structure from R/V Knorr: Preliminary analysis of relationship to cyclone positions and evolution. *The 10th Cyclone Workshop*, Sept. 21-26, Val Morin, Quebec, Canada.

Joly, A., P. Bessemoulin, K. A. Browning, J.-P. Cammas, J.-P. Chalon, S. A. Clough, R. Dirks, K. A. Emanuel, R. Gall, T. Hewson, P. H. Hildebrand, D. Jorgensen, R. H. Langland, Y. Lemaitre, J. A. Moore, P. O. G. Persson, M. A. Shapiro, C. Snyder, A. Thorpe, R. M. Wakimoto, 1997: The Fronts and Atlantic Storm-Track Experiment (FASTEX): an overview of the field phase. *The 10th Cyclone Workshop*, Sept. 21-26, Val Morin, Quebec, Canada.

Neiman, P. J., P. O. G. Persson, and M. A. Shapiro, 1997: Observations and numerical simulations of an intense extratropical cyclone over the Pacific Northwest of the United States on 11-13 December 1995. *The 10th Cyclone Workshop*, Sept. 21-26, Val Morin, Quebec, Canada.

Persson, P. O. G., F. M. Ralph, M. A. Shapiro, 1997: Simulation of the low-level structure of the Dec. 11-13, 1995 storm. Presented at the *Coastal Observation and Simulation with Topography (COAST) Workshop*, Dec. 18, 1996, San Francisco, CA.

#### 1996:

Ralph, F. M., P. J. Neiman, P. O. G. Persson, and J. M. Bane, 1996: Evidence of solitary Kelvin waves on the marine boundary layer inversion and their relationship to coastally trapped wind reversals. *Abstracts, Fall 1996 meeting of the American Geophysical Union*, December 17-20, San Francisco, CA.

Persson, P. O. G., J. Wilczak, J.-W. Bao, 1996: Mesoscale modeling at the Environmental Technology Laboratory. Presented at *First Workshop on NOAA Atmospheric Modeling*. May 1-2, Research Triangle Park, NC.

#### 1995:

Persson, P. Ola G., J.-W. Bao, and Stephen D. Burk, 1995: Tests of the Burk-Thompson PBL scheme. *Abstracts, Fifth PSU/NCAR Mesoscale Model Users Workshop*, Aug. 14-16, 1995, Boulder, CO, 117-119.

Jian-Wen Bao, Jimmy Dudhia, P.O.G. Persson, and Georg Grell, 1995: Implementation of the Burk-Thompson PBL Scheme in MM5. *Abstracts, Fifth PSU/NCAR Mesoscale Model Users Workshop*, Aug. 14-16, 1995, Boulder, CO, 115-116.

#### 1994:

Persson, P. Ola G., 1994: Hydrostatic and nonhydrostatic simulations of unforced conditional symmetric instability. *Abstracts, Fourth PSU/NCAR Mesoscale Model Users Workshop*, Aug. 29 - Sep. 1, 1994, Boulder, CO, p. 71.

Zamora, R.J., J. M. Wilczak, O. Persson, 1994: MM5 workstation results and future plans at the NOAA Environmental Technology Laboratory. *Abstracts, Fourth PSU/NCAR Mesoscale Model Users Workshop*, Aug. 29 - Sep. 1, 1994, Boulder, CO. p. 26.

Ruffieux, D., P. Ola G. Persson, C. W. Fairall, and D. E. Wolfe, 1994: Ice pack and lead surface energy budgets during LEADDEX92. Presented at 1994 Spring Meeting of American Geophysical Union, May 16-20 1994, Baltimore, Md.

#### 1993:

Persson, P. Ola G., D. Ruffieux, and D. Wolfe, 1993: Observations of the influence of the Arctic springtime diurnal energy cycle on the lower Arctic troposphere. *Abstracts, Nansen Centennial Symposium*, Solstrand-Bergen, Norway, June 21-25, 1993.

Burk, S., and P. Ola G. Persson, 1993: Modeling the Arctic springtime diurnal surface energy cycle and boundary layer evolution. *Abstracts, Nansen Centennial Symposium*, Solstrand-Bergen, Norway, June 21-25, 1993.

Persson, P. Ola G., 1993: Numerical experiments on the interaction between upright and slantwise convection. *Abstracts, European Geophysical Society, Annales Geophysicae, Part II, Oceans, Atmosphere, Hydrology & Nonlinear Physics, Supplement II to Vol. 11*, Springer International, pg. C198. (Presented at the 18th General Assembly of the European Geophysical Society, Session on Mesoscale Meteorology: Observations, Theory and Modelling I, Wiesbaden, Germany, May 3-6, 1993.)

#### 1980-1989:

- Persson, P. Ola G. and Thomas T. Warner, 1989: Numerical modelling considerations for the simulation of circulations associated with conditional symmetric instability. *Abstracts, Symp. Mesoscale Phenomena: Analysis and Forecasting*, 31 July - 12 Aug. 1989, Reading, UK, MF.53.
- Persson, P. Ola G., 1986: Application of two automatic radial wind interpretative methods at the Norrköping Doppler radar. Presented at the Nordic Meteorological Meeting, May 26-30, Visby, Sweden.
- Persson, P. Ola G., 1984: The small-mesoscale structure of a narrow cold-frontal rainband. Presented at the Nordic Meteorological Meeting, June, Tromsø, Norway.
- Persson, P. O. G. and R. W. Baker, 1983: A preliminary analysis of spatial variations of wind speed statistics in complex terrain. Presented at Wind Workshop VI, June 1-3, 1983, Minneapolis, MN, USA.
- Baker, R. W., J. E. Wade, P. O. G. Persson and S. N. Walker, 1983: A strategy for taking wake measurements in complex terrain. Presented at Wind Workshop VI, June 1-3, 1983, Minneapolis, MN, USA.

### **Grants Awarded or Pending**

- Persson, O., and M. Shupe, 2013: Deployment of Remote Sensors During ACSE 2014. Univ. of Stockholm, 1/14-12/14, (1 year, \$282,000), pending.
- Persson, O., M. Shupe, and A. Solomon, 2013: Atmospheric Boundary Layer-Surface Interactions in the Emerging Marginal Ice Zone of the Siberian Arctic Ocean. National Science Foundation, 11/14-10/17, (3 years, \$715,540), pending.
- Shupe, M. (PI), O. Persson, A. Solomon (co-PIs), 2010: Investigations of the Microphysical, Radiative, and Dynamical Properties of Mixed-Phase Clouds. DOE/ASR 8/14-7/17; (3 years, \$578,325), pending.
- Guest, P., C. W. Fairall, and P. O. G. Persson, 2012: Quantifying the role of atmospheric forcing in ice edge retreat and advance including wind-wave coupling. Office of Naval Research, Jan. 2013-Dec. 2017, \$487,043, awarded.
- Grachev, A. O. Persson, and R. Stone, 2010: Analysis of Surface Fluxes and Energy Budget at Arctic Terrestrial Sites. National Science Foundation, 9/11-8/14 (3 years, \$430,000), awarded.
- Shupe, M. (PI), O. Persson, A. Solomon (co-PIs), 2010: Continued Investigations of the Microphysical, Radiative, and Dynamical Properties of Mixed-Phase Clouds. DOE/ASR 7/11-12/13; (3 years, \$525,885), awarded.
- Persson, O., M. Shupe, and A. Solomon, 2010: Understanding and Modeling Key Arctic Cloud-ABL-Surface Processes and Interactions, National Science Foundation. 9/10-8/13, (3 years, \$664,741) (awarded)
- Persson, O., 2008: Remote Sensing of the Mesoscale Thermal, Kinematic, and Cloud Structure of the High-Arctic Boundary Layer. Subcontract to University of Stockholm, 2/08-1/10. (\$369,203)
- Shupe, M. (PI), O. Persson (co-PI), 2007: Investigations of the Microphysical, Radiative, and Dynamical Properties of Mixed-Phase Clouds. (\$307,849) ARM, 2/08-1/11.
- Persson, Ola P. G., 2007: IPY: Remote Sensing of the Macro and Microphysical Structure of Arctic Clouds During ASCOS. (\$299,852). National Science Foundation, 9/15/07-8/31/11.
- Persson, Ola P. G., 2006: Impact of Synoptic and Mesoscale Disturbances on the Beginning and End of the Summer Melt Season over Sea Ice. National Science Foundation (NSF) (\$297,000). 9/15/07-8/31/10.
- Gasiewski, A., (PI), O. Persson, M. Klein, and D. Cavalieri (co-PIs), 2006: Identification of Atmosphere-Surface Interaction Mechanisms During Arctic Sea-Ice Freezeup. National Aeronautics and Space Administration (NASA) (\$853,000). funded (8/07-5/10)
- Persson, Ola P. G., Collaborative Research: Improving Remotely Sensed Surface Fluxes Over Sea Ice. In collaboration with E. Andreas (NWRA), J. Francis (Rutgers Univ.). National Science Foundation, Office of Polar programs (NSF-OPP) (\$358,908). 1/1/07-12/31/09.
- Persson, Ola P. G., Analysis and New MM5 Simulations of Northeastern Pacific Ocean TRMM/GPM Cases. Submitted National Aeronautics and Space Administration (NASA) (\$35,000). 5/1/06-4/30/07.
- Persson, Ola P. G. (PI), 2004: MM5 Simulations of Northeastern Pacific Ocean TRMM/GPM Cases, Extension. National Aeronautics and Space Administration (NASA). (\$35,000). Apr-Nov 2005.
- Persson, Ola P. G. (PI), 2004: MM5 Simulations of Northeastern Pacific Ocean TRMM/GPM Cases. National Aeronautics and Space Administration (NASA). (\$30,000). Jul-Nov 2004.
- Persson, Ola P. G. (PI) and B. Walter, 2001: Determining the Structure of Low-level Jets in Maritime Storms Using QuikScat. National Aeronautics and Space Administration (NASA) (\$479,998). 3 years.

- Persson, Ola P. G., (PI) and A. A. Grachev (co-PI) 2000: GCM-Scale Surface Fluxes and Flux Parameterizations Determined from SHEBA Observations and a Nested Mesoscale Model. National Science Foundation (\$344,092). 3 years.
- Grachev, A.(PI) and Ola P. G. Persson (co-PI), 2000: Using the SHEBA Flux Data To Improve Regional and Global Climate Models. National Science Foundation (\$160,500). 3 years.
- Persson, Ola. P. O. G. (Principal Investigator), 1998-2001: Mid-Oceanic Wintertime Surface Fluxes and Atmospheric Boundary Layer Structure: Relationship to Cyclone Development and Evolution. National Science Foundation (\$192,693). 3 years.
- Ralph, F. M. (Principal Investigator), P. O. G. Persson, D. W. Reynolds, J. Wilczak, J.-W. Bao, and D. Kingsmill, 1998-2000: Improving Coastal Mesoscale Quantitative Precipitation Forecasting in Winter Storms along the United States West Coast: Analysis of Data from the CALJET Experiment During a Strong El Niño. (\$200,000), 2 years. U.S. Weather Research Program (USWRP).
- Persson, O. (Principal Investigator), and B. Walter, 1997: Airborne Measurement of Air-Sea fluxes in the Eastern Pacific during an El Nino Winter. Proposal funded by NOAA/OAR (\$128,568). 1 year.
- Ralph, F. M. (Principal Investigator), D. W. Reynolds, P. O. G. Persson, B. F. Smull, M. A. Shapiro, W. A. Nuss, J. Schmidt, 1996: The role of low-level jets and offshore data in mesoscale quantitative precipitation forecasting in coastal mountains. NOAA/ETL/USWRP. (\$95,000), 1 year.
- C. W. Fairall (Principal Investigator), and P. O. G. Persson, 1996: Measuring, parameterizing, and modeling atmospheric surface fluxes during SHEBA. Proposal funded by NSF/ONR for the SHEBA Project. (\$234,267), 3 years.
- Persson, P. Ola G. (Principal Investigator), 1996: NOAA ship-based measurements for FASTEX. Proposal funded by NOAA/ERL discretionary funds (\$169, 342), Oct. 1996 - March 1997.
- Persson, P. Ola G. (Principal Investigator), 1992: An examination of the potential vorticity evolution during FRONTS '87 using the French Peridot mesoscale model. Funded as a visiting scientist position by Nationale Centre de Recherche Meteorologique in Toulouse, France, 1 year, 200,000 FF (~ \$37,750).
- Warner, T. T. (Principal Investigator), and P. Ola G. Persson (Co-Principal Investigator), 1990: A study of the effect of a time-varying moist potential vorticity on the evolution of conditional symmetric instability. Funded by the National Science Foundation (NSF ATM-9019010), 18 mo., \$119,100. T. T. Warner later dropped from grant and P. Ola G. Persson became Principal Investigator, Fall, 1991.
- Andersson, T. (Principal Investigator), Dahlström, B., Liljas, E., Nilsson, S., and O. Persson (Co-Principal Investigators), 1985: Kustens och topografins betydelse för bildning och modifiering av mesoskaliga vädersystem och nederbörd. (Translation: Coastal and topographical effects on the development and modification of mesoscale weather systems and precipitation.). Funded by the Swedish Natural Science Research Council (G-GU 8509-100, KTO: 518509100-5), 1 yr., SKr 150,000 (~ \$25,000).
- Persson, P. Ola G.(Principal Investigator), Baker, R. W.(Co- Principal Investigator), 1983: Wind energy assessment studies in the Pequop Summit - Wells Area. Funded by the Bonneville Power Administration.
- Persson, P. Ola G.(Principal Investigator), 1982: The spatial variation of the wind resource in the Juniper Point - Goodnoe Hills Area. Funded by the Bonneville Power Administration, (Contract No. DE-AC79-81BP29182, M006).