CURRICULUM VITAE

University of Idaho

NAME: Walden, Von P.

DATE: May 2012

RANK OR TITLE: Associate Professor
DEPARTMENT: Geography

OFFICE LOCATION AND CAMPUS ZIP: McClure 305B, 3021
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DATE OF FIRST EMPLOYMENT AT UI: August 2001
DATE OF TENURE: June 2005
DATE OF PRESENT RANK OR TITLE: June 2005

EDUCATION BEYOND HIGH SCHOOL:

Degrees:

Ph.D., Geophysics, 1995, University of Washington
M.S., Geophysics, 1990, University of Washington
B.S., Physics with high honors, (minor in mathematics), 1984, Utah State University

EXPERIENCE:

Teaching, Extension and Research Appointments:

Associate Professor, University of Idaho, Moscow, Idaho, 2005 – current
Interim Project Director for Idaho EPSCoR/IDeA, September 2009 - January 2010
Assistant Professor, University of Idaho, Moscow, Idaho, 2001 – 2005
Affiliate Professor, Atmos. Science, Univ. Washington, Seattle, WA, 2002 - 2007
Research Scientist, University of Idaho, Moscow, ID, 2000-2001
Research Scientist, University of Wisconsin-Madison, Madison, WI, 1998-1999
Postdoctoral Research Associate, Univ. of Wisconsin-Madison, Madison, WI, 1997
Postdoctoral Research Associate, University of Washington, Seattle, WA, 1996
Electro-optical engineer, Quantic Industries, San Carlos, CA, 1984-1987

TEACHING ACCOMPLISHMENTS:

Courses Developed and Taught:

Geog 100 – Physical Geography
Core 201 – Global Change Summit: Facing the conseq. of global climate change
Geog 301 – Meteorology
Geog 385 – GIS Primer
Geog 401 – Climatology
Geog 404 – Global Environmental Change (team-taught)
Geog 415 – Data Analysis and Modeling using Computer Programming (Python)
Geog 491 – Research Methods in Geography (2 weeks; team-taught)
Geog 499 – Directed Study (IR properties of the atmosphere, Global Climate Change)
Geog 504 – Advanced Meteorology

Students Advised:

Undergraduate Advisees:

Currently advising eight undergraduate students in geography.
Approximately 2 to 3 advisees graduate each year.

Undergraduate Researchers:

Nathan Anderson, 2011
Alessio Spassiani, 2011
Kyle Behrens, 2010
Bryan Pettit, 2009
Kenny Christian, 2009
Ethan Davis, 2006, 2007
Craig Tarter, 2006
Jon Harbour, 2004

Graduate Students (as major professor):

University of Idaho

Brandon Moore, Ph.D., expected Spring 2013
Chris Cox, Ph.D., expected Fall 2013
Chris Cox, M.S., Fall 2009
Brian Harshburger, Ph.D., Fall 2009 (co-advised with Karen Humes)
Mark Ellison, M.S., Fall 2007
Brandon Moore, M.S., Spring 2006
W. Lance Roth, M.S., 2004

University of Washington (co-advised with Prof. Steve Warren)

Michael Town, Ph.D., 2007 (atmospheric science)
Penny Rowe, Ph.D., 2005, (atmospheric chemistry)
Michael Town, M.S., 2004. (atmospheric science)
Steven Hudson, M.S., 2004. (atmospheric science)
Ashwin Mahesh, Ph.D, 1999. (geophysics)

Graduate committees served (and serving) on:

Jacob Wolf, M.S., expected 2012
Joey Machala, M.S., 2009
Francoise Faure, Ph.D., 2008 (rapporteur only while on sabbatical)
John Zakrajsek, M.S., 2006
Carly Gibson, M.S., 2006
Troy Blandford, M.S., 2006
Yao Tang, M.S., 2005
Daniel Joswiak, M.S., 2004
Amy Haak, Ph.D., until 2003
Nate Dowse, M.S., 2003
Leon Denkhe, M.S., 2003

Charlotte Samis, M.S., 2002 (alternate for final exam)

Postdoctoral Fellows mentored:
Michael Town, 2008
Penny Rowe, 2006-2008

Grants and Contracts Awarded:

Pending:

Collaborative Research: Characterizing the Roles of Atmospheric Structure and Clouds on the Radiation and Precipitation Budgets at Summit, Greenland, National Science Foundation Arctic Natural Sciences, $248,424. (Walden portion), 1 August 2012 - 31 July 2015, (co-P.I.; P.I. - Dave Turner, U. Oklahoma)

Awarded:

Development of the Autonomous Arctic Infrared Observer (AAIRO), National Science Foundation Arctic Observing Network, $200,000, 15 Aug 2011 - 31 July 2013, (P.I.)

Regional Approaches to Climate Change (REACCH), USDA NIFA program, approx. $284,000 (Walden portion), 16 February 2011 - 15 February 2016, (Von P. Walden - co-P.I.; Sanford Eigenbrode (UI) - P.I., Large ($20,000,000) project in Idaho, Washington and Oregon)

EPSCoR Research Infrastructure Improvement program: Inter-campus and Intra-campus Cyber Connectivity (RII C2), $1,176,470, July 2010 - June 2012. (P.I.)

Collaborative Research: Cyberinfrastructure Development for the Western Consortium of Idaho, Nevada, and New Mexico, $2,000,000. (to Idaho EPSCoR), 15 September 2009 - 14 September 2012. (P.I. for Idaho EPSCoR portion)

Integrated Characterization of Energy, Clouds, Atmospheric state, and Precipitation at Summit (ICECAPS), ($1,917,000. – total; $898,000. – U. Idaho), National Science Foundation – Arctic Observing Network, 1 May 2009 – 30 April 2014. (Walden, P.I.; co-P.Is - Matthew Shupe, U. Colorado and David Turner, U. Wisconsin-Madison)

Idaho proposal to the NSF/EPSCoR Research Infrastructure Improvement Program: Water Resources in a Changing Climate: Connections to Ecological and Human Systems, co-P.I., $15,000,000., 1 September 2008 – 31 August 2013. (co-P.I. from 1 September 2008 – 24 September 2009, May 2010 - current; P.I. from 25 September 2009 - May 2010)

Lease of the University of Idaho Polar Atmospheric Emitted Radiance Interferometer (P-AERI) for deployment in Eureka, Canada for NOAA SEARCH, National Oceanic and Atmospheric Administration, 1 March 2008 – 39 June 2009, $19,000. (P.I.)

Subcontract for continuation of "Validation of the Atmospheric Infrared Sounder over the Antarctic Plateau", $25,000, NASA JPL, April 2008 – September 2008. (P.I.)

Antarctic Clouds and Climate: A Study with Two Generations of NASA Earth Science Enterprise Data, $148,843, NASA via Scripps Institute of Oceanography, March 2008 – February 2011. (co-P.I. with Dr. Dan Lubin, Scripps)

Preliminary Steps towards Understanding the Effects of Global Climate Change on Long-term Trends in Water Resources in Idaho, $25,000., (with matching funding from IWRRI ($12,500.) and PNWRC ($18,287.), July 2007 – June 2008.

Subcontract for continuation of "Validation of the Atmospheric Infrared Sounder over the Antarctic Plateau", $50,000, NASA JPL, March 2007 – September 2008. (P.I.)

IPY: Cloud properties across the Arctic Basin from surface and satellite measurements - An existing Arctic Observing Network, $197,559, National Science Foundation – International Polar Year, 15 March 2007 – 28 February 2010. (co-P.I. with Matthew Shupe, U. Colorado)

Lease of the University of Idaho Polar Atmospheric Emitted Radiance Interferometer (P-AERI) for deployment in Eureka, Canada for NOAA SEARCH, National Oceanic and Atmospheric Administration, 8 March 2007 – 29 February 2008, $45,168. (P.I.)

Hydrometeorological Forecasting in Mountain Watersheds for 2007, $195,300., Pacific Northwest Regional Co-laboratory, October 2006 – September 2007. (co-P.I. with Karen Humes)

Longwave Radiation Processes and Surface Energy Budget on the Antarctic Plateau, PI, $175,000, National Science Foundation - Office of Polar Programs, 1 March 2006 – 28 February 2009. (P.I)

Acquisition of spectral infrared downward longwave radiances over Eureka, Canada, PI, $35,000., National Oceanic and Atmospheric Administration (NOAA), Feb 2006 – May 2007. (P.I.)

Improvement of Operational Streamflow Forecasting in Snowmelt Dominated Basins, Co-PI with K. Humes, $125,859, Battelle National Laboratory, Pacific Northwest Regional Co-laboratory, 1 July 2005 - 30 June 2006.

Idaho proposal to the NSF/EPSCoR Research Infrastructure Improvement Program: Carbon/water flux in complex landscapes, co-PI, $66,500 for Walden, (total grant is $1,800,000), 1 June 2005 – 31 May 2008.

Instrumentation Support and Data Measurements for the Lexington Experiment, $23,420., Pacific Northwest National Laboratory, March – July 2005.

Hydro-meteorological tools for streamflow prediction in Western basins (Supplementary funding for Web Integration), Co-PI with K. Humes, $5,782, Battelle National Laboratory, Pacific Northwest Regional Co-laboratory, March 2005-June 2005.

Hydro-meteorological tools for streamflow prediction in Western basins, Co-PI with K. Humes, $128,500, Battelle National Laboratory, Pacific Northwest Regional Co-laboratory, May 2004-May 2005.

Extension to "Validation of the Atmospheric Infrared Sounder over the Antarctic Plateau", PI, $66,000, NASA, September 2004 – September 2005.

Improved Short-term Operational Streamflow Forecasting for Snow-melt Dominated Basins, Co-PI with K. Humes, $15,000, U.S.G.S – Idaho Water Resources Research Institute, March 2003 – February 2004.

Improving streamflow forecasts in the Upper Snake River Basin, Co-PI with K. Humes, $125,000, Battelle National Laboratory, Pacific Northwest Regional Co-laboratory, July 2003-May 2004.

Improved streamflow forecasting in Idaho, Co-PI with K. Humes, $15,000, U.S.G.S – Idaho Water Resources Research Institute, March 2003 – February 2004.

Longwave radiation processes over the Antarctic Plateau, PI, $97,657, National Science Foundation - Office of Polar Programs, January 2003 – December 2005.

Validation of the Atmospheric Infrared Sounder over the Antarctic Plateau, PI, $340,000, NASA, September 2001 – August 2004.

Supplemental grant to "Longwave Radiation Processes on the Antarctic Plateau" for the Teachers Experiencing Antarctica (TEA) program, $10,300, co-PI (with Steve Warren, UW), NSF – Polar Programs, April 2000 – May 2001. (Funded a high school teacher from Montana to help with our field program at South Pole Station in Dec 2000/ Jan 2001.)

Antarctic Clouds and Climate (co-I with Drs. David Bromwich (OSU) and Dan Lubin (Scripps Oceanographic Inst.), co-I, NSF – Climate Dynamics, $44,400, January 1999 – December 2000.

Integrated Science Core Course development award, PI, $2500, University of Idaho, December 1999.

The use of the Antarctic Plateau as a natural laboratory for upper tropospheric processes, PI, $143,351, NSF – Physical Meteorology, 1998 – 2001.

Longwave radiation processes over the Antarctic Plateau, PI, $176,000, NSF – Office of Polar Programs, 1997 – 2000.

SCHOLARSHIP ACCOMPLISHMENTS:

Refereed Publications:

Articles:

Shupe, M.D., D.D. Turner, V.P. Walden, R. Bennartz, M.P. Cadeddu, B.B. Castellani, *Christopher Cox, D.R. Hudak, M.S. Kulie, N.B. Miller, R.R. Neely III, W.D. Neff, 2012: High and Dry: New observations of tropospheric and cloud properties above the Greenland Ice Sheet, accepted to the *Bull. Amer. Met. Soc*.

*Cox, C.J., V.P. Walden, and P.M. Rowe, 2012: A comparison of the atmospheric conditions at Eureka, Canada and Barrow, Alaska (2006-2008), *J. Geophys. Res*., in press.

*Harshburger, B.J., V.P. Walden, K.S. Humes, *B.C. Moore, T.R. Blandford, and A. Rango, 2012: Generation of ensemble streamflow forecasts using an enhanced version of the Snowmelt Runoff Model (SRM), accepted to *J. Amer. Water Res. Assoc*.

Mariani, Z, K. Strong, M. Wolff, P. Rowe, V. Walden, P.F. Fogal, T. Duck, G. Lesins, D.S. Turner, *C. Cox, E. Eloranta, J.R. Drummond, C. Roy, D.D. Turner, D. Hudak, and I.A. Lindenmaier, 2012: Infrared measurements in the Arctic using two Atmospheric Emitted Radiance Interferometers, *Atmos. Meas. Tech*., 5, 329-344; doi:10.5194/amt-5-329-2012.

Rowe, P.M., S. Neshyba, and V.P. Walden, 2011: A responsivity-based criterion for accurate calibration of FTIR emission spectra: Theoretical development and bandwidth estimation, *Optics Express*, **19** (7), 5930-5941; doi:10.1364/OE.19.005930.

Rowe, P.M., S. Neshyba, *C.J. Cox, and V.P. Walden, 2011: A responsivity-based criterion for low noise in FTIR emission spectra: Identification of in-band low-responsivity wavenumbers, *Optics Express*, **19** (6), 5451-5463; doi: 10.1364/OE.19.005451.

Shupe, M.D., V.P. Walden, E. Eloranta, T. Uttal, J.R. Campbell, S.M. Starkweather, and M. Shiobara, 2011: Clouds at Arctic Atmospheric Observatories, Part I: Occurrence and Macrophysical Properties, *J. Appl. Meteor. Clim.*, **50** (3), 626-644.

*Harshburger B.J., K.S. Humes, V.P. Walden, T.R. Blandford, *B.C. Moore, and R.J. Dezzani, 2010b: Spatial interpolation of snow water equivalency using surface observations and remotely sensed images of snow-covered area, *Hydrological Processes,* **24**, 1285-1295.

*Harshburger, B.J., K.S. Humes, V.P. Walden, *B.C. Moore, T.R. Blandford, and A. Rango, 2010a: Evaluation of short-to-medium range streamflow forecasts obtained using an enhanced version of SRM, *J. Amer. Water Res. Assoc*., **46**, 603-617.

Walden, V.P., R.L. Tanamachi, P.M. Rowe, H.E. Revercomb, D.C. Tobin, and S.A. Ackerman, 2010: Improvements in the data quality of the Interferometric Monitor of Greenhouse Gases, *Appl. Opt*., **49**, 520-528.

*Town, M.S., and V.P. Walden, 2009: Surface energy budget over the South Pole and turbulent heat fluxes as a function of an empirical bulk Richardson number, *J. Geophys. Res*., **114**, D22107, doi:10.1029/2009JD011888.

*Rowe, P., and V.P. Walden, 2009: Improved measurements of the foreign-broadened continuum of water vapor in the 6.3 mm band at -30 °C, *Appl. Opt.*, **48**, 1358-1365.

Lesins, G., L. Bourdages, T.J. Duck, E.W. Eloranta, and V.P. Walden, 2009: Large surface radiative forcing from topographic blowing snow residuals measured in the High Arctic at Eureka, *Atmospheric Chemistry and Physics*, **9**, 1847-1862.

*Town, M. S., S. G. Warren, V. P. Walden, and E. D. Waddington 2008: Effect of atmospheric water vapor on modification of stable isotopes in near-surface snow on ice sheets, *J. Geophys. Res.*, **113**, D24303, doi:10.1029/2008JD009852.

*Town, M.S., E.D. Waddington, V.P. Walden, and S.G. Warren, 2008: Temperatures, heating rates, and vapour pressures in the near-surface snow at the South Pole, *J. Glac.*, 54, 487-498.

*Rowe, P., L.M. Miloshevich, D.D. Turner, and V.P. Walden 2008: Quantification of a dry bias in radiosonde humidity profiles over Antarctica, *J. Atmos. Ocean. Tech.,* **25**, 1529-1541.

Blandford, T., K.S. Humes, *B.J. Harshburger, *B.C. Moore, V.P. Walden, and H. Ye, 2008: Seasonal and synoptic variations in near-surface air temperature lapse rates in a mountainous basin, *J. Appl. Meteorol. Clim.*, **47**, 249-261.

*Town, M.S., V.P. Walden, and S.G. Warren, 2007: Cloud cover over the South

Pole from visual observations, satellite retrievals, and surface-based infrared radiation measurements, *J. Climate*, **20**, 544-559.

Gettelman, A., V.P. Walden, L.M. Miloshevich, *W.L. Roth, and B. Halter, 2006: Relative humidity over Antarctica from radiosondes, satellites, and a general circulation model, *J. Geophys. Res.*, **111**, doi:10.1029/2005JD006636.

*Rowe, P., V.P. Walden, and S.G. Warren, 2006: Measurements of the foreign-broadened continuum of water vapor in the 6.3-μm band at –30 C, *Appl. Opt.*, **45** (18), 4366-4382.

Walden, V. P., *W. L. Roth, R. S. Stone, and B. Halter, 2006: Radiometric validation of the Atmospheric Infrared Sounder over the Antarctic Plateau, *J. Geophys. Res*., **111**, D09S03, doi:10.1029/2005JD006357.

*Town, M.S., V.P. Walden, and S.G. Warren, 2005: Spectral and broadband longwave downwelling radiative fluxes, cloud radiative forcing and fractional cloud cover over the South Pole, *J. Climate*, **18** (20), 4235-4252.

Walden, V.P., *M.S. Town, B. Halter, and J.W.V. Storey, 2005: First measurements of the infrared sky brightness at Dome C, Antarctica, *Publ. Astron. Soc. Pac*., **117** (829), 300-308.

Aristidi, E., K. Agabi, M. Azouit, E. Fossat, J. Vernin, T. Travouillon, J.S. Lawrence, C. Meyer, J.W.V. Storey, B. Halter, W.L. Roth, and V. Walden, 2005: An analysis of temperatures and wind speeds above Dome C, Antarctica, *Astron. & Astrop*., **430** (2), 739-746.

*Hudson, S.R., *M.S. Town, V.P. Walden, and S.G. Warren, 2004: Temperature, humidity, and pressure response of radiosondes at low temperatures. *J. Atmos. Ocean. Tech*., **21**, 825-836.

Walden, V.P., S.G. Warren, and E. Tuttle, 2003: Atmospheric ice crystals over the Antarctic Plateau in winter. *J. Appl. Meteor.*, **42**, 1391-1405.

Fetzer, E., et al. (EOS Aqua Validation Scientists), 2003: AIRS/AMSU/HSB Validation. *IEEE Transactions of Geoscience and Remote Sensing*, **41**, 418-431.

*Mahesh, A., V.P. Walden, and S.G. Warren, 2001a: Ground-based infrared remote sensing of cloud properties over the Antarctic Plateau, Part I: Cloud-base heights. *J. Appl. Meteor.,* **40**, 1265-1278.

*Mahesh, A., V.P. Walden, and S.G. Warren, 2001b: Ground-based infrared remote sensing of cloud properties over the Antarctic Plateau, Part II: Cloud

optical depths and particle sizes. *J. Appl. Meteor.*, **40**, 1279-1294.

Wang, J.X.; Gille, J.C.; Revercomb, H.E., and Walden, V.P., 2000. Validation study of the MOPITT retrieval algorithm: Carbon monoxide retrieval from IMG observations during WINCE, *J. Atmos. Ocean. Tech*., **17**, 1285-1295.

Tobin, D.C., F.A. Best, P.D. Brown, S.A. Clough, R.G. Dedecker, R.G. Ellingson, R.K. Garcia, H.B. Howell, R.O. Knuteson, E.J. Mlawer, H.E. Revercomb, J.F. Short, P.F.W. van Delst, and V.P. Walden, 1999. Downwelling Spectral Radiance Observations at the SHEBA Ice Station: Water Vapor Continuum Measurements from 17-26 μm, *J. Geophys. Res.*, **104**, 2081-2092.

Walden, V.P., S.G. Warren, and F.J. Murcray, 1998. Measurements of the downward longwave radiation spectrum over the Antarctic Plateau and comparisons with a line-by-line radiative transfer model for clear skies, *J. Geophys. Res.*, **103**, 3825-3846.

Walden, V.P., S.G. Warren, F.J. Murcray, and R.G. Ellingson, 1997. Infrared radiance spectra for testing radiative transfer models in cold and dry atmospheres: Test cases from the Antarctic Plateau, *Bull. Amer. Met. Soc*., **78**, 2246-2247.

Mahesh, A., V.P. Walden, and S.G. Warren, 1997. Radiosonde temperature measurements in strong inversions: Correction for thermal lag based on an experiment at South Pole, *J. Atmos. Ocean. Tech.*, **14**, 45-53.

Walden, V.P., A. Mahesh, and S.G. Warren, 1996. Comment on "Recent changes in the North American Arctic boundary layer in winter", *J. Geophys. Res*., **101**, 7127-7134.

Walden, V.P., 1995. *The downward longwave radiation spectrum over the Antarctic Plateau*, Ph.D. dissertation, University of Washington, pp. 267.

* - *denotes either a graduate student or a postdoctoral fellow*

Submitted:

In preparation:

Cox, C.J., D.T. Turner, P.M. Rowe, M.D. Shupe, and V.P. Walden, 2011: Microphysical properties of clouds over Eureka, Canada, in preparation for *J. Geophys. Res*.

Moore, B.C., and V.P. Walden, 2011: Uncertainties associated with assumptions in

statistical downscaling of climate model output, in preparation for *Int. J. Climatology*.

Walden, V.P., P.M. Rowe, M.E. Ellison, R.E. Brandt, M.S. Town, S.R. Hudson, and R.M. Jones, 2011: Properties of super-cooled water droplets over South Pole, in preparation for *J. Appl. Meteorol.*

Reports:

Drafted chapters for the following planning documents for an Antarctic field experiment:

Bromwich, D.H., and T.R. Parish (eds.), 2004. *Antarctic Regional Interactions Meteorology Experiment (RIME): Implementation Plan.* BPRC Miscellaneous Series M-424, Byrd Polar Research Center, The Ohio State University, Columbus, Ohio, pp. 37.

Parish, T.R., and D.H. Bromwich (eds.). 2002. *Ross Island Meteorology Experiment (RIME)Detailed Science Plan.* BPRC Miscellaneous Series M-424, Byrd Polar Research Center, The Ohio State University, Columbus, Ohio, pp. 39.

Bromwich, D.H., and T.R. Parish (eds.), 1998. *Antarctica: Barometer of Climate Change.* Byrd Polar Research Center, The Ohio State University, Columbus, Ohio, pp. 13.

Walden, V.P., and D.C. Tobin, 1998. Creation of a Web-based Archive of IMG Data over the Arctic, Final Report to the International Arctic Research Center, University of Alaska-Fairbanks, Fairbanks, AK.

Other (Conference proceedings):

Moore, B.C., V.P. Walden, T.R. Blandford, B.J. Harshburger, and K.S. Humes, 2006: Evaluation of NDFD and downscaled NCEP forecasts in the Intermountain West. *Proceedings of the 18th Conference on Probability and Statistics in the Atmospheric Sciences*, 29 January – 2 February 2006, Atlanta, GA, American Meteorological Society, Boston, MA, CD-ROM. (submitted for publication in Jan 2006)

Blandford, T.R., B.J. Harshburger, K.S. Humes, B.C. Moore, and V.P. Walden, 2006: Interpolating surface air temperature for use in semi-distributed snowmelt runoff models, *Proceedings of the 73rd Western Snow Conference*, 11-14 April 2005, Great Falls, MT. (accepted for publication)

Harshburger, B.J., T.R.Blandford, K.S. Humes, V.P. Walden, and B.C. Moore, 2006: Evaluation of enhancements to the Snowmelt Runoff Model, *Proceedings of the 73rd Western Snow Conference*, 11-14 April 2005, Great Falls, MT. (accepted for publication)

Walden, V.P., M.E. Ellison, R.E. Brandt, M.S. Town, S.R. Hudson, R.M. Jones, 2005: Properties of super-cooled water clouds over South Pole. *Proceedings of the 8th Conference on Polar Meteorology and Oceanography*, 9-13 January 2005, San Diego, CA, American Meteorological Society, Boston, MA, CD-ROM.

Town, M.S., and V.P. Walden, 2005: Uncertainty analysis of data from the Polar Atmospheric Emitted Radiance Interferometer (PAERI) during the South Pole Atmospheric Radiation and Cloud Lidar Experiment, *Proceedings of the International Radiation Symposium, IRS '04: Current Problems in Atmospheric Radiation,* 23-28 August 2004, Busan, Korea, 351-354.

Walden, V.P., S.G. Warren, and E. Tuttle, 2003. Atmospheric ice crystals over the Antarctic Plateau, *Proceedings of the 7th Conference on Polar Meteorology and Oceanography*, 12-16 May 2003, Hyannis, MA, American Meteorological Society, Boston, MA, CD-ROM.

Hudson, S.R., M.S. Town, V.P. Walden, and S.G. Warren, 2003. Radiosonde temperature, humidity, and pressure response at low temperatures, *Proceeding of the 7th Conference on Polar Meteorology and Oceanography*, 12-16 May, Hyannis, MA, American Meteorological Society, Boston, MA, CD-ROM.

Walden, V.P., S. G.Warren, J. D. Spinhirne, A. Heymsfield, R. E. Brandt, P. Rowe, M. S. Town, S. Hudson, and R. M. Jones, 2001. "The South Pole Atmospheric Radiation and Cloud Lidar Experiment (SPARCLE)," in *Proc. 6th Conf. Polar Meteorology and Oceanography*, San Diego, CA, pp. 297–299.

Mahesh, A., J.D. Spinhirne, V.P. Walden, and J.R. Campbell, "Arctic and antarctic cloud properties from simultaneous lidar and spectral observations", in *Proc. 6th Conf. Polar Meteorology and Oceanography*, San Diego, CA.

Tanamachi, Robin L., V. P. Walden, S. A. Ackerman, H. E. Revercomb, R. O. Knuteson, 2001: Progress towards a high-quality data set of infrared spectra from the Interferometric Monitor for Greenhouse Gases (IMG). *Proceedings of the 5th Symp. on Integrated Observing Systems*, Albuquerque, NM, 14-19 January 2001 (preprints). Boston, MA, American Meteorological Society, 85-89.

Tanamachi, Robin L., V. P. Walden, S. A. Ackerman, R. O. Knuteson, 2001: Quality control and preliminary data analysis from the Interferometric Monitor for Greenhouse Gases (IMG) data set. *Proceedings of the 11th Conference on Satellite Meteorology and Oceanography*, Madison, WI, 15-18 October 2001, Boston, MA, American Meteorological Society, 692-695.

Knuteson, R.O., F. A. Best, W. Feltz, R.G. Garcia, H.B. Howell, H.E. Revercomb, D. Tobin, V.P. Walden, and W.L. Smith, 1999: UW High Spectral Resolution Emission Observations for Climate and Weather Research: Part I Ground-based AERI. *Proceedings of the 10th Conference on Atmospheric Radiation: A Symposium with tributes to the works of Verner E. Suomi*, Madison, WI, 28 June-2 July 1999, American Meteorological Society, Boston, MA, pp 354-355.

Walden, V. P., H. E. Revercomb, R. O. Knuteson, F. A. Best, N. Ciganovich, R. G. Dedecker, T. Dirkx, R. K. Garcia, R. Herbsleb, B. Howell, D. McRae, D., and J. Short, 1999: Variations in Arctic climate using downward longwave radiances. *Proceedings of the 5th Conference on Polar Meteorology and Oceanography*, Dallas, TX, 10-15 January 1999, Boston, MA, American Meteorological Society, 71-76.

Walden, V. P., D. C. Tobin, and H. E. Revercomb, 1999: Calibration and validation studies using data from the Interferometric Monitor of Greenhouse gases (IMG). *Proceedings of the 10th Conference on Atmospheric Radiation: A Symposium with*

tributes to the works of Verner E. Suomi, Madison, WI, 28 June-2 July 1999, Boston, MA, American Meteorological Society, pp 571-574.

Mahesh, Ashwin, Von P. Walden, and Stephen G. Warren, 1999: Ground-based remote sensing of cloud properties over the Antarctic plateau. *Proceedings of the 5th* Conference on Polar Meteorology and Oceanography, Dallas, TX, 10-15 January 1999, Boston, MA, American Meteorological Society, 281-283.

Knuteson, R.O., F.A. Best, H.E. Revercomb, D.C. Tobin, P.F.W. van Delst, P., and V.P. Walden, 1998. AERI instrument status and analysis results. In the *Proceedings of the Eighth Atmospheric Radiation Measurement (ARM) Science Team Meeting*, Tucson, AZ, 23-27 March 1998. Washington, DC: US Department of Energy, Office of Energy Research, Office of Health and Environmental Research, Environmental Sciences Division; 1998, 373-376.

Tobin, D.C., R.O. Knuteson, H.E. Revercomb, V.P. Walden, S.A. Clough, E.J. Mlawer, and R.G. Ellingson, 1998. AERI-ER at the SHEBA Ice Station: Far infrared water vapor continuum measurements. In the *Proceedings of the Eighth Atmospheric Radiation Measurement (ARM) Science Team Meeting*, Tucson, AZ, 23-27 March 1998. Washington, DC: US Department of Energy, Office of Energy Research, Office of Health and Environmental Research, Environmental Sciences Division; 1998, 753-756.

Wang, J., J.C. Gille, and V. Walden, 1998. Analysis of spectral radiance measurements by IMG on ADEOS. In: *Optical Remote Sensing of the Atmosphere and Clouds, Proceedings of the Meeting*, Beijing, China, 15-17 September 1998. Bellingham, WA, Society of Photo-Optical Instrumentation Engineers, 1998. (SPIE Proceedings volume 3501), 101-110.

Walden, V.P., and S.G. Warren, 1996. A spectral downward longwave climatology for clear and cloudy skies over South Pole, *Proceedings of the 1996 International Radiation Symposium*, Fairbanks, AK, 19-24 August 1996, pp 54-57.

Mahesh, A., Walden, V.P., and S.G. Warren, 1995. Radiosonde temperature profiles at South Pole: Correction for thermal lag. *Proceedings of the Fourth Conference on Polar Meteorology and Oceanography*, American Meteorological Society, 15-20 January 1995, Dallas, TX, pp. 22-23.

Warren, S.G., A. Mahesh, and Walden, V.P., 1995. Heights of temperature inversions in the Arctic troposphere: Multi-decadal trend?, *Proceedings of the Fourth Conference on Polar Meteorology and Oceanography*, American Meteorological Society, 15-20 January 1995, Dallas, TX, pp. 278-279.

Walden, V.P., and S.G. Warren, 1994. Longwave radiation spectrum on the Antarctic Plateau: Measurements from South Pole Station, Antarctica, 1992. *Proceedings of the Eighth Conference on Atmospheric Radiation*, American Meteorological Society, 23-28 January 1994, Nashville, TN, 461-463.

Walden, V.P., R. Heuberger, S.G. Warren, and F.J. Murcray, 1992. Atmospheric longwave radiation spectrum on the Antarctic Plateau, *Proceedings of the 1992 International Radiation Symposium*, Tallinn, Estonia, 3-8 August 1992, pp 245-247.

Walden, V.P., R. Heuberger, S.G. Warren, and F.J. Murcray, 1992. Atmospheric longwave radiation spectrum on the Antarctic Plateau, *Proceedings of the 3rd Conference on Polar Meteorology and Oceanography*, American Meteorological Society, 29 Sept –

2 Oct 1992, Portland, OR, pp. 11-12.

Talks at Professional Meetings:

Invited talk on *Ground-based Measurements in Support of Remote Sensing in Antarctica*, 1998 AMS Polar Meteorology and Oceanography Symposium, Dallas, TX.

Invited talk on *Climate Studies over the Antarctic Plateau*, 1997 Polar Processes and Global Climate conference, Orcas, Island, WA.

Invited talk on *Comparisons of spectral radiance measurements from South Pole to radiative transfer model calculations*, 1996 International Radiation Symposium, Fairbanks, AK.

Presentations at AIRS Science Team Meetings:

Walden, V.P., B. Halter, W.L. Roth, R.S. Stone, and D.C. Tobin. Validation of AIRS over the Antarctic Plateau: Low radiance, low humidity, and thin clouds. 8 November 2001, AIRS Validation Team Meeting, NASA JPL, Pasadena, CA.

Walden, V.P., B. Halter, W.L. Roth, R.S. Stone, and D.C. Tobin. An Update on AIRS Validation Activities at Dome C, Antarctica. 25-27 February 2003, AIRS Science Team Meeting, Camp Springs, MD.

Walden, V.P., B. Halter, W.L. Roth, R.S. Stone, and D.C. Tobin. An Update on AIRS Validation Activities at Dome Concordia, Antarctica. March 2004, AIRS Science Team Meeting, Greenbelt, MD.

Plus numerous talks and posters at various conferences: AGU, AMS, EGU, AAG, ...

Field Programs:

Summit Station, Greenland, May 2010-current, Collaborative project under NSF's Arctic Observing Network program with M.D. Shupe from the University of Colorado and D.T. Turner from the University of Wisconsin-Madison to measure atmospheric and cloud properties over the Greenland Ice Sheet, P.I.

Plaine Morte Glacier, February-April 2008, Collaborative project with the Laboratory of Environmental Fluid Mechanics, Ecole Polytechnique Federale de Lausanne to study the surface energy balance of snow surfaces and post-processing of stable water isotopes in snow after deposition.

Eureka, Canada, March 2006, Collaborative project with NOAA's Study for Environmental Arctic Change (SEARCH) to monitor Arctic cloud properties, P.I.

Dome C, Antarctica, Dec 2003 - Jan 2004, Validation for NASA's AIRS instrument, P.I.

Dome C, Antarctica, Dec 2002 - Jan 2003, Validation for NASA's AIRS instrument, P.I.

South Pole Station, Antarctica, January 2001, South Pole Atmospheric Radiation and Cloud Lidar Experiment (SPARCLE), co-P.I.

South Pole Station, Antarctica, December 1999, South Pole Atmospheric Radiation and Cloud Lidar Experiment (SPARCLE), co-P.I.

South Pole Station, Antarctica, January 1992, Fieldwork for graduate studies.

South Pole Station, Antarctica, November 1990 – February 1991, Fieldwork for graduate studies.

Awards:

Excellence in Research and Creative Activity Award, University of Idaho Research Office, April 2012.

President's Mid-Career Award, University of Idaho President's Office, April 2012.

Honorable mention for Best Student paper, AMS conference on Atmospheric Radiation, Nashville, TN, 1994.

SERVICE:

Major University Committee Assignments:

University of Idaho

Search Committee for Dean of the College of Science, 2012 - current
Member of Faculty Advisory Committee on International Studies Curriculum, Fall 2006.
Faculty representative to the Borah Symposium Committee, 2003 – 2006
Chairperson of the Borah Symposium Committee, 2005/2006
Faculty Advisor to the UI Bluegrass Club, 2005 – 2006
Faculty judge for 2003 Graduate Student Research Exhibition, Sciences, Earth Resources, and Environmental Sciences Division.

College of Science

Austin Distinguished Lecture Committee, 2011 - current
Faculty rep. to the Tenure and Promotion Committee, 2006 - 2009
Faculty rep. to the College of Science Scholarship Committee, 2001 – 2006

Department of Geography

Department Chair search committee, Geography, Fall 2011
Faculty search committee, Geography, Fall 2010
Faculty search committee 1, Geography, Spring 2009 (chair)
Faculty search committee 2, Geography, Spring 2009
Chaired the Review Committee for Chairperson Harley Johansen, Fall 2007
Faculty advisor to the Geography Student Club, 2001 – 2006
Faculty search committee, Geography, Spring 2006
Faculty search committee, Geography, Spring 2004
Faculty tenure/promotion for Dr. Karen Humes, fall 2002

Professional and Scholarly Organizations (including memberships, committee assignments, editorial services, offices held and dates)

Memberships:

American Geophysical Union (AGU), since 1992.
American Meteorological Society (AMS), since 1992.
Association of American Geographers (AAG), since 1996.

Committee Assignments:

AMS Polar Meteorology and Oceanography committee, 2011- current

Member of organization committee for the Arctic Observing Network (AON) P.I. meeting, November 2009.

Member of the NASA EOS AIRS Validation Science Team, 2001-2005.

Scientific Steering Committee for the Antarctic Regional Interactions Meteorology Experiment (RIME).

Served on the meeting organization committee for the AMS Polar Meteorology and Oceanography committee, 1998-2001.

Frequent reviewer for:

Refereed journals (J. Geophys. Res., J. Climate, Water Resources Research…)
Proposals (NSF Office of Polar Programs, NSF Physical Meteorology)

External Reviewer:

Reviewed promotion package of a colleague from the Byrd Polar Research Center from Research Associate to Research Scientist (Sep 2004)

Outreach Service: (Including popular press, interview articles, newspaper articles, workshops-seminars-tours organized, Extension impact statements)

Press Articles:

"Cold World, Hot Science: Antarctica provides UI researchers a climate to explore", by Ray Doering, The University of Idaho Magazine, Fall 2004. (Popular piece that profiles a former graduate student, Lance Roth, and our NASA project)

"University of Idaho geography team heads to Antarctica", By Chuck Oxley, Associated Press Writer, 22 November 2003.

"UI research team travels to Antarctica Plateau", UI Register, vol. 15, no. 25, 5 December 2003.

"UI research team goes to Antarctica, monitors satellite", by Katie Whittier, The University of Idaho Argonaut, vol. 105, no. 29, 9 December 2003.

Outreach:

Four-hour IGERT Workshop on Climate Change (with lab exercises on using downscaled climate model output), University of Idaho, Moscow, ID, 8 August 2011.

Lecture entitled "Lessons learned from some very cold places", Biogeosciences Seminar Series, University of Idaho, Moscow, ID, 26 April 2011.

Lecture and Computer Demo entitled "Data Sets for Downscaled Climate Model Output", Senior civil engineering course (Brian Lamb), Washington State University, Pullman, WA, 10 March 2011.

Seminar entitled "Recent Advances in Understanding Arctic Clouds", Department of Geography, University of Idaho, Moscow, Idaho, 9 February 2011.

Seminar entitled "Data Sets for Downscaled Climate Model Output for Idaho EPSCoR", EPSCoR Track 2 Cyber-seminar, Moscow, Idaho, 3 December

2010 (web broadcast to Boise, Idaho Falls, and Pocatello).

Seminar entitled "Idaho EPSCoR: Overview of Science Team Activities", Idaho Climate and Water meeting, Boise, Idaho, 2 November 2010.

Lecture entitled "Climate Change 101: What is it, and how will it affect the Palouse?" for course on Society and Natural Resources (Lauren Fins), UI, Moscow, Idaho, 27 October 2010.

Seminar entitled "Lessons learned from some very cold places", Pacific Northwest National Lab, Richland, WA, 4 October 2010.

Lecture entitled "Lessons learned from some very cold places", Society and Natural Resources course, UI, Moscow, Idaho, 27 October 2010.

Seminar entitled "Lessons learned from some very cold places", EE seminar series, UI, Moscow, Idaho, 16 September 2010.

Seminar entitled "Can we engineer our way out of climate change?" for Energy Ethics course, UI, Moscow, Idaho, 24 March 2010.

Invited public lecture entitled "Climate Change 101: What it is, and how it will affect Idaho." for Nez Perce Fisheries Annual Meeting, Lewiston, Idaho, 4 February 2010.

Seminar entitled "Climate Change 101: What is it, and how will it affect the Palouse?" for UI Honors course on Natural Resources (Lauren Fins), UI, Moscow, Idaho, 7 December 2009.

Seminar entitled "Climate Change 101: What is it, and how will it affect the Palouse?" for UI Honors course on Energy (Tom Bitterwolf), UI, Moscow, Idaho, 7 December 2009.

Seminar entitled "Climate Change 101: What is it, and how will it affect the Palouse?" for National "350 Teach-In", UI, Moscow, Idaho, 4 November 2009.

Seminar entitled "Climate Change 101: What is it, and how will it affect the Palouse?" for National "350 Teach-In", UI, Moscow, Idaho, 4 November 2009.

Seminar entitled "Water Resources in a Changing Climate" for Boise Climate and Water meeting, Water Center, Boise, Idaho, 22 October 2009.

Seminar entitled "Fractional cloud cover and longwave cloud radiative forcing over Eureka, Canada" for UI Geography department, UI, Moscow, Idaho, 12 October 2009.

Seminar entitled "Water Resources in a Changing Climate" for UI Geography department, UI, Moscow, Idaho, 28 Sept 2009.

Invited Panelist, brief presentation of "Climate Change 101: What is it?", then served on panel discussion for NW Philosophy conference, WSU, Pullman, WA, 1 May 2009.

Seminar entitled "Climate Change 101: What is it?" for UI Globalization course, UI, Moscow, Idaho, 10 March 2009.

Seminar entitled "Lessons Learned from some Very Cold Places" for Optical Technology Center, Montana State University, Bozeman, MT, 19 February 2009.

Seminar entitled "Climate Change 101: What is it?" for National Global

Warming Teach-In, UI, Moscow, Idaho, 5 February 2009.

Lecture on climate change, entitled "Understanding the Complexity of Earth's Climate", and served on expert panel, for Friends of the Sandpoint Library, via teleconference from UI, 4 December 2008.

Seminar on climate change entitled "Climate Change in Idaho: Impacts and Vulnerability" for UI Law School students, UI Law School, 27 October 2008.

Lecture entitled "Water Resources in a Changing Climate: Connections to Ecological and Human Systems", and served on expert panel, for President's Sustainability Conference, Boise, Idaho, 21 October 2008.

Talk entitled "Water Resources in a Changing Climate: Connections to Ecological and Human Systems" for annual Idaho Climate and Water Forecasts for the 2009 Water Year, Boise, Idaho, 16 October 2008.

Talk entitled "Water Resources in a Changing Climate: Connections to Ecological and Human Systems" for planning meeting at Idaho Dept of Water Resources, Boise, Idaho, 15 October 2008.

Seminar entitled "Water Resources in a Changing Climate: Connections to Ecological and Human Systems" for IWRRI fall seminar, UI, Moscow, Idaho, 23 September 2008.

Presentation entitled "Water Resources in a Changing Climate: Connections to Ecological and Human Systems" to CATIE and Tropical Foundation Board of Representatives, UI, Moscow, Idaho, 8 August 2008.

Seminar (invited), "Properties of polar clouds: Lessons learned from some very cold places", EPFL EFLUM seminar, 27 June 2008.

Lecture on state-wide EPSCoR proposal, entitled "Water Resources in a Changing Climate: Connections to Biological and Human Systems", for the Idaho Environment Summit, Boise, Idaho, 13 August 2007.

Lecture on climate change, entitled "Climate Change in Idaho: Past, present, and future", for the UI University Seminar Series, Moscow, Idaho, 31 August 2007.

Panel member for community forum on climate change in Boise, Boise River Conference, Boise, Idaho, 8 August 2007.

Lecture on climate change, entitled "Climate Change in Idaho: Impacts and Vulnerability", for the Association of Idaho Cities, Coeur d'Alene, Idaho, 14 June 2007.

Lecture entitled "An Update on Climate Change" for IDWR Climate Change sub-committee meeting, Boise (via telecon), 12 April 2007.

Lecture entitled "Can we engineer our way out of climate change?" for League of Women Voters, Moscow, Idaho, 11 April 2007.

Lecture entitled "Update on Climate Change" for Freshman honors course in Globalization, U. Idaho, 22 March 2007.

Lecture entitled "Update on Climate Change" for Geography 100, U. Idaho, 2 March 2007.

Lecture entitled "Update on Climate Change" for Moscow High School Environmental Club, plus Question and Answer session, 14 February 2007.

Lecture entitled "Global Climate Change: The Basics" for Moscow, Idaho

Community Forum on Climate Change, 1 February 2007.

Lecture entitled “Can we engineer our way out of climate change?” for Rangeland Ecology and Management department at University of Idaho, 13 October 2006.

Lecture entitled “Can we engineer our way out of climate change?” for Mechanical and Materials Engineering department at Washington State University, 5 October 2006.

Lecture on climate change and the Arctic, entitled “North by Northeast”, for four science classes at Moscow Junior High School, 3 October 2006, (contact: Jim LaForture, MJHS).

Panel member for community forum on climate change (in response to a documentary film entitled “An Inconvenient Truth”, 20 August 2006).

Mentor for students at Moscow Junior High School working on alternative fuels for the Toshiba Explora-vision project, January 2006 (contact: Kathy Dawes, MJHS).

Invited speaker for The University Interdisciplinary Colloquium, 20 Sep 2005, “Lessons Learned from a Frozen Continent: Performing research in Antarctica”

Organizer, primary speaker, and panel member for community forum on potential climate change (in response to a major motion picture entitled “The Day After Tomorrow”, Summer 2004).

Slide-show presentation at assembly on Antarctica for McDonald Elementary School, Fall 2000. Also, corresponding with students and teachers via email while performing field work in Antarctica.

Slide-show presentation on Antarctica for 2nd-grade class at McDonald Elementary School, Fall 1999. Corresponded with students and teachers via email while performing field work in Antarctica.