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NOAA ESRL PSD Attribution Predictability and Assessment Group

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## Education

- M.S. in Computer Information Systems, Denver University, June 2001.
- Ph.D. in Physics, University of Kansas, Dec. 1994.
- M.S. in Physics, University of Kansas, May 1990.
- B.A. in Physics, University of Colorado, May 1987.

## Professional Experience

- Research Associate III, CIRES & NOAA APA, July '14 - present
- Research Associate III, CIRES ESOC, CU, July '13 - July '14
- Associate Scientist III, NASA HIRDLS group, ACD NCAR, Sept. '08 - Jun '13
- Associate Scientist II, Climate Analysis Section, CGD NCAR, Mar. '02 - Aug. '08
- Mentor, NSF's SOARS program, NCAR, June '00 - present
- Software Engineer II, Regional Modeling Process Studies, ACD NCAR, Dec. '98 - Feb. '02
- Programmer Intern II, Mesoscale Microscale Meteorology, NCAR, Aug. '98 - Dec. '98
- Visiting Assistant Professor of Physics/Engineering, Adams State College, Alamosa, CO, Aug. '97 - Aug. '98
- Research Fellow in Computational Astrophysics, Wichita State University, Wichita, KS, summer 1997
- Tenure-Track Physics Instructor, Butler County Community College, El Dorado, KS, Aug.'95 - Aug. '97
- Visiting Assistant Professor of Physics, University of Kansas, summer 1995
- Research Assistant in Physics, Argonne National Laboratory & University of Kansas, summer '91 & '92, 1993
- Physics Teaching Assistant, University of Kansas, Sept.'88 - May '92

## Selected Peer Reviewed Publications

- R. Dole, *et al.*, 2017: Science and Services during the Strong El Nino of 2015-2016: The NOAA El Nino Rapid Response Field Campaign, *Bull. Am. Met. Soc.*, *in Preparation*.
- L. Cheng, M. Hoerling, L. Smith, J. Eischeid, 2017: Diagnosing Human-Induced Dynamic and Thermodynamic Drivers of Extreme Rainfall. *J. Clim.*, *in Review*.
- S. Tegtmeier, *et al.*, 2016: The SPARC Data Initiative: comparisons of CFC-11, FCF-12, HF and SF6 climatologies from international satellite limb sounders. *Earth Syst. Sci. Data*, **8**, 1-18. doi: 10.5194/essd-8-1-2016.
- L.L., Smith, J.C. Gille, 2014: Validation of the Aura High Resolution Dynamics Limb Sounder geopotential heights. *Atmos. Meas. Tech.*, **7**, 8, 2775-2785. doi: 10.5194/amt-7-2775-2014.
- M. Toohey, M. I. Hegglin, S. Tegtmeier, J. Anderson, J. A. Añel, A. Bourassa, S. Brohede, D. Degenstein, L. Froidevaux, R. Fuller, B. Funke, J. Gille, A. Jones, Y. Kasai, K. Krüger, E. Kyrölä, J. L. Neu, A. Rozanov, L. Smith, J. Urban, T. von Clarmann, K. A. Walker, and R. H. J. Wang, 2013: Characterizing sampling biases in the trace gas climatologies of the SPARC Data Initiative, *J. Geophys. Res.*, **118**, 11847-11826.

- S. Tegtmeier, M. I. Hegglin, J. Anderson, A. Bourassa, S. Brohede, D. Degenstein, L. Froidevaux, R. Fuller, B. Funke, J. Gille, A. Jones, Y. Kasai, K. Krüger, E. Kyrölä, G. Lingenfelter, J. Lumpe, B. Nardi, J. Neu, D. Pendlebury, E. Remsberg, A. Rozanov, L. Smith, M. Toohey, J. Urban, T. von Clarmann, K. A. Walker, and R. H. J. Wang, 2013: SPARC Data Initiative: A comparison of ozone climatologies from international satellite limb sounders, *J. Geophys. Res.*, **118**, 12229-12247.
- K.E. Trenberth, and L. Smith, 2009: Variations in the three dimensional structure of the atmospheric circulation with different flavors of El Niño. *J. Clim.*, **12**, No. 11, 2978-2991.
- K.E. Trenberth, and L. Smith, 2009: The three dimensional structure of the atmospheric energy budget: methodology and evaluation. *Clim. Dyn.*, **32**, 1065-1079.
- K.E. Trenberth, and L. Smith, 2008: Atmospheric energy budgets in the Japanese Reanalysis: Evaluation and variability. *J. Meteor. Soc. Japan*, **86**, 579-592.
- K.E. Trenberth, L. Smith, T. Qian, A. Dai, J. Fasullo, 2007: Estimates of the global water budget and its annual cycle using observational and model data. *J. Hydrometeor.*, **8**, 758-769.
- K.E. Trenberth, and L. Smith, 2006: The vertical structure of temperature in the tropics: Different flavors of El Niño. *J. Clim.*, **19** 4956-4973.
- K.E. Trenberth, J. Fasullo, L. Smith, 2005: Trends and variability in column-integrated atmospheric water vapor, *Clim. Dyn.*, **24**, 741-758.
- K.E. Trenberth, D.P. Stepaniak, L. Smith, 2005: Interannual Variability of the Mass of the Atmosphere, *J. Clim.*, **18**, 2812-2825.
- K.E. Trenberth, L. Smith, 2005: The Mass of the Atmosphere: a Constraint on Global Analyses, *J. Clim.*, **18**, 864-875.
- A. Klonecki, P. Hess, L. Emmons, L. Smith, J. Orlando, D. Blake, 2003: Seasonal Changes in the Transport of Pollutants into the Arctic Troposphere - A Model Study, *J. Geophys. Res.*, **108** (D4), 8367.

## Honors/Awards/Professional Societies

- 2002-present: American Geophysical Union (AGU)
- 1992-93: Strobel Scholarship, University of Kansas.
- 1991-92: Outstanding Teaching Assistant Award, KU Dept. of Physics.
- 1989-90: Outstanding Teaching Assistant Award, KU Dept. of Physics.
- 1989-present: Sigma Pi Sigma, Physics Honor Society.
- 1987-1990: Society of Physics Students (SPS)
- 1987-present: American Physical Society (APS), and Division of Particles and Fields (DPF).