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Education

Ph.D. – Atmospheric Science, University of California-Davis, September 2012
B.S. – Atmospheric Science, University of Wisconsin-Madison, January 2005
B.S. – Applied Mathematics, University of Wisconsin-Madison, January 2005

Research Interests

Atmospheric dynamics; global climate change; stratosphere-troposphere communication; wave-mean flow interaction; couplings between radiation, chemistry, and large-scale waves; stratospheric chemistry; sun-climate connections

Research Experience

Jan. 2014-present	National Science Foundation Atmospheric and Geospace Science Postdoctoral Fellow, Cooperative Institute for Research in the Environmental Sciences (CIRES), University of Colorado – Boulder (Supervisors: Drs. Judith Perlwitz-CIRES and Thomas Birner-Colorado State University)
Oct. 2013-Dec. 2013	Postdoctoral research associate, Cooperative Institute for Research in the Environmental Sciences (CIRES), University of Colorado – Boulder (Supervisors: Drs. Judith Perlwitz and George Kiladis)
Jan. 2013-Sept. 2013	Postdoctoral research fellow, Colorado State University Department of Atmospheric Science (Supervisor: Prof. Thomas Birner)
Fall 2005-Aug. 2012	Graduate student researcher, University of California-Davis Department of Land, Air, Water Resources - Atmospheric Science Program (Advisor: Prof. Terrence R. Nathan)
Fall 2008-fall 2009	Executive officer, Society for Industrial and Applied Mathematics Club, University of California-Davis
Summer 2008	Stratospheric Processes and Their Role in Climate (SPARC) summer school: Dynamics, long-term memory, and trends in the climate system
Fall 2004	Student research employee (focus: nonlinear dynamics), University of California-Davis Center for Computational Sciences (Advisor: Prof. James P. Crutchfield)
Summer 2004	Undergraduate research intern (focus: nonlinear dynamics), Santa Fe Institute (Advisor: Prof. James P. Crutchfield)
Winter/spring 2004	Undergraduate research (focus: adjoint forecast modeling and predictability), University of Wisconsin-Madison Department of Atmospheric Science (Advisor: Prof. Michael C. Morgan)
15-19 March 2004	University of Wisconsin-Madison – Atmospheric Science Predictability Workshop (participant)
Summer 2003	National Science Foundation research experiences for undergraduates, Santa Fe Institute (Advisor: Prof. James P. Crutchfield)

Fellowships and Awards

Fall 2013 (award date) National Science Foundation Atmospheric and Geospace Sciences Postdoctoral Fellowship

Summer 2011	Best graduate student presentation award – 18th American Meteorological Society Conference on Atmospheric and Oceanic Fluid Dynamics in Spokane, WA
Spring 2010	Henry A. Jastro Graduate Research Scholarship
Summer 2010	University of California-Davis Office of Graduate Studies – Graduate Student Research Fellowship
Summer 2009	University of California-Davis Office of Graduate Studies – Graduate Student Travel Award
Summer 2008	University of California-Davis Office of Graduate Studies – Graduate Student Research Fellowship
Summer 2007	University of California-Davis Office of Graduate Studies – Graduate Student Research Fellowship

Publications

Albers, J. R. and T. Birner, (2014): Relative roles of gravity and planetary waves in vortex preconditioning prior to sudden stratospheric warmings. *Journal of the Atmospheric Sciences*, **71**, 4028-4054.

Albers, J. R. and T. R. Nathan, (2013): Ozone loss and recovery and the preconditioning of upward propagating planetary wave activity. *Journal of the Atmospheric Sciences*, **70**, 3977-3994.

Albers, J. R., J. P. McCormack, and T. R. Nathan, (2013): Ozone and the morphology of the planetary waveguide. *Journal of Geophysical Research,* **118**, 563-576.

Albers, J. R., and T. R. Nathan, (2012): Pathways for communicating the effects of stratospheric ozone to the polar vortex: Role of zonally asymmetric ozone. *Journal of the Atmospheric Sciences*, **69**, 785-801.

Nathan, T. R., J. R. Albers, and E. C. Cordero, (2011): Role of wave–mean flow interaction in sun–climate connections: Historical overview and some new interpretations and results. *Journal of Atmospheric and Solar-Terrestrial Physics*, **73**, 1594–1605.

Conference Presentations and Seminars

3-8 January 2015	**American Meteorological Society 18th Conference on the Middle Atmosphere**, Phoenix, Arizona (talk) – "Interhemispheric potential vorticity stirring during Sudden Stratospheric Warmings"
12-17 January 2014	**Stratosphere-troposphere Processes and their Role in Climate (SPARC) General Assembly**, Queenstown, New Zealand (poster) – "Relative roles of gravity and planetary waves in vortex preconditioning prior to sudden stratospheric warmings."
17-21 June 2013	**American Meteorological Society 19th Conference on Atmospheric and Oceanic Fluid Dynamics**, Newport, Rhode Island (talk) – "Gravity wave effects on polar vortex evolution during sudden stratospheric warmings"
17-21 June 2013	**American Meteorological Society 17th Conference on the Middle Atmosphere**, Newport, Rhode Island (talk) – "Ozone loss and the preconditioning of upward propagating planetary wave activity"
7 December 2012	**American Geophysical Union Fall Meeting**, San Francisco, California (poster) – Lower stratospheric ozone loss: Preconditioning of upward propagating wave activity and the driving of the stratospheric circulation
29 November 2011	**National Center for Atmospheric Research (NCAR) Atmospheric Chemistry Division**, Boulder, Colorado (talk) – "Pathways for Communicating Changes in Stratospheric Ozone to the Polar Vortex"
13-17 June 2011	**American Meteorological Society 18th Conference on Atmospheric and Oceanic Fluid Dynamics**, Spokane, Washington (talk) – "Zonally asymmetric ozone and the morphology of the planetary waveguide"
13-17 June 2011	**American Meteorological Society 18th Conference on Atmospheric and Oceanic Fluid Dynamics**, Spokane, Washington (poster) – "Communicating lower stratospheric ozone losses to the Arctic polar vortex: Role of zonally asymmetric ozone"
23-27 January 2011	**American Meteorological Society 16th Conference on the Middle Atmosphere**, Seattle, Washington (poster) – "Role of zonally asymmetric ozone in modulating downward influence exerted by steady, transient, and pulse forcing"
3-5 November 2010	**SPARC DynVar Workshop 2: Modeling the Dynamics and Variability of the Stratosphere-Troposphere System**, Boulder, Colorado (poster) – Pathways for Communicating Changes in Stratospheric Ozone to the Arctic Polar Vortex: Role of Zonally Asymmetric Ozone
8-12 June 2009	**American Meteorological Society 17th Conference on Atmospheric and Oceanic Fluid Dynamics and 15th Conference on the Middle Atmosphere**, Stowe, Vermont (talk) – "Communicating changes in lower stratospheric ozone to the Arctic polar vortex"
10 October 2008	**Center for Atmosphere and Ocean Science – Courant Institute of Applied Mathematics, New York University - Graduate Student Seminar** (invited talk) - "Longitudinal variations in stratospheric ozone and its effects on climate variability"
1 May 2008	**University of California-Davis Society for Industrial and Applied Mathematics Graduate Student Conference** (talk) – "Effects of ozone on stratospheric wave-mean flow interaction"
20-24 August 2007	**American Meteorological Society 14th Conference on the Middle Atmosphere**, Portland, Oregon (poster) - "Planetary wave-induced ozone heating and its effect on stratospheric sudden warmings"
25-29 June 2007	**American Meteorological Society 16th Conference on Atmospheric and Oceanic Fluid Dynamics**, Santa Fe, NM (poster) - "Effects of ozone on stratospheric wave-mean flow interaction: Implications for sudden stratospheric warmings"
22 March 2007	**University of Hokkaido – Nonlinear and Computational Science Division,** Sapporo, Japan (invited talk) - "Effects of ozone on stratospheric wave-mean flow interaction"
25 November 2003	**University of Wisconsin-Madison Department of Physics – Chaos and Complex Systems Seminar** - "Multiple agent dynamical systems"

25 August 2003 **Santa Fe Institute Institute REU Seminar** – "Multiple agent dynamical systems"

Teaching Experience

Spring 2012	Teaching assistant – Photography: Bridging Art and Science (SAS 40), University of California-Davis
Fall 2011	Teaching assistant – Severe and Unusual Weather (ATM 10), University of California-Davis
Winter 2011	Teaching assistant – Global Climate Change (ATM 5), University of California-Davis
Winter 2010	Teaching assistant – Global Climate Change (ATM 5), University of California-Davis
Fall 2001-Summer 2002	Undergraduate calculus and physics tutor, University of Wisconsin-Madison

Computational Skills

Programming languages: Matlab, IDL, Fortran

References

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