

**John R. Albers, Ph. D.**Email: [john.albers@noaa.gov](mailto:john.albers@noaa.gov)

Cooperative Institute for Research in the Environmental Sciences  
 University of Colorado  
 and  
 Earth System Research Laboratory – Physical Science Division  
 National Oceanic and Atmospheric Administration  
 Boulder, CO USA

**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

**Appointments**

May 2022-present	<u>Research Scientist III</u> , Cooperative Institute for Research in the Environmental Sciences (CIRES), University of Colorado – Boulder
April. 2018-April 2022	<u>Research Scientist II</u> , Cooperative Institute for Research in the Environmental Sciences (CIRES), University of Colorado – Boulder
Jan. 2016-April 2018	<u>Research Scientist I</u> , Cooperative Institute for Research in the Environmental Sciences (CIRES), University of Colorado – Boulder
Jan. 2014-Dec. 2015	<u>National Science Foundation Atmospheric and Geospace Science Postdoctoral Fellow</u> , Cooperative Institute for Research in the Environmental Sciences (CIRES), University of Colorado – Boulder
Oct. 2013-Dec. 2013	<u>Postdoctoral research associate</u> , Cooperative Institute for Research in the Environmental Sciences (CIRES), University of Colorado – Boulder (Supervisors: Drs. Judith Perlwitz and George Kiladis)
Jan. 2013-Sept. 2013	<u>Postdoctoral research fellow</u> , Colorado State University Department of Atmospheric Science (Supervisor: Prof. Thomas Birner)
Fall 2005-Aug. 2012	<u>Graduate student researcher</u> , University of California-Davis Department of Land, Air, Water Resources - Atmospheric Science Program (Advisor: Prof. Terrence R. Nathan)
Fall 2004	<u>Student researcher</u> (focus: nonlinear dynamics), University of California-Davis Center for Computational Sciences (Advisor: Prof. James P. Crutchfield)
Summer 2003	<u>National Science Foundation research experiences for undergraduates</u> , Santa Fe Institute (Advisor: Prof. James P. Crutchfield)

**External activities**

2018-present	<b>Scientific mentor</b> – CIRES-CU Boulder (NSF sponsored) Research Experiences for Community College Students summer internship program
Oct. 2017	<b>Invited lecturer</b> (2 weeks) – Advanced School on Tropical-Extratropical Interactions on Intra-Seasonal Time Scales, International Centre for Theoretical Physics, Trieste, Italy
Nov. 2017-present	<b>Associate editor</b> – American Meteorological Society <i>Monthly Weather Review</i>

**Grants, Fellowships, and Awards**

Dec. 2018-present	National Science Foundation Atmospheric and Geospace Sciences Grant (NSF Award # 1756958): <i>The influence of climate variability and change on stratospheric intrusions of ozone over North America</i>
Jan. 2017	Bulletin of the American Meteorological Society Editor's Award
Jan. 2014-Dec. 2015	National Science Foundation Atmospheric and Geospace Sciences Postdoctoral Fellowship. Project title: <i>A Hierarchical Modeling Approach to Quantifying the Effects of Changes in Ozone and Solar Variability on the Brewer-Dobson Circulation and Tropospheric Climate.</i>
Summer 2011	Best graduate student presentation award – 18 <sup>th</sup> American Meteorological Society Conference on Atmospheric and Oceanic Fluid Dynamics in Spokane, WA

---

**Publications**


---

- Albers, J. R.**, Newman, M., Hoell, A., Breeden, M. L., Lillo, S. P., Wang, Y., Lou, J. (under review): The February 2021 Cold Air Outbreak in the United States: a Subseasonal Forecast of Opportunity. *Bull. Amer. Met. Soc.*
- Albers, J. R.**, Butler, A. H., Langford, A. O., Elsbury, D., Breeden, M. L., (under review): Dynamics of ENSO-driven stratosphere-to-troposphere transport of ozone over North America. *Atm. Chem. Phys.*
- Breeden, M. L., **Albers, J. R.**, Amy H. Butler, and Matthew Newman, (under review): The spring minimum in subseasonal 2-meter temperature forecast skill over North America. *Mon. Weath. Rev.*
- Albers, J. R.**, Butler, A. H., Breeden, M. L., Langford, A. O., Kiladis, G. N., (2021): Subseasonal prediction of springtime Pacific-North American transport using upper-level wind forecasts. *Weather Clim. Dynam.*, 2, 433–452. <https://doi.org/10.5194/wcd-2-433-2021>.
- Breeden, M. L., Butler, A. H., **Albers, J. R.**, Sprenger, M., Langford, A. O. (2021): The Spring Transition of the North Pacific Jet and its Relation to Deep Stratosphere-to-Troposphere Mass Transport over Western North America. *Atmos. Chem. Phys.*, 21, 2781–2794. <https://doi.org/10.5194/acp-21-2781-2021>.
- Albers, J. R.** and Newman, M., (2021): Subseasonal Predictability of the North Atlantic Oscillation. *Environ. Res. Lett.*, 16 (4), 044 024..
- Albers, J. R.**, and M. Newman, (2019): A Priori Identification of Skillful Extratropical Subseasonal Forecasts. *Geophys. Res. Lett.*, **46**, 12527-12536.
- de la Camara, A., T. Birner, **J. R. Albers**, (2019): Are Sudden Stratospheric Warmings Preceded by Anomalous Tropospheric Wave Activity? *J. of Climate* , 32 , 7173-7189
- Mariotti, A., C. Baggett, E. A. Barnes, E. Becker, A. H. Butler, D. C. Collins, P. A. Dirmeyer, L. Ferranti, N. C. Johnson, J. Jones, B. P. Kirtman, A. L. Lang, A. Molod, M. Newman, A. W. Robertson, S. Schubert, D. E. Waliser, and **J. R. Albers**, (2019): Windows of Opportunity for Skillful Forecasts Subseasonal to Seasonal and Beyond *Bull. of the Amer. Met. Society*
- Charlesworth, E. J., T. Birner, **J. R. Albers**, (2019): Ozone Transport-Radiation Feedbacks in the Tropical Tropopause Layer *Geophys. Res. Lett.* , **46**
- Kim, Y. -H., G. N. Kiladis, **J. R. Albers**, J. Dias, M. Fujiwara, J. W. Anstey, I. -S. Song, C. J. Wright, Y. Kawatani, F. Lott, and C. Yoo, (2019): Comparison of equatorial wave activity in the tropical tropopause layer and stratosphere represented in reanalysis. *Atmos. Chem. Phys.*
- Albers, J. R.**, J. Perlwitz, A. H. Butler, T. Birner, G. N. Kiladis, Z. D. Lawrence, G. L. Manney, A. O. Langford, J. Dias (2018): Mechanisms governing interannual variability of stratosphere to troposphere ozone transport. *J. of Geophys. Res.*, **123**, 234-260.
- de la Camara, A., **J. R. Albers**, T. Birner, R. R. Garcia, P. Hitchcock, D. E. Kinnison, A. K. Smith (2017): Sensitivity of sudden stratospheric warmings to previous stratospheric conditions. *J. Atmos. Sci.*, **74**, 2857-2877.
- Birner, T. and **J. R. Albers** (2017): Sudden stratospheric warmings and anomalous upward wave activity flux. *SOLA*, 13A, 8-12, doi:10.2151/sola.13A-002.
- Albers, J. R.**, G. N. Kiladis, T. Birner, and J. Dias (2016): Tropical upper tropospheric potential vorticity intrusions during sudden stratospheric warmings. *Journal of the Atmospheric Sciences*, (73), 2361-2384.
- 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. *J. Atm. Solar-Terr. Physics*, **73**, 1594–1605.

---

**Recent Conference Presentations (covers last year)**


---

- January 2021      **American Meteorological Society Conference Annual Meeting**, virtual (talk) – “Subseasonal Predictability of the North Atlantic Oscillation”
- April 2021        **European Geophysical Union Annual Conference**, virtual, (talk) – “Subseasonal prediction of springtime Pacific-North American transport using upper-level wind forecasts”

June 2021 **Ludwig Maximilian University of Munich**, virtual (invited talk) – “Linear inverse modeling: A framework for subseasonal forecasting and the diagnosis of physical sources of forecast skill”

July 2021 **WMO World Climate Research Programme Subseasonal-to-seasonal Webinar**, virtual (invited talk) – “Subseasonal forecasting and the diagnosis of physical sources of forecast skill”

October 2021 **NOAA NCEP Climate Diagnostics and Prediction Workshop**, virtual, (talk) – “Was the February 2021 cold air outbreak over the central U.S. a subseasonal forecast of opportunity?”

December 2021 **American Geophysical Union Annual Conference**, virtual, (talk) – “Was the February 2021 cold air outbreak over the central U.S. a subseasonal forecast of opportunity?”