

Biographical Sketch

Kenneth P. Bowman

David Bullock Harris Professor of Geosciences
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Professional Preparation

B.S. Environmental Design, University of Colorado, 1979
Ph.D. Geophysical Fluid Dynamics, Princeton University, 1984

Appointments

Visiting Scholar, Harvard University, 2014
Department Head, Texas A&M University, 2007–2012
Long-Term Visitor, National Center for Atmospheric Research, 2004
Associate Professor and Professor, Texas A&M University, 1992–present
Assistant Professor, University of Illinois, 1985–1992
NRC Postdoctoral Fellow, NASA Goddard Space Flight Center, 1983–1985
Research Assistant, Geophysical Fluid Dynamics Laboratory, Princeton University,
1979–1983
Research Assistant, Institute for Arctic and Alpine Research, University of Colorado,
1976–1979

Honors, Awards, and Other Activities

Fellow of the American Meteorological Society, 2018
Texas A&M University, Dean's Distinguished Achievement Award in Research, 2014
David Bullock Harris Professor of Geosciences, 2012-present
Board of Trustees, University Corporation for Atmospheric Research, 2011-2016
Principal Investigator, Stratosphere-Troposphere Analyses of Regional Transport 2008
(START08) mission
Member, HIAPER Progressive Science mission team (Inaugural NCAR Gulfstream V
experiments)
Secretary, Atmospheric Sciences Section, American Geophysical Union, 1998–2000
Chair, American Meteorological Society Committee on the Middle Atmosphere, 1998–2001

Selected Publications

Cooney, JW, KP Bowman, CR Homeyer, and TM Fenske, 2018. Ten-year analysis of
tropopause-overshooting convection using GridRad data, *J. Geophys. Res.*, **123**, 329–343,
doi: 10.1002/2017JD027718.
Smith, JB, DM Wilmoth, KM Bedka, KP Bowman, CR Homeyer, JA Dykema, MR
Sargent, CE Clapp, SS Leroy, DS Sayres, JM Dean-Day, TP Bui and JG Anderson, 2017.

- A case study of convectively sourced water vapor observed in the overworld stratosphere over the United States, *J. Geophys. Res.*, **122**, 9529–9554, doi: 10.1002/2017JD026831.
- Anderson, JG, DK Weisenstein, KP Bowman, CR Homeyer, J. B. Smith, D. M. Wilmoth, D. S. Sayres, J. E. Klobas, S. S. Leroy, J. A. Dykema, and S. C. Wofsy, 2017. Stratospheric ozone over the United States in summer linked to observations of convection and temperature via chlorine and bromine catalysis, *Proc. Nat. Acad. Sci.*, **114**, E4905–E4913, doi: 10.1073/pnas.1619318114.
- Siu, LW, KP Bowman, and CC Epifanio, 2015. Convective transport of trace species observed during the Stratosphere-Troposphere Analyses of Regional Transport 2008 Experiment, *J. Geophys. Res.*, **116**, 10,530–10,547, doi: 10.1029/2011JD016724.
- Homeyer, CR, and KP Bowman, 2013. Rossby wavebreaking and transport between the tropics and extratropics above the subtropical jet, *J. Atmos. Sci.*, **70**, 607–626, doi: 10.1175/JAS-D-12-0198.1.
- Homeyer, CR, KP Bowman, and LL Pan, 2011. Dynamical and chemical characteristics of tropospheric intrusions observed during START08, *J. Geophys. Res.*, **116**, D06111, doi: 10.1029/2010JD015098.
- Vogel, B, et al., 2011. Transport pathways and signatures of mixing in the extratropical tropopause region derived from Lagrangian model simulations, *J. Geophys. Res.*, **116**, D05306, doi: 10.1029/2010JD014876.
- Pan, LL, KP Bowman, EL Atlas, SC Wofsy, F Zhang, JF Bresch, BA Ridley, JV Pittman, CR Homeyer, P Romashkin, WA Cooper, 2010. The Stratosphere-Troposphere Analyses of Regional Transport 2008 (START08) Experiment, *Bull. Amer. Meteor. Soc.*, **91**, 327–342, doi: 10.1175/2009BAMS2865.1.
- Bowman, KP, LL Pan, T Campos, and R Gao, 2007. Observations of fine-scale transport structure in the upper troposphere from HIAPER, *J. Geophys. Res.*, **112**, D18111, doi: 10.1029/2007JD008685.
- Pan, LL, KP Bowman, M Shapiro, WJ Randel, R Gao, T Campos, C Davis, S Schauffler, BA Ridley, JC Wei, and C Barnet, 2007. Chemical behavior of the tropopause region observed during the Stratosphere-Troposphere Analyses of Regional Transport (START) experiment, *J. Geophys. Res.*, **112**, D18110, doi: 10.1029/2007JD008645.
- Bowman, KP, 2006. Transport of carbon monoxide from the tropics to the extratropics, *J. Geophys. Res.*, **111**, D02107, doi: 10.1029/2005JD006137.
- Seo, K-H, and KP Bowman, 2002. Lagrangian estimate of stratosphere-troposphere mass exchange, *J. Geophys. Res.*, **107**, doi: 10.1029/2002JD002441.
- Wagner, R, and KP Bowman, 2000. Wavebreaking and mixing in the northern hemisphere summer stratosphere, *J. Geophys. Res.*, **105**, 24,799–24,807, doi: 10.1029/2000JD900320.
- Bowman, KP, 1996. Rossby wave phase speeds and mixing barriers in the stratosphere, Part I: Observations, *J. Atmos. Sci.*, **53**, 905–916, doi: 10.1175/1520-0469(1996)053<0905:RWPSAM>2.0.CO;2.
- Bowman, KP, 1993. Large-scale isentropic mixing properties of the Antarctic polar vortex from analyzed winds. *J. Geophys. Res.*, **98**, 23,013–23,027, doi: 10.1029/93JD02599.