

CURRICULUM VITAE

Jasna V. Pittman

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EDUCATION:

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| 2005 | Ph.D. Atmospheric Sciences | Harvard University |
| 2001 | M.S. Chemistry | Harvard University |
| 1998 | B.S. Chemistry | University of Tennessee – Knoxville |

PROFESSIONAL EXPERIENCE:

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| 2016 – Present | Visiting Research Associate Prof. Steven Wofsy, School of Engineering and Applied Sciences Harvard University, Cambridge, Massachusetts |
| 2015 – Present | Research Scientist NorthWest Research Associates, Redmond, Washington |
| 2009 – 2015 | Research Associate Prof. Steven Wofsy, School of Engineering and Applied Sciences Harvard University, Cambridge, Massachusetts |
| 2009 | Project Scientist I Atmospheric Chemistry Division National Center for Atmospheric Research, Boulder, Colorado |
| 2008 – 2009 | Visiting Scientist Atmospheric Chemistry Division National Center for Atmospheric Research, Boulder, Colorado |
| 2006 – 2008 | Postdoctoral Fellow Advisor Dr. Pete Robertson, Global Hydrology and Climate Center NASA Marshall Space Flight Center, Huntsville, Alabama |
| 2005 – 2006 | Visiting Scientist University Space Research Association, Huntsville, Alabama |
| 1999 – 2005 | Graduate Research Assistant Advisor Prof. Jim Anderson, Departments of Chemistry and Earth and Planetary Sciences Harvard University, Cambridge, Massachusetts |
| 1998 – 1999 | Research Assistant Prof. Jim Anderson, Division of Engineering and Applied Sciences Harvard University, Cambridge, Massachusetts |
| 1995 – 1998 | Undergraduate Research Assistant Prof. Robert Hinde, Department of Chemistry University of Tennessee, Knoxville, Tennessee |

PROFESSIONAL ACTIVITIES:

- 2011 – 2014 Instrument development, field deployment and laboratory calibrations of the Harvard University Picarro Cavity Ringdown Spectrometer
- 2010 – 2011 Field deployment and laboratory calibrations of Harvard University sensors measuring atmospheric concentrations of greenhouse gases
- 2002 – 2004 Teaching Fellow
Department of Earth and Planetary Sciences
Harvard University, Cambridge, Massachusetts
- 1997 Teaching Assistant and Laboratory Supply Supervisor
Inorganic Chemistry Group, Department of Chemistry
University of Tennessee, Knoxville, Tennessee
- 1996 – 1998 Teaching Assistant
Governor's School for the Sciences, Chemistry specialty
University of Tennessee, Knoxville, Tennessee
- 1996 Chemistry and Math Tutor
University of Tennessee, Knoxville, Tennessee

FIELD CAMPAIGNS:

- 2011 – 2014 NASA Airborne Tropical Tropopause Layer EXperiment, Edwards AFB, California and Andersen AFB, Guam
- 2013 NASA Studies of Emissions and Atmospheric Composition, Clouds and Climate Coupling by Regional Surveys, Ellington Field, Texas
- 2012 NASA Carbon in Arctic Reservoirs Vulnerability Experiment, Fairbanks, Alaska
- 2010 – 2011 NSF HIAPER Pole-to-Pole Observations experiment, Colorado, Alaska, Hawaii, American Samoa, Cook Islands, New Zealand, Australia, Saipan, and Midway Island
- 2008 NSF Stratosphere-Troposphere Analyses of Regional Transport, Broomfield, Colorado
- 2004 NASA Pre-Aura Validation Experiment, Costa Rica
- 2002 NASA Cirrus Regional Study of Tropical Anvils and Cirrus Layers – Florida Area Cirrus Experiment, Key West, Florida
- 2001 NASA Clouds and Water Vapor in the Climate System, Costa Rica

FELLOWSHIPS, HONORS, AND AWARDS:

- 2006 – 2008 NASA Postdoctoral Fellowship
- 2001 – 2004 NASA Earth System Science Graduate Student Fellowship
- 2002 Certificate of Distinction in Teaching, Harvard University
- 1998 Analytical Chemistry Division, American Chemical Society
Undergraduate Award
- 1998 East Tennessee Section of the American Chemical Society Outstanding Senior in Chemistry Award
- 1997 Chancellor's Citation for Extraordinary Professional Promise

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| 1996 – Present | Phi Beta Kappa Honor Society |
| 1996 – Present | Phi Kappa Phi Honor Society |
| 1996 | Hoechst-Celanese Corporation Junior Chemistry Major Award |
| 1995 – 1998 | A. D. Melaven - Rhenium Scholar |
| 1995 | C.W. Keenan General Chemistry Outstanding Award |

SCIENTIFIC SERVICE ACTIVITIES:

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| 1999 – Present | Member of the American Geophysical Union |
| 2003 – Present | Member of the American Meteorological Society |
| 1998 – 2003 | Member of the American Chemical Society |
| 1997 – 1998 | Member of the American Physical Society |
| 1995 – 1998 | Member of the Student Affiliates of the American Chemical Society |

VOLUNTEER ACTIVITIES:

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| 2016 | Pacific Science Center, Invited Speaker for the Science Café Series with a talk for the general public entitled “Into the Stratosphere: Cutting-Edge Research in the Atmospheric Sciences” |
| 2015 | Boston Trinity Academy, 10 th grade Chemistry class field trip to Harvard University: organized and performed laboratory demonstrations, career outreach, and lectures on climate change research |
| 2013 – 2014 | Narrator and co-editor of a series of six documentary videos describing the NASA ATTREX campaign (youtube.com and sciflychannel.com) |
| 2013 – 2014 | Participated in multilingual online science discussions with middle school students in the U.S. and Chile during Global Hawk flights supporting the NASA ATTREX campaign |
| 2014 | Guam high schools: participated in career and technology outreach |
| 2013 | California middle and high schools: participated in career and technology outreach |
| 2012 | AGU Fall Meeting / Atmospheric Sciences co-convener (with Dr. Jim Elkins and Dr. Britt Stephens) for the session entitled “Airborne Observations of Greenhouse Gases and Black Carbon”, San Francisco, California |
| 2012 | Co-organizer of the NSF HIAPER Pole-to-Pole Observations Science Team Meeting with Dr. Jim Elkins at NOAA, Boulder, Colorado |
| 2011 | Co-organizer of the NSF HIAPER Pole-to-Pole Observations Workshop with Dr. Britt Stephens at NCAR, Boulder, Colorado |
| 1995 - 1998 | East Tennessee middle and high schools: participated in chemistry laboratory demonstrations and career outreach |

PUBLICATIONS – Ph.D. Dissertation

| Date | Advisor | Title |
|------|--------------------|---|
| 2005 | Prof. Jim Anderson | Transport in the Tropical and Subtropical Lower Stratosphere: Insights from <i>in Situ</i> Measurements of Chemical Tracers |

PUBLICATIONS – SELECTED

- Jensen E. J., *et al.*, (2015), The NASA Airborne Tropical Tropopause EXperiment (ATTREX): High-Altitude Aircraft Measurements in the Tropical Western Pacific, *Bull. Amer. Meteor. Soc.*, doi: 10.1175/BAMS-D-14-00263.1
- Alvarado, M. J., V. H. Payne, K. E. Cady-Pereira, J. D. Hegarty, S. S. Kulawik, K. J. Wecht, J. R. Worden, **J. V. Pittman**, S. C. Wofsy (2015), Impacts of updated spectroscopy on thermal infrared retrievals of methane evaluated with HIPPO data, *Atmos. Meas. Tech.*, 8, 965-985.
- Tilmes, S., L. L. Pan, P. Hoor, E. Atlas, M. A. Avery, T. Campos, L. E. Christensen, G. S. Diskin, R.-S. Gao, R. L. Herman, E. J. Hints, M. Loewenstein, J. Lopez, M. E. Paige, **J. V. Pittman**, J. R. Podolske, M. Proffitt, G. W. Sachse, N. Spelten, C. Webster, A. Weinheimer, E. M. Weinstock, M. A. Zondlo (2010), An aircraft based upper troposphere lower stratosphere O₃, CO and H₂O climatology for the Northern hemisphere, *J. Geophys. Res.*, 115, D14303, doi:10.1029/2009JD012731.
- Wei, J. C., L. L. Pan, E. Maddy, **J. V. Pittman**, Murty Divakarla, X. Xiong, F. Sun, C. D. Barnet (2010), Ozone profile retrieval from advanced Infrared sounder: Experiments with tropopause based climatology and optimal estimation approach, *J. Atmos. Ocean Tech.*, 27, 7, 1123-1139.
- Pan, L. L., K. P. Bowman, E. L. Atlas, S. C. Wofsy, F. Zhang, J. F. Bresch, B. A. Ridley, **J. V. Pittman**, C. R. Homeyer, P. Romashkin, W. A. Cooper (2010), The Stratosphere-Troposphere Analyses of Regional Transport 2008 (START08) Experiment, *Bull. Amer. Meteor. Soc.* 91, 327-342.
- Pittman, J. V.**, L. L. Pan, J. C. Wei, F. W. Irion, L. Xiong, E. S. Maddy, C. D. Barnet, K. Chance, and R. S. Gao (2009), Evaluation of AIRS, IASI, and OMI Ozone Profile Retrievals in the Extratropical Tropopause Region using in situ aircraft measurements, *J. Geophys. Res.*, 114, D24109, doi:10.1029/2009JD012493.
- Weinstock, E. M., J. B. Smith, D. S. Sayres, **J. V. Pittman**, J. R. Spackman, E. J. Hints, T. F. Hanisco, E. J. Moyer, J. M. St. Clair, M. R. Sargent, and J. G. Anderson (2009), Validation of the Harvard Lyman-alpha In Situ Water Vapor Instrument: Implications for the Mechanisms that Control Stratospheric Water Vapor, *J. Geophys. Res.*, 114, D23301, doi:10.1029/2009JD012427.
- Pittman, J. V.**, T. Chronis, F. R. Robertson, and T. L. Miller (2009), Electrification in Hurricanes: Implications for Water Vapor in the Tropical Tropopause Layer, in *Hurricanes and Climate Change*, edited by J. B. Elsner and T. H. Jagger, Springer, New York.

Chronis, T. G., S. J. Goodman, D. Cecil, D. Buecheler, **J. V. Pittman**, F. R. Robertson, and R. J. Blakeslee (2008), Global Lightning Activity from the ENSO Perspective, *Geophys. Res. Lett.*, 35, L19804, doi:10.1029/2008GL034321.

Pittman, J. V., E. M. Weinstock, R. J. Oglesby, D. S. Sayres, J. B. Smith, J. G. Anderson, O. R. Cooper, S. C. Wofsy, I. Xueref, C. Gerbig, B. C. Daube, E. C. Richard, B. A. Ridley, A. Weinheimer, M. Loewenstein, H. J. Jost, J. P. Lopez, M. J. Mahoney, T. L. Thompson, W. W. Hargrove, and F. M. Hoffman (2007), Transport in the subtropical lowermost stratosphere during CRYSTAL-FACE, *J. Geophys. Res.*, 112, D08304, doi:10.1029/2006JD007851.