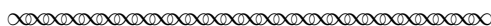


DAVEN K. HENZE

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Education

University of Washington, Chemistry	B.S. (2001)
University of Washington, Chemical Engineering	B.S. (2001)
California Institute of Technology, Chemical Engineering	M.S. (2004)
California Institute of Technology, Chemical Engineering	Ph.D. (2007)

Appointments

- 2009- Assistant Professor of Mechanical Engineering, University of Colorado, Boulder.
- 2007-2009 Earth Institute Postdoctoral Fellow, Columbia University, NASA GISS.
- 2007 Postdoctoral Scholar, California Institute of Technology.

Fellowships and Awards

- 2010 **NASA New Investigator Program Grant**
- 2009 **EPA Early Career Grant**
- 2007 **Columbia University Earth Institute Postdoctoral Fellowship**
- 2007 **William and Sonya Davidow Graduate Fellow** *Awarded to top graduate student in Environmental Science at Caltech.*
- 2002-2003 **William H. Corcoran Memorial Fellowship for Chemical Engineering** *Provided funding for first year of graduate studies.*

Peer-reviewed Publications

- 2011 Pinder, R. W., J. T. Walker, J. O. Bash, K. E. Cady-Pereira, **D. K. Henze**, M. Luo, G. B. Osterman, M. W. Shephard, Quantifying spatial and seasonal variability in atmospheric ammonia with in situ and space-based observations, *Geophys. Res. Lett.*, *in press*.
- 2010 Liang, M. C., **D. K. Henze**, M. Adamkovic, E. F. Chu, K. Boering, and Y. L. Yung, Synergistic study of hydrocarbon photochemistry in the laboratory and planetary atmospheres, *submitted*.
- 2010 Jiang, Z., D. B. A. Jones, M. Kopacz, J. Liu, **D. K. Henze**, and C. Heald, Quantifying the impact of model errors on the top-down estimates of carbon monoxide emissions using satellite observations, *submitted*.
- 2010 Kopacz, M., D. L. Mauzerall, J. Wang, E. M. Leibensperger, **D. K. Henze**, and K. Singh, Origin and radiative forcing of black carbon transported to the Himalayas and Tibetan Plateau, *Atmos. Chem. Phys. Discuss.*, *10*, 21615-21651.

- 2010 Kopacz, M., D. J. Jacob, J. A. Fisher, J. A. Logan, L. Zhang, I. A. Megretskaya, R. M. Yantosca, K. Singh, **D. K. Henze**, J. P. Burrows, M. Buchwitz, I. Khlystova, W. W. McMillan, J. C. Gille, D. P. Edwards, A. Eldering, V. Thouret, and P. Nedelec, Global estimates of CO sources with high resolution by adjoint inversion of multiple satellite datasets (MOPITT, AIRS, SCIAMACHY, TES), *Atmos. Chem. Phys.*, *10*, 855–876.
- 2009 **Henze, D. K.**, J. H. Seinfeld, and D. T. Shindell, Inverse modeling and mapping U.S. air quality influences of inorganic PM_{2.5} precursor emissions with the adjoint of GEOS-Chem, *Atmos. Chem. Phys.*, *9*, 5877–5903.
- 2009 Zhang, L., D. J. Jacob, M. Kopacz, **D. K. Henze**, and D. A. Jaffe, Intercontinental source attribution of ozone pollution at western U.S. sites using an adjoint method, *Geophys. Res. Lett.*, *36*, L11810, doi:10.1029/2009GL037950.
- 2009 Kopacz, M., D. Jacob, **D. K. Henze**, C. L. Heald, D. G. Streets, and Q. Zhang, A comparison of analytical and adjoint Bayesian inversion methods for constraining Asian sources of CO using satellite (MOPITT) measurements of CO columns, *J. Geophys. Res.*, *114*, D04305, doi:10.1029/2007JD009264.
- 2009 Pye, H. O. T., J. H. Seinfeld, H. Liao, S. Wu, L. J. Mickely, D. J. Jacob, and **D. K. Henze**, Effect of changes in climate and emissions on future sulfate-nitrate-ammonium aerosol levels in the United States, *J. Geophys. Res.*, *114*, D01205, doi:10.1029/2008JD010701.
- 2009 Eller, P., K. Singh, A. Sandu, K. Bowman, **D. K. Henze**, and M. Lee, Implementation and evaluation of an array of chemical solvers in a global chemical transport model, *Geosci. Mod. Devel.*, *2*, 185–207.
- 2008 Fu, T.-M., D. J. Jacob, F. Wittrock, J. P. Burrows, M. Vrekoussis, and **D. K. Henze**, Global budgets of atmospheric glyoxal and methylglyoxal, and implications for formation of secondary organic aerosols, *J. Geophys. Res.*, *113*, D15303, doi:10.1029/2007JD009505.
- 2008 **Henze, D. K.**, J. H. Seinfeld, N. G. Ng, J. H. Kroll, T.-M. Fu, D. J. Jacob, and C. L. Heald, Global modeling of secondary organic aerosol formation from aromatic hydrocarbons: High- vs low-yield pathways, *Atmos. Chem. Phys.*, *8*, 2405–2420.
- 2008 Heald, C. L., **D. K. Henze**, J. H. Seinfeld, L. W. Horowitz, J. Feddema, J.-F. Lamarque, A. Guenther, P. G. Hess, F. Vitt, A. H. Goldstein, and I. Fung, Predicted change in secondary organic aerosol concentrations in response to future climate, emissions, and land-use change, *J. Geophys. Res.*, *113*, D05211, doi:10.1029/2007JD009092.
- 2007 Zhang, Y., J.-P. Huang, **D. K. Henze**, and J. H. Seinfeld, The role of isoprene in secondary organic aerosol formation on a regional scale, *J. Geophys. Res.*, *112*, D20207, doi:10.1029/2007JD008675.
- 2007 **Henze, D. K.**, A. Hakami and J. H. Seinfeld, Development of the adjoint of GEOS-Chem, *Atmos. Chem. Phys.*, *7*, 2413–2433.
- 2007 Hakami, A., **D. K. Henze**, J. H. Seinfeld, K. Singh, A. Sandu, S. Kim, D. Byun, and Q. Li, The adjoint of CMAQ, *Environ. Sci. Technol.*, *41*(22), 7807–7818, doi:10.1021/es070944p.
- 2006 Liao, H., **D. K. Henze**, J. H. Seinfeld, W. Shiliang, and L. J. Mickley, Biogenic secondary organic aerosol over the United States: comparison of climatological simulations with observations, *J. Geophys. Res.*, *112*, D06201, doi:10.1029/2006JD007813.
- 2006 **Henze, D. K.**, and J. H. Seinfeld, Global secondary organic aerosol formation from isoprene oxidation, *Geophys. Res. Lett.*, *33*, L09812, doi:10.1029/2006GL025976.
- 2005 Sandu, A., W. Liao, G. R. Carmichael, **D. K. Henze**, and J. H. Seinfeld, Inverse modeling of aerosol dynamics using adjoints: Theoretical and numerical considerations, *Aerosol Sci. Tech.*, *39*, 677–694, doi:10.1080/02786820500182289.

- 2005 Hakami, A., **D. K. Henze**, J. H. Seinfeld, T. Chai, Y. Tang, G. R. Carmichael, and A. Sandu, Adjoint inverse modeling of black carbon during the Asian Pacific Regional Aerosol Characterization Experiment, *J. Geophys. Res.*, 110, D14301, doi:10.1029/2004JD005671.
- 2004 **Henze, D. K.**, J. H. Seinfeld, W. Liao, A. Sandu, and G. R. Carmichael, Inverse modeling of aerosol dynamics: Condensational growth, *J. Geophys. Res.*, 109, D14201, doi:10.1029/2004JD004593.
- 2004 Tantillo, D. J., R. Hoffmann, K. N. Houk, P. M. Warner, E. C. Brown, and **D. K. Henze**, Extended barbaralanes: Sigmatropic shiftamers or alpha-polyacenes? *J. Am. Chem. Soc.*, 126, 13, 4256-4263.
- 2002 Brown, E. C., **D. K. Henze**, and W. T. Borden, Are 1,5-disubstituted semibullvalenes that have C-2v equilibrium geometries necessarily bishomoaromatic?, *J. Am. Chem. Soc.*, 124, 50, 14977-14982.

Books

- 2002 Epiotis, N. D. and **D. K. Henze**, The Periodic Table, *Encyclopedia of Physical Science and Technology*, Academic Press, R. A. Meyers.

Professional Society Service

- 2010 Co-chaired session *Measuring Earth-Atmosphere Fluxes and Tropospheric Composition from Space*, AGU Fall Meeting, San Francisco, CA.
- 2009 Co-chair adjoint modeling sessions at the GEOS-Chem Users' Meeting, Cambridge, MA.
- 2009- present GEOS-Chem Adjoint Model Scientist.

Research Advising

- Postdocs Gill-Ran Jeong
- PhD Matthew Turner
Juliet (Lye) Zhu
Hyongmin Lee
Kristen Brown (co-advised with J. Milford)
- BS Alexander J. Turner
- Other Shanon Reckinger (PhD Comprehensive Exam)
Dave Makhija (PhD Comprehensive Exam)
Christopher Lang (PhD Prelim Committee)

Mentoring and Outreach

- 2010 Raymond Detweiler (SOARS Writing Mentee)
- 2009 Victoria Dorr (McNair Scholars Program)

Research Grants

Observations, trends and health impacts for air quality in African urbanization hotspots \$21,367, Patrick L. Kinney (PI), Henze (Co-PI).

- Columbia Univ. Earth Institute CCI; Robin DeJong (robin@ei.columbia.edu)
- 09/01/2008 – 09/01/2010
- Academic / summer / total months per year: 1/0/1

Inverse modeling and attainment analysis for improved decision support of PM_{2.5} air quality regulations \$1,201,007, Henze (PI), Patrick Kinney (Co-PI).

- NASA ROSES NNH08ZDA001N-Decisions; Lawrence Friedl (LFriedl@nasa.gov)
- 09/01/2009 – 08/30/2013
- Academic / summer / total months per year: 0/1/1

Regional effects of climate change on energy management and climate impact of potential changes in transportation sector emissions \$279,000, Drew T. Shindell (PI), (Henze is Collaborator, nonfunded).

- NASA ROSES NNH08ZDA001N-Decisions; Lawrence Friedl (LFriedl@nasa.gov)
- 01/01/2009 – 12/31/2012
- Academic / summer / total months per year: 0.5/0/0.5

Further development, application, and evaluation of multi-phase adjoint sensitivity analysis for multidimensional air quality modeling \$179,840, Amir Hakami (PI), (Henze is Consultant, \$25,000).

- American Petroleum Institute; Dan Baker (dan.baker@shell.com)
- 10/01/2009 – 09/31/2011
- Academic / summer / total months per year: 0/0.5/0.5

Constraining ammonia emissions and PM_{2.5} control efficiencies with a new combination of satellite data, surface observations and adjoint modeling techniques \$249,942, Henze (PI).

- EPA STAR EPA-G2009-STAR-D2; Sherri Hunt (hunt.sherri@epa.gov)
- 01/05/2010 – 04/30/2013
- Academic / summer / total months per year: 0/1/1

Constraining local to global sources and distributions of tropospheric ammonia through model assimilation of satellite and in situ observations \$485,162, Henze (PI).

- NASA ROSES NNH09ZDA001N-ACMA; D. Considine (David.B.Considine@nasa.gov)
- 03/17/2010 – 03/16/2013
- Academic / summer / total months per year: 0/1/1

Collaborative research: Quantifying the sensitivity of antarctic snowpack nitrate to primary NO_x sources and photodenitrification: Implications for the ice core record \$443,640, Becky Alexander (PI), (Henze is Co-PI, \$116,440).

- NSF ANT - OPP; Peter Milne (pmilne@nsf.gov)
- 05/01/2010 – 04/30/2012
- Academic / summer / total months per year: 0/1/1

Development of the CO/CO₂ adjoint for GEOS-Chem \$59,665 Daven Henze (PI).

- NASA JPL; Gabriel Obregon (gabriel.obregon@jpl.nasa.gov)
- 03/08/2010 - 12/17/2010
- Academic / summer / total months per year: 0/2/2

Internalizing Environmental Damage Costs to Shape US Power System Development \$35,000 Jana Milford (PI), Henze (Collaborator).

- RASEI Seed Grant; Carl A. Koval, koval@colorado.edu)
- 07/01/2010 – 06/30/2011
- Academic / summer / total months per year: 0/0/0

Constraining global estimates of aerosol direct radiative forcing and surface concentrations with APS data and the GEOS-Chem adjoint model \$385,752 Henze (PI).

- NASA ROSES NNH09ZDA001N-GLORY; Hal Maring (hal.maring@nasa.gov)
- 11/01/2010 – 10/31/2013
- Academic / summer / total months per year: 0/1/1

Linking radiative forcing of fine-mode aerosols and tropospheric ozone to precursor emissions \$328,650 Henze (PI).

- NASA ROSES NNH09ZDA001N-NIP; Ming-Ying Wei (Ming-Ying.We-1@nasa.gov)
- 08/06/2010 – 08/05/2013
- Academic / summer / total months per year: 1/1/2

Estimation and attribution of global CO₂ surface fluxes using satellite observations of CO₂ and CO from TES, GOSAT, and MOPITT \$1,399,210 Dylan Jones (PI), (Henze is a Co-I, \$57,942).

- NASA NNH09ZDA001N-ACOS; Kenneth Jucks (kenneth.w.jucks@nasa.gov)
- 09/02/2010 – 09/01/2013
- Academic / summer / total months per year: 0/1/1

Using remote sensing and adjoint modeling for integration of climate impacts into design of ozone and aerosol control strategies \$738,461 Henze (PI).

- NASA NNH09ZDA001N-AQAST; Lawrence Friedl (LFriedl@nasa.gov)
- 08/01/2010 – 07/31/2015
- Academic / summer / total months per year: 1/1/2

Recent Department Seminars

- 2010 **Henze, D. K.**, J. Zhu, M. Turner, J. Bash, M. Luo, K. E. Cady-Pereira, R. W. Pinder, M. W. Shephard, R. W. Pinder, and J. T. Walker, Constraining ammonia with a new combination of satellite data, surface observations and adjoint modeling techniques, ESRL CSD, NOAA, Boulder, CO, Oct 27.
- 2010 **Henze, D. K.**, Aerosols, Air Quality and Climate Change, Environmental Engineering, University of Colorado, Boulder, CO, Oct 20.
- 2010 **Henze, D. K.**, J. Bash, M. Luo, K. E. Cady-Pereira, R. W. Pinder, M. W. Shephard, R. W. Pinder, and J. T. Walker, Constraining ammonia with a new combination of satellite data, surface observations and adjoint modeling techniques, Department of Earth and Atmospheric Sciences, University of Nebraska, Lincoln, NE, Feb 2.

Recent Conference Presentations (Oral)

- 2010 **Henze, D. K.**, R. W. Pinder, F. Akhtar, D. Loughlin, R. Spurr, M. Kopacz, K. Singh, and C. Shim, Linking BC direct radiative forcing to source regions and sectors as a constraint on future emissions mitigation strategies, A33I-04, AGU 2010 Fall Meeting, San Francisco, CA, 13-17 Dec.
- 2010 Wang, J., X. Xu, **D. K. Henze**, M. Kopacz, K. Singh, and C. Shim, A new framework for the top-down estimate of aerosol emission: Integrated analysis with satellite (MODIS) reflectance and the adjoint of a chemistry transport model (GEOS-chem), A51H-04, AGU 2010 Fall Meeting, San Francisco, CA, 13-17 Dec. *invited*
- 2010 Kopacz, M., D. L. Mauzerall, J. Wang, E. M. Leibensperger, **D. K. Henze**, K. Singh, and C. Shim, Origin and radiative forcing of black carbon transported to the Himalayas and Tibetan Plateau, A33I-06, AGU 2010 Fall Meeting, San Francisco, CA, 13-17 Dec.

- 2010 Pinder, R. W., J. T. Walker, J. O. Bash, K. E. Cady-Pereira, **D. K. Henze**, M. Luo, G. B. Osterman, and M. W. Shephard, Quantifying spatial and temporal variability in atmospheric ammonia with in situ and space-based observations, A51H-05, AGU 2010 Fall Meeting, San Francisco, CA, 13-17 Dec.
- 2010 Bowman, K. B., A. M. Aghedo, H. Worden, **D. K. Henze**, Impact of atmospheric composition on climate: perspective from the Tropospheric Emission Spectrometer, A53G-02, AGU 2010 Fall Meeting, San Francisco, CA, 13-17 Dec. *invited*
- 2010 **Henze, D. K.**, Zhao, S., A. Hakami, S. Capps, A. Nenes, A. Russell, J. Resler, T. Chai, D. Byun, M. Turner, P. Purcell, J. Baek, C. Stanier, G. Carmichael, S. Napelenok, R. W. Pinder, and A. Sandu, CMAQ adjoint progress report, CMAQ Adjoint Workshop, Chapel Hill, NC, Nov 12-15.
- 2010 **Henze, D. K.**, R. W. Pinder, F. Akhtar, D. Loughlin, R. Spurr, K. B. Bowman, H. Worden, A. Aghedo, S. Kulawik, M. Kopacz, K. Singh, and C. Shim, Direct radiative forcing of aerosols and tropospheric ozone from specific emissions sectors and locations, CMAS Conference, Chapel Hill, NC, Oct 11-13.
- 2010 Zhao, S., A. Hakami, S. Capps, A. Nenes, A. Russell, J. Resler, T. Chai, D. Byun, M. Turner, **D. K. Henze**, P. Purcell, J. Baek, C. Stanier, G. Carmichael, S. Napelenok, R. W. Pinder, and A. Sandu, Development of a full adjoint for CMAQ, CMAS Conference, Chapel Hill, NC, Oct 11-13.
- 2010 Akhtar, F., R. W. Pinder, D. Loughlin, **D. K. Henze**, GLIMPSE: Evaluating atmospheric radiative forcing from future emission scenarios of short lived climate forcers using GEOS-Chem / LIDORT adjoint and MARKAL, MARKAL Users Conference, Research Triangle Park, NC, Oct 7-8
- 2010 **Henze, D. K.**, A. Hakami, R. V. Martin, K. B. Bowman, H. Worden, A. Aghedo, K. Singh, A. Sandu, D. B. Jones, and P. Hamer, Source influences on remote sensing products of short-lived species: implications for inverse modeling and radiative forcing constraints, Aura Science Team Meeting, Boulder, CO, Sep 27-29.
- 2010 Wecht, K., D. Jacob, C. Pickett-Heaps, S. Wofsy, E. Kort, V. Payne, J. Worden, S. Kulawik, G. Osterman, **D. K. Henze**, M. Kopacz, K. Singh, and C. Shim, Aura Science Team Meeting, Boulder, CO, Sep 27-29.
- 2010 Cady-Pereira, K. E., M. Luo, M. W. Shephard, R. W. Pinder, J. T. Walker, J. O. Bash, and **D. K. Henze**, Ammonia from TES: Limits and possibilities, Aura Science Team Meeting, Boulder, CO, Sep 27-29.
- 2010 **Henze, D. K.**, J. Bash, M. Luo, K. E. Cady-Pereira, R. W. Pinder, M. W. Shephard, R. W. Pinder, and J. T. Walker, Constraining NH₃ emissions using remote sensing and surface observations, iCACGP-IGAC, Halifax, Canada, July 11-16.
- 2010 **Henze, D. K.**, J. Bash, M. Luo, K. E. Cady-Pereira, R. W. Pinder, M. W. Shephard, R. W. Pinder, and J. T. Walker, Inverse modeling constraints on NH₃ emissions using TES observations: Limits and possibilities, EPRI AQ Model Development Meeting, Palo Alto, CA., July 7-8.
- 2010 Kopacz, M., D. L. Mauzerall, J. Wang, E. M. Leibensperger, **D. K. Henze**, K. Singh, and C. Shim, Spatial and seasonal diversity of BC sources to the Himalayas and the Tibetan Plateau: an analysis using the adjoint of GEOS-Chem, AOGS, Hyderabad, India, July 5-9.
- 2010 **Henze, D. K.**, J. Bash, M. Luo, K. E. Cady-Pereira, R. W. Pinder, M. W. Shephard, R. W. Pinder, and J. T. Walker, Inverse modeling constraints on NH₃ emissions using TES observations: Limits and possibilities, TES Science Team Meeting, CA., June 16-17.
- 2010 Cady-Pereira, K. E., M. Luo, M. W. Shephard, R. W. Pinder, J. T. Walker, J. O. Bash, and **D. K. Henze**, Ammonia from TES: Limits and possibilities, TES Science Team Meeting, CA., June 16-17.
- 2010 Kopacz, M., D. L. Mauzerall, J. Wang, E. M. Leibensperger, **D. K. Henze**, K. Singh, and C. Shim, Identifying the origin and estimating the radiative forcing of BC in the Himalayas: an analysis using the global GEOS-Chem adjoint model, EGU, EGU2010-6138, Vienna, Austria, May 2-7.

Recent Conference Presentations (Poster)

- 2010 Hamer, P., K. W. Bowman, and **D. K. Henze**, The observing requirements for the prediction of ozone, A53D-0270, AGU 2010 Fall Meeting, San Francisco, CA, 13-17 Dec.
- 2010 Martin, R. V., N. Bousserez, K. W. Bowman, **D. K. Henze**, M. Kopacz, K. Singh, and C. Shim, Improving the lightning NO_x source using satellite observations: a 4D-var analysis approach, A43D-0268, AGU 2010 Fall Meeting, San Francisco, CA, 13-17 Dec.
- 2010 Cady-Pereira, K. E., R. W. Pinder, J. T. Walker, J. O. Bash, M. Luo, **D. K. Henze**, M. W. Shephard, J. Zhu and C. Rinsland, Measuring ammonia from space: Limits and possibilities, A51D-0158, AGU 2010 Fall Meeting, San Francisco, CA, 13-17 Dec.
- 2010 Jiang, Z., D. B. Jones, J. Kar, Y. Wang, M. Kopacz, **D. K. Henze**, M. Kopacz, K. Singh, and J. R. Drummond, Inverse Modeling of Urban and Regional Emissions of CO in China using Observations from the MOPITT Instrument, A53D-0278, AGU 2010 Fall Meeting, San Francisco, CA, 13-17 Dec.
- 2010 Akhtar, F., R. W. Pinder, **D. K. Henze**, R. Spurr, Global and Regional Aerosol Direct Radiative Forcing Sensitivities to U.S. Emissions., AAAR, Portland, OR, Oct 25-29.
- 2010 Turner, M. and **D. K. Henze**, Inverse modeling of NH₃ emissions with the adjoint of CMAQ, CMAS Conference, Chapel Hill, NC, Oct 11-13.
- 2010 Akhtar, F., R. W. Pinder, D. Loughlin, **D. K. Henze**, GLIMPSE: Evaluating atmospheric radiative forcing from future emission scenarios of short lived climate forcers using GEOS-Chem / LIDORT adjoint and MARKAL, CMAQ, CMAS Conference, Chapel Hill, NC, Oct 11-13.
- 2010 Zhu, J., **D. K. Henze**, J. Bash, M. Luo, K. E. Cady-Pereira, R. W. Pinder, M. W. Shephard, R. W. Pinder, and J. T. Walker, NH₃ inverse modeling results using new TES NH₃ observations, and surface measurements, Aura Science Team Meeting, Boulder, CO, Sep 27-29.
- 2010 Hamer, P., K. W. Bowman, and **D. K. Henze**, The observing requirements to enable prediction of ozone, Aura Science Team Meeting, Boulder, CO, Sep 27-29.
- 2010 Jiang, Z., D. B. Jones, J. Kar, Y. Wang, M. Kopacz, **D. K. Henze**, M. Kopacz, K. Singh, and J. R. Drummond, Inverse Modeling of Urban and Regional Emissions of CO in China using Observations from the MOPITT Instrument, iCACGP-IGAC, Halifax, Canada, July 11-16.
- 2010 Kopacz, M., D. L. Mauzerall, J. Wang, E. M. Leibensperger, **D. K. Henze**, K. Singh, and C. Shim, Black carbon receptor to source relationship in the Himalayas and the Tibetan Plateau: preliminary results using the adjoint of GEOS-Chem, HTAP / SLF, Chapel Hill, NC, March 1-4.
- 2010 Kopacz, M., D. J. Jacob, J. A. Fisher, J. A. Logan, L. Zhang, I. A. Megretskaya, R. M. Yantosca, K. Singh, **D. K. Henze**, J. P. Burrows, M. Buchwitz, I. Khlystova, W. W. McMillan, J. C. Gille, D. P. Edwards, A. Eldering, V. Thouret, and P. Nedelec, Global estimates of CO sources with high resolution by adjoint inversion of multiple satellite datasets (MOPITT, AIRS, SCIAMACHY, TES), EGU, EGU2010-6138, Vienna, Austria, May 2-7.

Reviewing for journals and proposals

Aerosol Science and Technology: 2009 (1), 2006 (1)

Atmospheric Chemistry and Physics: 2011(1) 2010 (4), 2009 (2), 2008 (4), 2006(1)

Atmospheric Environment: 2010 (2), 2009 (3), 2008 (1), 2006 (1)

Environmental Science and Technology: 2010 (3), 2009 (1), 2006 (1)

Geoscientific Model Development: 2010 (1), 2009 (2)

Geophysical Research Letters: 2010 (1)

International Journal of Climatology: 2010 (1), 2009 (1)

Journal of Geophysical Research: 2010 (6), 2009 (2), 2008 (2), 2006 (2), 2005 (2), 2004 (2)

Journal of Aerosol Science: 2008 (1), 2007 (1)

Science: 2009 (1), 2006 (1)

Science of the Total Environment: 2009 (1)

NASA Review Panel: 2010 (1)

NOAA Proposal Review: 2010 (1)

NSF Proposal Review: 2010 (1)