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Education

Ph.D., Chemistry, University of California, Berkeley, 1989
B.S., Chemistry, Colorado State University, Ft. Collins, CO, 1981.

Dissertation

Effects of Trace Gases on Global Atmospheric Chemical and Physical Processes

Honors or Awards

2008 NASA Group Achievement Award, Tropical Composition, Cloud, and Climate Coupling (TC3), May 2008.

2007 Intergovernmental Panel on Climate Change recognition award for contributing to the 2007 IPCC Nobel Peace Prize.

2006 NASA Group Achievement Award to the UARS Team, April 2006.

2005 Co-Investigator on High Resolution Dynamics Limb Sounder (HIRDLS), 2005.

2005 NASA Group Achievement Award for support of the Aura Project, 17 May 2005.

2005 NASA GSFC Group Achievement Award for Aura, 9 March 2005.

2004 NASA GSFC Recognition Award for EOS Aura Mission, 15 July 2004.

1993 Physical Science, Geosciences and Environmental Research Program, Distinguished Achievement Award for Outstanding Scientific Publication, Lawrence Livermore National Laboratory, 1993.

1991 Physics Distinguished Achievement Award for Outstanding Postdoctoral Contributions, Lawrence Livermore National Laboratory, 1991.

Professional Employment

2009- present
Project Scientist III, Atmospheric Chemistry Division, National Center for Atmospheric Research, Boulder, CO.

1999- 2008
Project Scientist II, Atmospheric Chemistry Division, National Center for Atmospheric Research, Boulder, CO.

1992–1999

Atmospheric Scientist, Univ. of California, Lawrence Livermore National Laboratory, Livermore, CA.

1989–1992
Post-doctoral Position, Univ. of California, Lawrence Livermore National Laboratory, Livermore, CA.

1987–1989
Participating Student Guest, Univ. of California, Lawrence Livermore National Laboratory, Livermore, CA.

1983-1987
Research Assistant, Chemistry Department, University of California, Berkeley, CA.

1982-1983
Analytical Chemist, Rockwell International, Rocky Flats Nuclear Weapons Plant, Golden, CO.

1981
National Science Foundation Undergraduate Research Program, Ft. Collins, CO.

Professional Affiliations

Member, American Geophysical Union

Professional Activities—Contributions to National and International Reports

Lead Author on the SPARC CCMVal Report on Evaluation of Chemistry-Climate Models, Chapter 6, 2008-2009.

Co-Author on the World Meteorological Organization/United Nations Environmental Program Scientific Assessment of Ozone Depletion, Chemistry and Climate Chapter 5, 2007.

Coordinating Lead Author on the NASA High Speed Research Program, 1998 Scientific Assessment of the Atmospheric Effects of Stratospheric Aircraft, 1999.

Lead Author on the World Meteorological Organization/United Nations Environmental Program Scientific Assessment of Ozone Depletion, Chapter 12, 1999.

Lead Author on the International Panel on Climate Change, Special Report on Aviation and the Global Atmosphere, 1999.

Contributor to the NASA High Speed Research Program, 1995 Scientific Assessment of the Atmospheric Effects of Stratospheric Aircraft, NASA Ref. Publ. 1381, 1995.

Contributor to the NASA High Speed Research Program, The Atmospheric Effects of Stratospheric Aircraft: A Fourth Program Report, NASA Reference, 1994-1995.

Contributor to the World Meteorological Organization/United Nations Environmental Program Scientific Assessment of Ozone Depletion, Report NO. XX, 1993-1995.

Contributor to the Intergovernmental Panel on Climate Change, Climate Change 1994, Radiative Forcing of Climate Change and An Evaluation of the IPCC IS92 Emission Scenarios, 1993-95.

Contributor to the NASA High Speed Research Program, The Atmospheric Effects of Stratospheric Aircraft: A Third Program Report, NASA Reference, 1993-1994.

Contributor to the NASA High Speed Research Program, The Atmospheric Effects of Stratospheric Aircraft: A Second Program Report, NASA Reference Publication 1293, 1992-1993.

Lead Author on the NASA High Speed Research Program, Model and Measurements Committee, 1991-1992.

Contributor to the NASA High Speed Research Program, The Atmospheric Effects of Stratospheric Aircraft: A First Program Report, NASA Reference Publication 1272, 1991-1992.

Contributor to the World Meteorological Organization/United Nations Environmental Program Scientific Assessment of Ozone Depletion, Report NO. 25, 1991.

Contributor to the Intergovernmental Panel on Climate Change, Scientific Assessment of Climate Change 1989-1990.

Contributor to the National Academy of Sciences Report on Climate Change, 1989-1990.

Contributor to the World Meteorological Organization Global Ozone Research and Monitoring Project-Report NO. 18, Chapter 7, 1988.

Contributor to the NASA's Conference Publication 3042, Two-Dimensional Intercomparison of Stratospheric Models, 1988.

Contributor to the NASA Reference Publication 1208, Present State of Knowledge of the Upper Atmosphere 1988: An Assessment Report, 1988.

Professional Activities—Journal Review

Reviewer, NASA Proposals
Reviewer, *Journal of Geophysical Research*
Reviewer, *Geophysical Research Letters*
Reviewer, *Nature*

Publications—Thesis

Kinnison, D.E., 1989: The effect of trace gases on global atmospheric chemical and physical processes. University of California at Berkeley, Ph.D. Thesis (Also LLNL Report UCRL-53903).

Publications—Journal Articles

1. Kinnison, D.E., H.S. Johnston, and D.J. Wuebbles, Ozone calculations with large nitrous oxide and chlorine changes. *J. Geophy. Res.,* 93, 14165–14175, 1988.

2. Wuebbles, D.J., and D.E. Kinnison, A two-dimensional modeling study of past trends in global ozone. *Ozone in the Atmosphere, Proceedings of the International Quadrennial Ozone Symposium 1988 and Tropospheric Ozone Workshop,* Gottingen, Fed. Rep. of Germany, August 4–13, 1988 R.D. Bojkov, P. Fabian (Eds.) A Deepak Publishing, Hampton, VA, 605–608, 1989.

3. Kinnison, D.E., H.S. Johnston, and D.J. Wuebbles, Sensitivity study of global ozone to NO_X emission from aircraft. *Ozone in the Atmosphere, Proceedings of the International Quadrennial Ozone Symposium 1988 and Tropospheric Ozone Workshop*, Gottingen, Fed. Rep. of Germany, August 4–13, 1988, R.D. Bojkov, P. Fabian (Eds.) A Deepak Publishing, Hampton, VA, 635–638, 1989.

4. Johnston, H.S., D.E. Kinnison, and D.J., Wuebbles, Nitrogen oxides from high-altitude aircraft: An Update of Potential Effects on Ozone. *J. Geophy. Res.*, 94, 16351–16363, 1989.

5. Wuebbles, D. J., and D. E. Kinnison, Sensitivity of stratospheric ozone to present and possible future aircraft emissions. *Lecture Notes in Engineering, Air Traffic and the Environment–Background, Tendencies and Potential Global Atmospheric Effects, Proceedings of a DLR International Colloquium* Bonn, Germany, November 15–6 pp. 107–123, U. Schumann (Eds.) Springer-Verlag, 1990.

6. Wuebbles, D. J., **D. E. Kinnison**, K. E. Grant, and J. Lean, The effect of solar flux variations and trace gas emissions on recent trends in stratospheric ozone and temperature. *J. of Geomag. Geoelectr*., 43, Suppl., 709–718, 1991.

7. MacCracken, M. C, D. E. Kinnison, D. J. Wuebbles, and W. E. Emanuel, 1991: The relative radiative forcings from percentage changes in trace gas emissions. *National Academy of Sciences Report, "Policy Implications of Greenhouse Warming",* National Academy Press, 1991.

8. Patten, K.O. Jr., P.S. Connell, D.E. Kinnison, D.J. Wuebbles, L. Froidevaux, and T.G. Slanger, Effect of vibrationally excited oxygen on ozone in the upper stratosphere. *J. Geophys. Res.*, 99, 1211-1223,99, 1211-1223, 1993.

9. Wuebbles, D. J., and **D. E. Kinnison**, A primer on global atmospheric ozone. *American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc. (ASHRAE) Journal*, ISBN 1-883413-12-5, pp1-23, 1993.

10. Wuebbles, D. J., and **D. E. Kinnison**, Issues and Concerns about Global Atmospheric Ozone, *Energy*, 18, 1249-1262, 1993.

11. Koike, M. N. B. Jones, W. A. Matthews, P. V. Johnston, R. L. McKenzie, **D. E. Kinnison**, and J. Rodriguez, 1994: Impact of Pinatubo aerosols on the partitioning between NO_2 and HNO_3, *Geophys. Res. Lett.*. 21, 597-600, 1994.

12. **Kinnison D. E**., H. S. Johnston, and D. J. Wuebbles, Model Study of Atmospheric Transport Using Carbon-14 and Strontium-90 as Inert Tracers, *J. Geophys. Res.,* 99, 20647-20-664, 1994.

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16. Wuebbles, D. J. and **D. E. Kinnison**, Predictions of future ozone changes, *International Journal of Environmental Studies*, 51, pp. 269-283, 1996.

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39. Kulawik, S. S., H. Worden, G. Osterman, M. Luo, R. Beer, **D. Kinnison**, K. Bowman, J. Worden, A. Eldering, M. Lampel, T. Steck, and C. Rodgers, TES Atmospheric Profile Retrieval Characterization: An Orbit of Simulated Observations, *IEEE, Trans. Geosci. Remote Sens*., 44, No 5, May 2006.

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47. Gettelman, A., and **D. E. Kinnison**, The global impact of supersaturation in a coupled chemistry-climate model, *Atmos. Chem. Phys.*, 7, 1629-1643, 2007.

48. Eyring *et al*., **(> 20 co-authors),** Multi-model projections of ozone recovery in the 21st century, *J. Geophys. Res.*, 112, D16303, doi:10.1029/2006JD008332, 2007.

49. Marsh, D. R., R. R. Garcia, **D. E. Kinnison**, B. A. Boville, S. Walters, K. Matthes, and S.C. Solomon, Modeling the whole atmosphere response to solar cycle changes in radiative and geomagnetic forcing, *J. Geophys. Res.*, 112, D23306, doi:10.1029/2006JD008306, 2007.

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Ozone and Climate Assessments and the Planned SPARC CCMVal Report, n30, SPARC Newsletter, January 2008.

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