SUSAN SOLOMON
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Education:

Illinois Institute of Technology, Chicago, Illinois – B.S. in Chemistry, 1977. Graduation with high honors.

University of California, Berkeley, California – M.S. in Chemistry, 1979; Ph.D. in Chemistry, 1981.

Professional Employment:

Lee and Geraldine Martin Professor of Environmental Studies, Department of Earth, Atmospheric and Planetary Sciences, Massachusetts Institute of Technology 2017-present; Ellen Swallow Richards Professor, Department of Earth, Atmospheric and Planetary Sciences, Massachusetts Institute of Technology 2012-2017.

Founding Director, MIT Environmental Solutions Initiative, May 2014-October, 2015.

Research Chemist at the Aeronomy Laboratory, National Oceanic and Atmospheric Administration, Boulder, 1981–1991. Senior Scientist, Aeronomy Laboratory (now called the Chemical Sciences Division), 1991–2011. Program Leader, Middle Atmosphere group (renamed to Chemistry and Climate Processes group) 1988–2011.

Acting Director, Atmospheric Chemistry Division, National Center for Atmospheric Research, Boulder, November 1995–November 1996.

Other Major Professional Affiliations:

Affiliate Scientist, National Center for Atmospheric Research, Boulder, 1992–2006.

Adjunct Professor, Department of Astrophysical, Planetary and Atmospheric Sciences, University of Colorado, Boulder 1982–2012. Principal research advisor

for two M.S. students and five Ph.D. students; often serves as a member on University of Colorado thesis committees. Frequently guest lectures for undergraduate chemistry and atmospheric science classes. Team-teaches graduate courses on atmospheric chemistry.

Head project scientist, National Ozone Expedition, McMurdo Station, Antarctica, August–November, 1986 (NOZE-1) and August–November, 1987 (NOZE-2).

Co-chair, Working Group 1, Intergovernmental Panel on Climate Change (IPCC), April 2002–September 2008.

Visiting Scholar, Atmospheric Sciences Department, University of Washington, Seattle, WA March–June, 2008. Provided graduate course covering the science and policy of ozone depletion and climate change and contrasts between them.

Current Research Interests:

Chemistry and chemistry/climate coupling processes in the stratosphere and troposphere. Interpretation of ozone depletion at mid-latitudes and in polar regions. Coupling between trace gases and the Earth's climate system. Chemistry of wildfire smoke including its effects on stratospheric ozone.

Honors and Awards:

UCAR (University Corporation for Atmospheric Research) Fellow, 1977–1978.

Elected outstanding teaching assistant by the Berkeley freshman chemistry class of September 1977.

James B. MacElwane award, American Geophysical Union, 1985.

Gold Medal for exceptional service, U. S. Department of Commerce, 1989.

Henry G. Houghton award for excellence in research, American Meteorological Society, January 1991.

Common Wealth Award for Excellence in Science and Invention, April 1992.

Member, National Academy of Sciences, April 1992 – present.

Scientist of the Year, R&D Magazine, Cahners Publications, September 1992.

Fellow, American Academy of Arts and Sciences, April 1993 – present.

Honorary doctorate, University of Colorado, Boulder, Colorado, May 1993.

Arthur S. Flemming award for excellence in government service, May 1994.

Honorary doctorate, Tulane University, New Orleans, LA, May 1994.

H. J. Reid award, NASA Langley Research Center, August 1994.

Solomon Glacier (78°23'S, 162°30'E) and Solomon Saddle (78°23'S, 162°39'E) were named in honor of leadership in Antarctic research, 1994.

Associé étranger (Foreign associate), Academie des Sciénces de France, 1995 – present.

Honorary doctorate, Williams College, Williamstown, MA, June 1996.

Stratospheric Ozone Protection Award of the Environmental Protection Agency, October 1996.

United Nations Environment Programme (UNEP) Award for key contributions to the development of the Montreal Protocol, September 1997.

Co-recipient, Climate Protection Award of the Environmental Protection Agency, October 1998.

Carl-Gustaf Rossby Research Medal, highest award of the American Meteorological Society, January 2000.

Foreign Member, Academia Europaea, 2000 – present.

U. S. National Medal of Science, 1999; award presented in March 2000.

Award of the Bonfils-Stanton Trust, Denver, CO, April 2001.

ARCS Woman of the Year, Denver Chapter, April 2001.

Honorary doctorate, Illinois Institute of Technology, May 2001.

Honorary doctorate, State University of New York at Stony Brook, May 2001.

Weizmann Women and Science Award, presented at Rockefeller University, June 2002.

Gold Medal, Department of Commerce, for contributions as a leading author of the third assessment report of the Intergovernmental Panel on Climate Change, 2002.

Distinguished Presidential Rank Award, May 2003.

Honorary doctorate, University of Miami, May 2003.

Honorary doctorate, University of East Anglia, Norwich, UK, July 2004.

Blue Planet Laureate, Asahi Glass Foundation, Tokyo, Japan, November 2004.

Honorary Member, International Polar Foundation, January 2005.

UNEP/WMO Vienna Convention Award for outstanding contributions to the Vienna Convention for the Protection of the Ozone Layer, November 2005.

Member, Colorado Women's Hall of Fame, March 2006.

Fellow, Royal Society of Chemistry, April 2006.

Honorary doctorate, Northwestern University, June 2006.

Goldschmidt Award, highest honor of the Geochemical Society, August 2006.

Alumni Achievement Award, University of California, Berkeley, March 2007.

Lowell Thomas Award, Explorers Club, New York, October 2007.

Lemaitre Prize, Foundation Georges Lemaitre, Brussels, Belgium, November 2007.

The Nobel Peace Prize for 2007 was awarded to the Intergovernmental Panel on Climate Change (IPCC) and Mr. Albert Gore, Junior. As co-chair of IPCC Working Group One, Susan Solomon led the process that produced the highly influential IPCC Working Group One Fourth Assessment Climate Science Report [S. Solomon, D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller (eds.), *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change,* Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, 2007.]

Bowie Medal, highest honor of the American Geophysical Union, December 2007.

Listed by Time magazine as one of the 100 most influential people in the world in 2008.

Fellow, American Philosophical Society, April 2008.

Fellow, Royal Society of London, May 2008.

Honorary doctorate, Butler University, May 2008.

Honorary Fellow, Geological Society of London, September 2008.

Distinguished Presidential Rank Award, October 2008.

American Geological Institute Award for Advancing Public Understanding of the Geosciences, October 2008.

Grande Medaille, Academie des Sciences de France, November 2008.

John Scott Award, John Scott Foundation Trust, Philadelphia, PA, November 2008.

Member, National Women's Hall of Fame, March 2009.

Honorary doctorate, University of Pennsylvania, May 2009.

Honorary doctorate, Reading University, UK, July 2009.

Volvo Environment Prize, November 2009.

Honorary doctorate, University of Paris, March 2010.

Listed by Good Housekeeping magazine as one of the 125 women who changed the world, May 2010.

Honorary doctorate, University of Athens, June 2010.

Career Achievement Award, Service to America Awards of the Partnership for Public Service, September 2010.

Chevalier, Legion d'honneur, Republique de France, November 2010.

Honorary doctorate, Smith College, May, 2012.

Honorary Member, American Meteorological Society, October, 2012.

Vetlesen Prize, Vetlesen Foundation, February, 2013.

Honorary Member, American Polar Society, April, 2013.

BBVA Frontiers of Knowledge Prize, BBVA Foundation, June, 2013.

Honorary doctorate, Leeds University, UK, July, 2013.

Honorary doctorate, Brown University, May, 2015.

Illinois Institute of Technology Hall of Fame, September, 2015.
Honorary doctorate, University of British Columbia, November, 2015.

Honorary fellow, Royal Meteorological Society, UK, April, 2017.

Arthur L. Day Prize and Lectureship, National Academy of Sciences, April, 2017.

Bakerian Medal and Lecture, Royal Society, (March, 2018).

Crafoord Prize, Swedish Academy of Sciences (May, 2018).

Honorary doctorate, Rockefeller University, NY (June, 2018).

Killian Award, MIT (Highest award to MIT faculty, April, 2021).

National Academy of Sciences Award for Chemistry in Service to Society (April, 2021).

Award for outstanding MIT undergraduate 2020 summer research mentors, May, 2021

Member, Pontifical Academy of Sciences, August, 2021.

Future of Life Award, Futureoflife.org, "celebrating unsung heroes of our time", September, 2021.

Honorary doctorate, Oxford University, June, 2022.

Honorary doctorate, Duke University, May, 2023.

VinFuture Foundation award for female innovator, Hanoi, Vietnam, December, 2023.

Honorary doctorate, University of Washington, Seattle, June 2024.

Fellow, International Engineering and Technology Institute, August, 2024.

Honorary Fellow, Royal Society of Chemistry, May, 2025.

Honorary Fellow, Austrian Academy of Sciences, May 2026.

Tang Prize in Sustainable Development, September, 2026.

Awards for Specific Scientific Studies:

NOAA Environmental Research Laboratories outstanding scientific publication award for "Transport process and ozone perturbations," by Solomon, Garcia and Stordal, J. Geophys. Res., 90, 12981-12989, 1985.

NOAA Environmental Research Laboratories outstanding scientific publication award for "Visible Spectroscopy at McMurdo Station, 2. Observations of OClO," by Solomon, Mount, Sanders, and Schmeltekopf, J. Geophysical Res., 92, 8329-8338, 1987.

NOAA Environmental Research Laboratories outstanding review publication award for "The Mystery of the Antarctic Ozone Hole," by S. Solomon, Rev. Geophys., 26, 131-148, 1988.

NCAR outstanding publication award for "Transport of nitric oxide and the D-region winter anomaly," by Garcia, Solomon, Avery and Reid, J. Geophys. Res., 92, 977-994, 1987.

NOAA Environmental Research Laboratories outstanding scientific publication award for "On the evaluation of ozone depletion potentials," by Solomon, Mills, Heidt, and Tuck, J. Geophys. Res., 97, 825, 1992.

NOAA Environmental Research Laboratories outstanding scientific publication award for "Atmospheric lifetimes of long-lived species," by Ravishankara, Solomon,Turnipseed, and Warren, Science, 259, 194-199, 1993.

NOAA Environmental Research Laboratories outstanding scientific publication award for "Role of aerosol variations in anthropogenic ozone depletion in polar regions," by Portmann, Solomon, Garcia, Thomason, Poole, and McCormick, J. Geophys. Res., 101, 22991-23006, 1996.

NOAA Environmental Research Laboratories outstanding scientific review paper award for "Stratospheric Ozone Depletion: A Review of Concepts and History," by S. Solomon, Reviews of Geophysics, 37, 275-316, 1999.

NOAA OAR outstanding scientific publication award for "Interpretation of recent Southern Hemisphere climate change," by Thompson and Solomon, Science, 296, 895-899, 2002.

NOAA OAR outstanding scientific publication award for "Detection of human influence on twentieth-century precipitation trends," by Zhang, Zwiers, Hegerl, Lambert, Gillet, Solomon, Stott, and Nozawa, Nature, 448, 461-465, 2007.

NOAA OAR outstanding scientific publication special award for "Technical Summary, *Climate Change 2007: The Physical Science Basis*, Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change," Solomon and 30 coauthors, Cambridge University Press, 74 pp., 2007.

Professional Societies:

Fellow, American Geophysical Union

Fellow, American Meteorological Society

Fellow, Royal Meteorological Society

Member, American Chemical Society

Fellow, Royal Society of Chemistry

Honorary Fellow, International Polar Foundation

Honorary Fellow, The Geological Society (London)

Fellow, American Philosophical Society

Editorships, Committees, Science Teams, etc.:

Co-Investigator, Solar Mesosphere Explorer (SME) satellite, 1981–1986.

Co-Investigator, Earth Observing System (EOS) theoretical project with W. L. Grose, NASA Langley, project selected for EOS science team, 1988–1995.

Associate Editor, Journal of the Atmospheric Sciences, 1983–1986.

Member, Editorial Board, Planetary and Space Science, 1989–1992.

Associate Editor, Journal of Geophysical Research 1985–1991.

Associate Editor, Geophysical Research Letters, 1987–1991.

Guest Editor, John F. Noxon memorial issue of the Journal of Geophysical Research, 1985–1986.

Guest Editor, Polar ozone issue of Geophysical Research Letters, 1988.

Member, Committee on Solar and Space Physics of the National Academy of Sciences 1983–1986.

Member, American Meteorological Society Committee on the Middle Atmosphere, 1986–1987.

Member, Space and Earth Science Advisory Committee (SESAC) of the National Aeronautics and Space Administration, 1985–1988.

Member, Science and Technology advisory committee for Congressman David Skaggs, 1988–1994.

Member, Polar Research Board, National Academy of Sciences, 1989–1993.

Chairperson, Scientific Advisory Committee, Division of Polar Programs, National Science Foundation, 1990–1992.

Member, Scientific Advisory Committee, Climate and Global Change Program, NOAA, 1991–present.

Member, National Research Council review panel for the Air Force Office of Scientific Research, 1988–1990.

Member, MacElwane Award Committee, American Geophysical Union, 1988–1989.

Member, SPEC Review Panel, Atmospheric Chemistry Division of NCAR, 1990.

Member, NCAR-wide Review Panel, 1992.

Member, Steering Committee for the Network for Detection of Stratospheric Change, 1990–1995.

Member, International Ozone Commission, 1992–2008.

Member, Stratospheric Processes and their Role in Climate (SPARC) steering committee, World Climate Research Programme, 1993–1998.

Member, Scientific Review Panel for the NASA Langley Aerosol Research Branch, August, 1990.

Chair, Visiting Review Committee for Code 916, NASA Goddard Space Flight Center, March, 1997.

Co-principal Lecturer and Co-organizer, NCAR Summer Colloquium on "Chemistry of the lower and middle atmosphere," July 8–25, 1986.

Co-principal Lecturer, NCAR Summer Colloquium on Atmospheric Chemistry, June 3–12, 1991.

Co-principal Lecturer and Organizer, NASA-sponsored workshop on middle atmosphere chemistry, Keystone, Colorado, July, 1987.

Chairperson, Polar Ozone Chapter, United Nations Environmental Program/World Meteorological Organization assessment of the state of the ozone layer, 1989.

Member, Theory Team, Airborne Arctic Stratosphere Experiment (AASE), Stavanger, Norway, January–February, 1989.

Member, Advisory Committee, Airborne Arctic Stratosphere Experiment II (AASE II), Bangor, Maine, November 1991–March 1992.

Chairperson, Ozone depletion potentials chapter, United Nations Environmental Program/World Meteorological Organization assessment of the state of the ozone layer, 1991.

Chairperson, Ozone depletion potentials and global warming potentials chapter, United Nations Environment Program/World Meteorological Organization assessment of the state of the ozone layer, 1994.

Member, NAS/NRC Committee on Antarctic Policy and Science, January–June, 1993.

Member, NAS/NRC Committee on High Speed Civil Transportation, January–October, 1993.

Member, NAS/NRC Committee on International Organizations and Programs, 1994–1997.

Member, NAS Nominating Committee, 1995.

Member, Special Blue Ribbon Panel on Antarctic Science in the 21st Century, National Science Foundation, 1995–6.

Member, Joint Scientific Committee (JSC), World Climate Research Programme (WCRP), 1996–2001.

Member, NAS/NRC Committee on Women in Science and Engineering (CWSE), 1996–1999.

Featured lecturer at NATO Advanced Study Institute on "The Stratosphere and Its Role in the Climate System," Quebec, Canada, September, 1996.

Chairperson, search committee for NSF Geosciences Associate Director, 1999.

Chairperson, search committee for NCAR Atmospheric Chemistry Division Director, 2000.

Author, Intergovernmental Panel on Climate Change (IPCC) reports, 1994, 1996, 2001.

Co-convenor, Chapman Conference on the Absorption of Solar Radiation, Estes Park, Colorado, August, 2001.

Guest lecturer at Department of Applied Mathematics and Theoretical Physics summer institute in fluid dynamics, Cambridge, UK, September, 2001.

Co-chair, National Academy of Sciences Temporary Nominating Group on Global Human and Environmental Sciences, 2000–2003.

Chairperson and Member, American Meteorological Society Atmospheric Research Awards Committee, 2001–2002.

Co-chair, Working Group I Intergovernmental Panel on Climate Change (IPCC), April 2002–September 2008.

Member, National Academy of Sciences Temporary Nominating Group for Younger Nominees, Class I, 2003–2006.

Member, National Research Council committee on Strategic Guidance for NSF's Support of the Atmospheric Sciences, 2004–2007.

Member, National Academy of Sciences Geophysics Section Diversity Committee, 2007–present.

Member, Bowie Medal Committee, American Geophysical Union, 2009–2010.

Member, National Research Council Committee on America's Climate Choices, 2008–2011.

Chair, National Research Council Committee on Climate Change Stabilization Targets, 2009–2010.

Member, American Chemical Society Committee on Climate Change Science, 2011-2012.

Member, international advisory committee, University of Paris VI, 2012-2013.

Member, joint Royal Society/National Academy of Sciences study panel on climate change, 2013-2014.

Member, Steering Committee for the 2014 International UNEP/WMO Scientific Assessment of Ozone Depletion, 2013-2014.

Member, organizing committee for NAS/NRC workshop on Antarctic sea ice change, Boulder, July 2015-Jan 2016.

Member, Science and Security Board, Bulletin of the Atomic Scientists, 2016-2026.

Review Editor for the International UNEP/WMO Scientific Assessment of Ozone Depletion, 2016-2017.

Review Editor for the International UNEP/WMO Scientific Assessment of Ozone Depletion, 2021-2023.

Member, NAS/NRC committee on the environmental effects of nuclear war, 2023-2025.

Journal Publications:

Susan Solomon was named the third most highly cited geoscientist in the world during the decade of the 1990s by Science Watch in December, 2001.

Her publication record is as follows:

Fishman, J., Solomon, S., Crutzen, P. J., Observational and theoretical evidence in support of a significant in situ photochemical source of tropospheric ozone, *Tellus*, 31 (5) 432-446, 1979. doi: 10.3402/tellusa.v31i5.10458

Johnston, H. S. Solomon, S., Thunderstorms as possible micrometeorological sink for stratospheric water, *Journal of Geophysical Research: Oceans*, 84 (C4) 3155-3158, 1979. doi: 10.1029/jc084ic06p03155

Crutzen, P. J. Solomon, S., Response of mesospheric ozone to particle precipitation, *Planetary and Space Science*, 28 (12) 1147-1153, 1980.

Solomon, S., Johnston, H. S., Kowalczyk, M., Wilson, I., Instantaneous global ozone balance including observed nitrogen dioxide, *Pure and Applied Geophysics*, 118 (1) 58-85, 1980. doi: 10.1007/BF01586446

Solomon, S. Crutzen, P. J., Analysis of the August 1972 solar proton event including chlorine chemistry, *Journal of Geophysical Research*, 86 (C2) 1140-1146, 1981. doi: 10.1029/JC86iC02p01140

Rusch, D. W., Gerard, J. C., Solomon, S., Crutzen, P. J., Reid, G. C., The effect of particle precipitation events on the neutral and ion chemistry of the middle atmosphere - I. Odd nitrogen, *Planetary and Space Science*, 29 (7) 767-774, 1981. doi: 10.1016/0032-0633(81)90048-9

Solomon, S., Rusch, D.W., Gerard, J. C., Reid, G. C., Crutzen, P. J., The effect of particle precipitation on the neutral and ion chemistry of the middle atmosphere - II. Odd hydrogen, *Planetary and Space Science*, 29 (8) 885-893, 1981. doi: 10.1016/0032-0633(81)90078-7

Solomon, S., Crutzen, P. J., Roble, R. G., Photochemical coupling between the thermosphere and the lower atmosphere I. Odd nitrogen from 50 to 120 km, *Journal of Geophysical Research: Oceans*, 87 (C9) 7206-7220, 1982. doi: 10.1029/JC087iC09p07206

Solomon, S., Reid, G. C., Roble, R. G., Crutzen, P. J., Photochemical coupling between the thermosphere and the lower atmosphere II. D region ion chemistry and winter anomaly, *Journal of Geophysical Research: Oceans*, 87 (C9) 7221-7227, 1982. doi: 10.1029/JC087iC09p07221

Solomon, S., Ferguson, E. E., Fahey, D. W., Crutzen, P. J., On the chemistry of H_2O, H_2 and meteoritic ions in the mesosphere and lower thermosphere, *Planetary and Space Science*, 30 (11) 1117-1126, 1982. doi: 10.1016/0032-0633(82)90122-2

Garcia, R. R., Solomon, S., A numerical model of the zonally averaged dynamical and chemical structure of the middle atmosphere, *Journal of Geophysical Research: Oceans*, 88 (C2) 1379-1400, 1983. doi: 10.1029/JC088iC02p01379

Solomon, S., The possible effects of translationally excited nitrogen atoms on lower thermospheric odd nitrogen, *Planetary and Space Science*, 31 (1) 135-139, 1983. doi: 10.1016/0032-0633(83)90038-7

Solomon, S., Minor constituents in the stratosphere and mesosphere, *Review of Geophysics*, 21 (2) 276-283, 1983. doi: 10.1029/RG021i002p00276

Solomon, S., Reid, G. C., Rusch, D. W., Thomas, R. J., Mesospheric ozone depletion during the solar proton event of July 13, 1982, Part II. Comparison between theory and measurements, *Geophysical Research Letters*, 10 (4) 257-260, 1983. doi: 10.1029/GL010i004p00257

Solomon, S., Rusch, D. W., Thomas, R. J., Eckman, R. S., Comparison of mesospheric ozone abundances measured by the solar mesosphere explorer and model

calculations, *Geophysical Research Letters*, 10 (4) 249-252, 1983. doi: 10.1029/gl010i004p00249

Solomon, S., Garcia, R. R., On the distribution of nitrogen dioxide in the high latitude stratosphere, *Journal of Geophysical Research: Atmospheres*, 88 (C9) 5229-5239, 1983. doi: 10.1029/JC088iC09p05229

Solomon, S., Garcia, R. R., Simulation of NO_X partitioning along isobaric parcel trajectories, *Journal of Geophysical Research: Oceans,* 88 (C9) 5497-5501, 1983. doi: 10.1029/JC088iC09p05497

Garcia, R. R., Solomon, S., Roble, R. C., Rusch, D. W., A numerical model study of the response of the middle atmosphere to the 11-year solar cycle, *Planetary and Space Science*, 32 (4) 411-423, 1984. doi: 10.1016/0032-0633(84)90121-1

Russell, J. M., Solomon, S., Gordley, L. L., Remsberg, E. E., Callis, L. B., The variability of stratospheric and mesospheric NO_2 in the polar winter night observed by LIMS, *Journal of Geophysical Research: Atmospheres*, 89 (D5) 7267-7275, 1984. doi: 10.1029/JD089iD05p07267

Solomon, S., Garcia, R. R., Transport of thermospheric NO to the upper stratosphere?, *Planetary and Space Science*, 32 (4) 399-409, 1984. doi: 10.1016/0032-0633(84)90120-X

Solomon, S., Garcia, R. R., On the distribution of long lived tracers and chlorine species in the middle atmosphere, *Journal of Geophysical Research: Atmospheres*, 89 (D7) 11633-11644, 1984. doi: 10.1029/JD089iD07p11633

Solomon, S., Mount, G. H., Zawodny, J. M., Measurements of stratospheric NO_2 from the solar mesosphere explorer satellite II. General morphology of observed NO_2 and derived N_2O_5, *Journal of Geophysical Research: Atmospheres*, 89 (D5) 7317-7321, 1984. doi: 10.1029/JD089ID01P01327

Thomas, R. J., Barth, C. A., Solomon, S., Seasonal variations of ozone in the upper mesosphere and gravity waves, *Geophysical Research Letters*, 11 (7) 673-676, 1984. doi: 10.1029/GL11I007P00673

Garcia, R. R., Solomon, S., The effect of breaking gravity waves on the dynamics and chemical composition of the mesosphere and lower thermosphere, *Journal of Geophysical Research: Atmospheres*, 90 (D2) 3850-3868, 1985. doi: 10.1029/JD090ID02P03850

Solomon, S., Garcia, R. R., Olivero, J. J., Bevilacqua, R. M., Schwartz, P. R., Clancy, R. T., Muhleman, D. O., Photochemistry and transport of carbon monoxide in the middle atmosphere, *Journal of Atmospheric Sciences*, 42 (10) 1072-1083, 1985. doi: 10.1175/1520-0469(1985)042<1072:PATOCM>2.0.CO;2

Solomon, S., Garcia, R. R., Stordal, F., Transport processes and ozone perturbations, *Journal of Geophysical Research: Atmospheres*, 90 (D7) 12981-12989, 1985. doi: 10.1029/JD090ID07P12981

Austin, J., Garcia, R. R., Russell, J. M., Solomon, S., Tuck, A. F, On the atmospheric photochemistry of nitric acid, *Journal of Geophysical Research: Atmospheres*, 91 (D5) 5477-5485, 1986. doi: 10.1029.JD091iD05p05477

Kiehl, J. T., Solomon, S., On the radiative balance of stratosphere, *Journal of the Atmospheric Sciences*, 43 (14) 1525-1534, 1986. doi: 10.1175/1520-0469(1986)043<1525:OTRBOT>2.0.CO;2

Reid, G. C., Solomon, S., On the existence of an extraterrestrial source of water vapor in the middle atmosphere, *Geophysical Research Letters*, 13 (11) 1129-1132, 1986. 10.1029/GL013i011p01129

Solomon, S., Russell, J. M., Gordley, L. L., Observations of the diurnal variation of nitrogen dioxide in the stratosphere, *Journal of Geophysical Research: Atmospheres*, 91 (D5) 5455-5464, 1986. doi: 10.1029/JD091iD05455

Solomon, S., Garcia, R. R., Rowland, F. S., Wuebbles, D. J., On the depletion of Antarctic ozone, *Nature*, 321 (6072) 755-758, 1986. doi: 10.1038/3217dda0

Solomon, S., Kiehl, J. T., Garcia, R. R., Grose, W., Tracer transport by the diabatic circulation deduced from satellite observations, *Journal of Atmospheric Sciences*, 43 (15) 1603-1617, 1986. doi: 10.1175/1520-0469(1986)043<1603:TTBTDC>2.0.CO;2

Solomon, S., Kiehl, J. T., Kerridge, B. J., Remsberg, E. E., Russell III, J. M., Evidence for non-local thermodynamic equilibrium in the V_3 mode of mesospheric ozone, *Journal of Geophysical Research: Atmospheres*, 91 (D9) 9865-9876, 1986. doi: 10.1029/JD091iD09p09865

Bjarnason, G. G., Solomon, S., Garcia, R. R., Tidal influences on vertical diffusion and diurnal variability of ozone in the mesosphere, *Journal of Geophysical Research: Atmospheres*, 92 (D1) 5609-5620, 1987. doi: 10.1029/JD092iD05p05609

Garcia, R. R., Solomon, S., Avery, S. K., Garcia, R. R., Transport of nitric oxide and the D-region winter anomaly, *Journal of Geophysical Research: Atmospheres*, 92 (D1) 977-994, 1987. doi: 10.1029/JD092iD01p00977

Garcia, R. R., Solomon, S., A possible relationship between interannual variability in Antarctic ozone and the quasi-biennial oscillation, *Geophysical Research Letters*, 14 (8) 848-851, 1987. doi: 10.1029/GL014i008p00848

Le Texier, H., Solomon, S., Garcia, R. R., Seasonal variability of the OH Meinel bands, *Planetary and Space Science*, 35 (8) 977-989 1987. doi: 10.1016/0032-0633(87)9002-X

Roble, R. G., Emery, B. A., Killeen, T. L., Reid, G. C., Solomon, S., Garcia, R. R., Evan, D. S., Hays, P. B., Carignan, G. R., Heelis, R. A., Hanson, W. B., Winningham, D. J., Spencer, N. W., Brace, L. H., Joule heating in the mesosphere and thermosphere during the July 13, 1982 solar proton event, *Journal of Geophysical Research: Space Physics*, 92 (A6) 6083-6090, 1987. doi: 10.1029/JA092iA06p06083

Solomon, S., Schmelekopf, A. L., Sanders, R. W., On the interpretation of zenith sky absorption measurements, *Journal of Geophysical Research: Atmospheres*, 92 (D7) 8311-8319, 1987. doi: 10.1029/JD092iD07p08311

Mount, G. H., Sanders, R. W., Schmeltekopf, A. L., Solomon, S., Visible spectroscopy at McMurdo Station, Antarctica, 1. Overview and daily variations of NO_2 and O_3, austral spring, 1986, *Journal of Geophysical Research: Atmospheres*, 92 (D7) 8320-8328, 1987. doi: 10.1029/JD092iD07p08320

Solomon, S., Mount, G. H., Sanders, R. W., Schmeltekopf, A. L., Visible spectroscopy at McMurdo Station, Antarctica, 2. Observation of OClO, *Journal of Geophysical Research: Atmospheres*, 92 (D7) 8329-8338, 1987. doi: 10.1029/JD092iD07p08329

Sanders, R. W., Solomon, S., Mount, G. H., Bates, M. W., Schmeltekopf, A. L., Visible spectroscopy at McMurdo Station Antarctica, 3. Observations of NO_3, *Journal of Geophysical Research: Atmospheres*, 92 (D7) 8339-8342, 1987. doi: 10.1029/JD092ID07p08339

Solomon, S., Garcia, R.R., Current understanding of mesospheric transport processes, *Philosophical Transactions of the Royal Society of London Series A*, 323 655-666, 1987. doi: 10.1098/rsta.1987.0112

Spear, K. A., Solomon, S., Mesospheric ionization and O_2 ($^1\Delta_g$) depletion, *Planetary and Space Science,* 35 (8) 1087-1091, 1987. doi: 10.1016/0032-0633(87)90013-4

Le Texier, H., Solomon, S., Garcia, R. R., The role of molecular hydrogen and methane oxidation in the water vapor budget of the stratosphere, *Quarterly Journal of the Royal Meteorological Society*, 114 (480) 281-295, 1988. doi: 10.1002/qj.49711448002

Sanders, R. W., Solomon, S., Carroll, M. A., Schmeltekopf, A. L., Ground-based measurements of O3, NO2, OCIO, and BrO during the 1987 Antarctic ozone depletion event, *Polar Ozone Workshop,* 118, 1988.

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