

Dr. Anne M. Thompson

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Director, Center for Environmental Chemistry & Geochemistry, University Park, PA
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RESEARCH EXPERTISE:

Atmospheric Chemistry & Climate Change: Modeling and measurements of trace gases, air-sea gas exchange, ozone and convective systems, lightning, biomass burning. Global Change: Simulation of future and pre-industrial troposphere. Remote Sensing. Applications and validation.

EDUCATION:

1970 - B.A., Chemistry (Honors), Swarthmore College; 1972 - M.A., Chemistry, Princeton University
1978 - Ph.D., Physical Chemistry, Bryn Mawr College

POSITIONS:

1978 - 1979 Woods Hole Oceanographic Institution, Woods Hole, MA, Postdoctoral Scholar
1979 - 1981 UC-SD - Scripps Institution of Oceanography, LaJolla, CA, Postgraduate Marine Chemist
1981 - 1984 National Center for Atmospheric Research (NCAR), Boulder, CO, Visiting Scientist; ASP Postdoctoral Fellow
1984 - 1986 Applied Research Corporation, Landover, MD, Contract Scientist at NASA/GSFC
1986 - 2004 Physical Scientist, Atmospheric Chemistry and Dynamics Branch, Lab. for Atmospheres, NASA/Goddard Space Flight Center, Greenbelt, MD
1995 - Adjunct Faculty, Univ. Maryland-College Park, Atmospheric & Oceanic Sciences Dept.
2005 - Professor, Penn State University, Meteorology Department

MEMBERSHIPS:

AAAS, AMS, AGU -- Member and Fellow; Assn Women in Science (AWIS); Am. Chemical Society

AWARDS:

1970 BA with Honors (External Examination), Phi Beta Kappa, Sigma Xi, Phila. Chapter ACS
Best Student Award; NSF Predoctoral Fellowship
1987, 1989, 1995, 2003 GSFC Director's Discretionary Fund;
1990-1996, 1998-2002 GSFC Performance Awards;
1992 Goddard Equal Opportunity Award;
1993, 2001 GSFC Lab. for Atmospheres Peer Award for Outstanding Leadership
1995 NASA Exceptional Achievement Medal.
1995 Fellow, American Meteorological Society (AMS)
1998 Nordberg Medal, COSPAR (Committee for Space Research)
2002 Fellow, American Association for Advancement of Science (AAAS)
2003 Fellow, American Geophysical Union (AGU)
2004 Women in Aerospace, International Achievement Award
2004 NASA Honor Award (SHADOZ Group Achievement)
2004 ISI - Highly Cited Author (Geosciences)
2007 William T. Pecora Award for Satellite Achievement (NASA/Dept. Interior to TOMS Team)
2007 Wilson Award for Excellence in Research (Penn State Univ, College of Earth and Mineral Sciences)
2007 NOAA OAR Outstanding Paper Award for IONS-04 (Cooper et al, *JGR*, 2006)
2007 UNEP/WMO Recognition Letter (for Nobel Peace Prize IPCC Contributions)
2009 Penn State College of Earth and Mineral Sciences Faculty Mentoring Award
2010 Fulbright Scholar Award, South Africa

SPECIAL EXPERIENCE:

Research & Projects

1. PI on NASA Project: "Tropospheric Photochemical Modeling" 1984-present. Also PI on EPA and NOAA Interagency Agreements, 1985-present.

2. EOS-IDS Teams: Stratospheric Chemistry and Dynamics (M. Schoeberl, PI); Biogeochemical Fluxes at Air-Sea Interface (P. Brewer, PI); Chemistry-Climate Interaction (D. Jacob, PI), 1988-1995.
3. NASA Satellite & Aircraft Science Teams: TOMS Satellite, 1994-2004; GTE/TRACE-A; PEM-Tropics-B, TRACE-P; UARP/ STRAT, POLARIS, ACCENT, SAFARI-2000; INTEX-NA (2004), INTEX-B (2006), TC4 (2007), ARCTAS (2008)
4. Oceanographic cruises, *Knorr 73/7*, 1978; Soviet-American Gases and Aerosols (SAGA 3), 1990; Aerosols99 Cruise, *R/V R H Brown*, 1-2/99; NEAQS, July 2004
5. Co-Mission Scientist, SONEX (SASS Ozone and Nitrogen Experiment), 1997
6. NASA HQ Detail: Project Scientist, AEAP/Subsonic Assessment, HQ Office of Aeronautics, 1993-1994
7. SHADOZ PI (Southern Hemisphere Additional Ozonesondes, 1997-present) and Field Work - Aerosols99 Cruise, PAUR II, 1999 (Crete); SAFARI-2000, Zambia
8. IONS (INTEX Ozonesonde Network Study) PI, 2004; 2006. Ozonesonde Field work at INTEX-B/Milagro in Mexico City & Richland, Washington, 2006, TC4 at Panama, 2007; NW Territories, Canada, 2008.

Service & Committees

1. AGU: Education and Human Resource Committee, 1986-1988; Editorial Advisory Board, *Earth in Space*, 1988-1990; Secretary, Atmos. Sciences Section, 1990-1992; AGU Publications Committee, 1994-1996; Associate Editor, *JGR-Atmospheres*, 1992-1996; Chair, *GRL* Editors Search Committee, 1995-1996; Member, *JGR-Atmospheres* Editors Search Committee, 1996; Chair, 1999-2000. President, Atmos. Sciences Section, 2010-2012
2. AMS: Atmos. Chemistry Committee, 1996-1998; AMS Council and Executive Council, 2001-2004; Nomination Committee, 2004-2007; Subject Matter Editor, *Bull. Am. Meteorological Society*, 2005-2008
3. International Societies: (A) Commission on Atmospheric Chemistry and Global Pollution (CACGP), 1994-2002. President, 2002-2006. (B) Member, International Ozone Commission, 1996-2004; (C) IGBP/IGAC Steering Committee (2000-2002); (D) WCRP/SPARC Scientific Steering Comm., 2007-2009; (E) Vice-President, ICSU/Intl Association for Meteorology and Atmospheric Science, 2007-2011
4. Global Change and Assessments: Rapporteur, Workshop on UV Effects on Aquatic Systems, 1989; Working Group 1, IPCC (Intergov. Panel on Climate Change) 1989; Rapporteur, NASA/NOAA /EPA Workshop on Global Warming Potentials, 1990; Lead Author, Chapter 8, UNEP/WMO 1998 Ozone Assessment.
5. NSF-NAS/NRC: Chair, NSF, NCAR-Atmos. Chemistry Div. Review Panel, 1996. NAS/NRC Committee - Major Ocean Programs (1996-1998); NAS/NRC Climate Research Committee (1996-2000); NAS/NRC Earth from Space Committee (2006-2007)
6. AAAS: Member-at-Large (2002-2005); Council (Sec. W, 2005-2007); Chair-Elect (Sec. W, 2007-2008)
7. UCAR/NCAR, University Relations Committee, 2005-2006; Board of Trustees, 2007-2010
8. WMO: Committee on Atmospheric Science, Management Advisory Council, 2006-2009

Education & Outreach

1. Adjunct Professor - University of Maryland Earth Systems Science Interdisciplinary Center (ESSIC), 2000-present; previously JCESS Fellow, 1995-2000. Course Taught: Atmospheric Chemistry & Physics, 2002.
2. Adjunct Research Professor (Thesis Committees): U. Miami (Rosenstiel School), NC State, Florida State U.
3. Students Advised/Co-advised: PhD -- C. Herbster, Florida State Univ. (1998), S. A. Yvon, U. Miami (1990-95); J-H Kim, U. Maryland (1996), D. J. Allen (1998); Masters -- C. Phelps, U. Maryland (1995), R. M. Todaro, U. Maryland (1997), H. Guo, U. Maryland (1999); M. G. Seybold, NC State (1999); J B. Stone, PSU (2006); S. M. Michaels, PSU (2006); A. Loucks, PSU (2007), D. Giles (U. Md., 2007); J. E. Yorks, PSU (MS, 2007), K. M. Dougherty (MS, 2007), W-C Hui, PSU (MS, 2007), A M Luzik (MS, 2009), D. C. Doughty (MS, 2009)
4. External Examiner or Student Host/Co-author: G. Bodeker (U. Natal, So. Africa, 1995), D. Jeker (ETH-Zürich, 1999), K. Longo (U. Sao Paulo, 1998), W. Peters (U. Utrecht, Netherlands, 2002)
5. GSFC Programs: Summer Institute Atmos. Sciences, Coordinator 1987-1989; Education Office, Public Affairs Speaker, 1988-Present; Summer Advisor: 1989, D. Davidoff, Yale; 1996, N. Dang, UNH; 1993-94, K. Patterson, Salisbury State and UCSB; 1996, M. Lakin, UC-Irvine; 2003 E. Deviatova, UMCP
6. Courses Taught: Penn State - Meteo 565: Middle Atmosphere, Meteo 532, Chemistry of the Atmosphere; Meteo 436: Atmospheric Physics I; Meteo 440W, Meteorol. Measurements; Meteo 597, Remote Sensing
7. NCAR - Advanced Study Program, Philip D. Thompson Lecturer, 2005
8. Penn State Committees: Meteo. MS: 2005: A. Metcalf; K Bailey; 2006: C. Beatty; 2007: M Root, A K. Huff, D. M. Shelow. PhD - J. Mao (Meteorology, 2007), J.H. Park (Elec. Eng., 2008), A. Wyant (Elec. Eng., 2010)

REFEREED PUBLICATIONS:

1. **A. M. Thompson**, The photochemical *cis-trans* isomerization of azomethane: A kinetic investigation, Ph.D. Thesis, Bryn Mawr College, 1978.
2. **A. M. Thompson**, P. C. Goswami, and G. L. Zimmerman, A kinetic analysis of the photochemistry of alkyldiazenes in hydrocarbon solution, *J. Phys. Chem.*, **83**, 314-320, 1979.
3. **A. M. Thompson**, Wet and dry removal of tropospheric formaldehyde at a coastal site, *Tellus*, **32**, 376-383, 1980.
4. **A. M. Thompson** and R. J. Cicerone, Clouds and wet removal as causes of variability in the trace gas composition of the marine troposphere, *J. Geophys. Res.*, **87**, 8811-8826, 1982.
5. **A. M. Thompson** and O. C. Zafiriou, Air-sea fluxes of transient atmospheric species, *J. Geophys. Res.*, **88**, 6696-6708, 1983.
6. B. G. Heikes and **A. M. Thompson**, Effects of heterogeneous processes on NO_3 , HONO, and HNO_3 in the troposphere, *J. Geophys. Res.*, **88**, 10,883-10,895, 1983.
7. **A. M. Thompson**, The effect of clouds on photolysis rates and ozone formation in the unpolluted troposphere, *J. Geophys. Res.*, **89**, 1341-1349, 1984.
8. **A. M. Thompson** and D. H. Lenschow, Mean profiles of trace reactive species in the unpolluted marine surface layer, *J. Geophys. Res.*, **89**, 4788-4796, 1984.
9. **A. M. Thompson** and R. J. Cicerone, Possible perturbations to atmospheric CO , CH_4 , and OH , *J. Geophys. Res.*, **91**, 10,853-10,864, 1986.
10. **A. M. Thompson** and R. J. Cicerone, Atmospheric CH_4 , CO , and OH from 1860-1985, *Nature*, **321**, 148-150, 1986.
11. **A. M. Thompson**, R. W. Stewart, M. A. Owens, and J. A. Herwehe, Sensitivity of tropospheric oxidants to global chemical and climate change, *Atmos. Environ.*, **23**, 519-532, 1989.
12. R. W. Stewart, **A. M. Thompson**, M. A. Owens, and J. A. Herwehe, Comparison of parameterized nitric acid rainout rates using a coupled stochastic-photochemical tropospheric model, *J. Geophys. Res.*, **94**, 5219-5226, 1989.
13. **A. M. Thompson**, M. A. Owens, and R. W. Stewart, Sensitivity of atmospheric hydrogen peroxide to global chemical and climate change, *Geophys. Res. Lett.*, **16**, 53-56, 1989.
14. C. J. Nappo, J. A. Herwehe, and **A. M. Thompson**, Observations of ozone profiles in the developing convective boundary layer, *Ozone in the Atmosphere*, edited by R. D. Bojkov and P. Fabian, pp. 477-480, A. Deepak Publishing, 1989.
15. **A. M. Thompson**, Atmospheric chemical and climate change: Possible effects on tropospheric ozone, *Ozone in the Atmosphere*, edited by R. D. Bojkov and P. Fabian, pp. 580-583, A. Deepak Publishing, 1989.
16. **A. M. Thompson**, Effects of atmospheric chemical and climate change on tropospheric ozone, *Ozone Sci. and Engin.*, **7**, 177-194, 1990.
17. R. W. Stewart, **A. M. Thompson**, and M. A. Owens, Atmospheric residence times for soluble species: Differences in numerical and theoretical model results, *Atmos. Environ.*, **24A**, 519-524, 1990.
18. K. E. Pickering, **A. M. Thompson**, R. R. Dickerson, W. T. Luke, D. P. McNamara, P. R. Zimmerman, and J. P. Greenberg, Model calculations of tropospheric ozone production potential following observed convective events, *J. Geophys. Res.*, **95**, 14049-14062, 1990.
19. **A. M. Thompson**, M. A. Huntley, and R. W. Stewart, Perturbations to tropospheric oxidants, 1985-2035: 1. Model calculations of ozone and OH in chemically coherent regions, *J. Geophys. Res.*, **95**, 9829-9844, 1990.
20. J. R. Scala, M. Garstang, W-K. Tao, K. E. Pickering, **A. M. Thompson**, J. Simpson, V. W. J. H. Kirchhoff, E. V. Browell, G. W. Sachse, A. L. Torres, G. L. Gregory, R. A. Rasmussen and M. A. K. Khalil, Cloud draft structure and trace gas transport, *J. Geophys. Res.*, **95**, 17017-17030, 1990.
21. **A. M. Thompson**, W. E. Esaias, and R. L. Iverson, Two approaches to determining the sea-to-air flux of DMS: Satellite ocean color and a photochemical model with atmospheric measurements, *J. Geophys. Res.*, **95**, 20551-20558, 1990.
22. **A. M. Thompson**, M. A. Huntley, and R. W. Stewart, Perturbations to tropospheric oxidants, 1985-2035: 2. Model calculations of hydrogen peroxide in chemically coherent regions, *Atmos. Environ.* **25A**, 1837-1850, 1991.
23. **A. M. Thompson**, Interaction of atmospheric chemical and climate change: implications for tropospheric

- ozone, in *Atmospheric Chemistry: Models and Predictions for Climate and Air Quality*, ed. C. S. Sloane and T. W. Tesche, Lewis Pub., Boca Raton, FL, 1991, pp. 47-61.
24. **A. M. Thompson** and R. W. Stewart, How chemical kinetics uncertainties affect concentrations computed in an atmospheric photochemical model, *Chemometrics and Intelligent Laboratory Systems*, **10**, 69-79, 1991.
 25. K. E. Pickering, **A. M. Thompson**, J. R. Scala, W.-K. Tao, J. Simpson, and M. Garstang, Photochemical ozone production in tropical squall line convection in ABLE 2A, *J. Geophys. Res.*, **96**, 3099-3114, 1991.
 26. **A. M. Thompson** and R. W. Stewart, The effect of chemical kinetics uncertainties on calculated constituents in a tropospheric photochemical model, *J. Geophys. Res.*, **96**, 13089-13108, 1991.
 27. **A. M. Thompson**, New ozone hole phenomenon, News and Views in *Nature*, **352**, 282-283, 1991.
 28. Commentary by K. B. Hogan, **A. M. Thompson**, and J. S. Hoffman, Methane on the greenhouse agenda, *Nature*, **354**, 181-182, 1991.
 29. K. S. Law and J. Pyle, **A. M. Thompson**, Discussion on modelling the response of tropospheric trace species to changing source gas concentrations, *Atmos. Environ.* **26A**, 195-197, 1992.
 30. K. E. Pickering, **A. M. Thompson**, J. R. Scala, W.-K. Tao, and J. Simpson, Ozone production potential following convective redistribution of biomass burning emissions, *J. Atmos. Chem.*, **14**, 297-313, 1992.
 31. K. E. Pickering, J. R. Scala, **A. M. Thompson**, W.-K. Tao, and J. Simpson, A regional estimate of convective transport of CO from biomass burning, *Geophys. Res. Lett.*, **19**, 289-292, 1992.
 32. **A. M. Thompson**, K. B. Hogan, and J. S. Hoffman, Methane reductions: Implications for global warming and atmospheric chemical change, *Atmos. Environ.*, **26A**, 2665-2688, 1992.
 33. **A. M. Thompson**, The oxidizing capacity of the Earth's atmosphere: Probable past and future changes, *Science*, **256**, 1157-1165, 1992.
 34. K. E. Pickering, **A. M. Thompson**, J. R. Scala, W.-K. Tao, R. R. Dickerson, and J. Simpson, Free tropospheric ozone production following entrainment of urban plumes into deep convection, *J. Geophys. Res.*, **97**, 17985-18000, 1992.
 35. A. L. Torres and **A. M. Thompson**, Nitric oxide in the equatorial Pacific boundary layer: SAGA-3 measurements, *J. Geophys. Res.*, **98**, 16949-16954, 1993.
 36. J. A. Chappellaz, I. Y. Fung, and **A. M. Thompson**, Atmospheric methane increase since the last glacial maximum. 1. Source estimates, *Tellus*, **45B**, 228-241, 1993.
 37. **A. M. Thompson**, J. A. Chappellaz, I. Y. Fung, and T. L. Kucsera, Atmospheric methane increase since the last glacial maximum. 2. Effect on oxidants, *Tellus*, **45B**, 242-257, 1993.
 38. **A. M. Thompson**, J. E. Johnson, A. L. Torres, and 10 others, SAGA-3 ozone observations and a photochemical model analysis of the marine boundary layer during SAGA-3, *J. Geophys. Res.*, **98**, 16955-16968, 1993.
 39. E. Atlas, W. Pollock, J. Greenberg, L. Heidt, and A. Thompson, Alkyl nitrates, nonmethane hydrocarbons, and halocarbon gases over the equatorial Pacific Ocean during SAGA-3, *J. Geophys. Res.*, **98**, 16933-16948, 1993.
 40. K. E. Pickering, **A. M. Thompson**, W.-K. Tao, and T. L. Kucsera, Upper tropospheric production following mesoscale convection during STEP/EMEX, *J. Geophys. Res.*, **98**, 8737-8749, 1993.
 41. **A. M. Thompson**, D. P. McNamara, K. E. Pickering, and R. D. McPeters, Effect of marine stratocumulus clouds on TOMS ozone, *J. Geophys. Res.*, **98**, 23051-23057, 1993.
 42. J. E. Johnson, V. M. Koropalov, K. E. Pickering, **A. M. Thompson**, N. Bond, and J. W. Elkins, Third Soviet-American Gases and Aerosols (SAGA 3) Experiment: Overview and meteorological and oceanographic conditions, *J. Geophys. Res.*, **98**, 16893-16908, 1993.
 43. J. P. Pinto, C. H. Brühl, and **A. M. Thompson**, The current and future environmental role of atmospheric methane: Model studies and uncertainties: Working Group Report, in *Atmospheric Methane: Sources, Sinks and Role in global Change*, ed. by M. A. K. Khalil, Springer-Verlag, 1993, Chapter 21.
 44. **A. M. Thompson**, K. E. Pickering, R. R. Dickerson, W. G. Ellis, Jr., D. J. Jacob, J. R. Scala, W.-K. Tao, D. P. McNamara, and J. Simpson, Convective transport over the central United States and its role in the regional CO and ozone budgets, *J. Geophys. Res.*, **99**, 18703-18711, 1994.
 45. K. E. Pickering, **A. M. Thompson**, D. P. McNamara, M. R. Schoeberl, L. R. Lait, P. A. Newman, C. O. Justice, and J. D. Kendall, A trajectory modeling investigation of the biomass burning - tropical ozone relationship, *Ozone in the Troposphere and Stratosphere*, ed. R. D. Hudson, NASA CP-3266, 101-104,

- 1994.
46. K. E. Pickering, **A. M. Thompson**, J. R. Scala, W.-K. Tao, and J. Simpson, Enhancement of free tropospheric ozone production by deep convection, *Ozone in the Troposphere and Stratosphere*, ed. R. D. Hudson, NASA CP-3266, 105-108, 1994.
 47. **A. M. Thompson**, Aspects of modeling the tropospheric hydroxyl radical concentration, *Israel J. Chem*, **34**, 277-288, 1994.
 48. K. E. Pickering, **A. M. Thompson**, D. P. McNamara, and M. R. Schoeberl, An intercomparison of isentropic trajectories over the South Atlantic, *Mon. Wea. Rev.*, **122**, 864-879, 1994.
 49. **A. M. Thompson**, Photochemical modeling of chemical cycles: Issues related to the interpretation of ice core data, in *Biogeochemical Cycles and Ice Cores*, NATO ASI Series I-30, ed. R. J. Delmas, Springer-Verlag, Vol. I30, 265-297, 1995.
 50. C. W. Brown, W. E. Esaias, and **A. M. Thompson**, Using the ratio of euphotic depth to mixed-layer depth to predict phytoplankton composition: An evaluation, *Remote Sensing of Env.*, **53**, 172-176, 1995.
 51. R. D. Hudson, J. Kim, and **A. M. Thompson**, On the derivation of tropospheric column ozone from radiances measured by the total ozone mapping spectrometer, *J. Geophys. Res.* **100**, 11137-11145, 1995.
 52. **A. M. Thompson**, Measuring and modeling the tropospheric hydroxyl radical (OH), *J. Atmos. Sci.*, **52**, 3315-3327, 1995.
 53. K. E. Pickering, **A. M. Thompson**, D. P. McNamara, W.-K. Tao, A. M. Molod, and R. B. Rood, Vertical transport by convective clouds: Comparisons between cloud-scale and global-scale models, *Geophys. Res. Lett.*, **22**, 1089-1092, 1995.
 54. M. A. Carroll and **A. M. Thompson**, NO_x in the non-urban troposphere, 198-255 in *Problems and Progress in Atmospheric Chemistry*, ed. J. Barker, World Pub. Company, 1995.
 55. B. Heikes, M. Lee, D. Jacob, R. Talbot, J. Bradshaw, H. Singh, D. Blake, B. Anderson, H. Fuelberg, and **A. M. Thompson**, Ozone, hydroperoxides, oxides of nitrogen, and hydrocarbon budgets in the marine boundary layer over the South Atlantic, *J. Geophys. Res.*, **101**, 24221-24234, 1996.
 56. J.-H. Kim, R. D. Hudson, and **A. M. Thompson**, A new method of deriving time-averaged tropospheric column ozone over the tropics using TOMS radiances: Intercomparison and analysis, *J. Geophys. Res.*, **101**, 24317-24330, 1996.
 57. J. R. Ziemke, S. Chandra, **A. M. Thompson**, and D. P. McNamara, Zonal asymmetries in southern hemisphere column ozone: Implications of biomass burning, *J. Geophys. Res.*, **101**, 14421-14427, 1996.
 58. S. A. Yvon, E. S. Saltzman, D. J. Cooper, T. S. Bates, and **A. M. Thompson**, The flux of dimethylsulfide from the tropical South Pacific during a time-series station at 12 S, 135 W, *J. Geophys. Res.*, **101**, 6899-6909, 1996.
 59. **A. M. Thompson**, R. D. Diab, G. E. Bodeker, M. Zunckel, G. Coetzee, C. B. Archer, D. P. McNamara, K. E. Pickering, J. B. Combrink, J. Fishman, and D. Nganga, Ozone over southern Africa during SAFARI-92/TRACE-A, *J. Geophys. Res.*, **101**, 23793-23807, 1996.
 60. R. D. Diab, **A. M. Thompson**, M. Zunckel, G. J. R. Coetzee, J. B. Combrink, G. E. Bodeker, J. Fishman, F. Sokolic, D. P. McNamara, C. B. Archer, and D. Nganga, Vertical ozone distribution over southern Africa and adjacent oceans during SAFARI-92, *J. Geophys. Res.*, **101**, 23,809-23,821, 1996.
 61. K. E. Pickering, **A. M. Thompson**, D. P. McNamara, M. R. Schoeberl, H. E. Fuelberg, R. O. Loring, Jr., M. V. Watson, K. Fakhruzzaman, and A. S. Bachmeier, TRACE-A trajectory intercomparison: 1. Effects of different input analyses, *J. Geophys. Res.*, **101**, 23,909-23,925, 1996.
 62. H. E. Fuelberg, R. O. Loring, Jr., M. V. Watson, M. C. Sinha, K. E. Pickering, **A. M. Thompson**, D. R. Blake, G. W. Sachse, and M. R. Schoeberl, TRACE-A trajectory model intercomparison: 2. Isentropic and kinematic methods, *J. Geophys. Res.*, **101**, 23,927-23,939, 1996.
 63. W. G. Ellis, Jr., **A. M. Thompson**, S. Kondragunta, K. E. Pickering, G. Stenchikov, R. R. Dickerson, and W.-K. Tao, Potential ozone production following convective transport based on future emission scenarios, *Atmos. Environ.*, **30**, 667-672, 1996.
 64. K. E. Pickering, **A. M. Thompson**, Y. Wang, W.-K. Tao, D. P. McNamara, V. W. J. H. Kirchhoff, B. G. Heikes, G. W. Sachse, J. D. Bradshaw, G. L. Gregory, and D. R. Blake, Convective transport of biomass burning emissions over Brazil during TRACE-A, *J. Geophys. Res.*, **101**, 23,993-24,012, 1996.
 65. Y. Wang, W.-K. Tao, K. E. Pickering, **A. M. Thompson**, R. Adler, J. Simpson, P. Keehn, and J. Lai, Mesoscale (MM5) simulations of TRACE-A and PRE-STORM convective events, *J. Geophys. Res.*,

- 101, 24,013-24,027, 1996.
66. N. C. Hsu, J. R. Herman, P. K. Bhartia, C. J. Seftor, **A. M. Thompson**, J. Gleason, T. Eck, and B. N. Holben, Detection of biomass burning smoke from TOMS measurements, *Geophys. Res. Lett.*, **23**, 745-748, 1996.
67. R. W. Stewart and **A. M. Thompson**, Kinetic data imprecisions in photochemical rate calculations: Means, medians and temperature dependence, *J. Geophys. Res.*, **101**, 20,953-20,964, 1996.
68. T. Zenker, **A. M. Thompson**, D. P. McNamara, T. L. Kucsera, G. W. Harris, F. G. Wienhold, P. Le Canut, M. O. Andreae and R. Koppman, Regional trace gas distribution and airmass characteristics in the haze layer over southern Africa during the biomass burning season (Sep./Oct. 92): Observations and modeling from the STARE/SAFARI '92/DC-3, *Biomass Burning and Global Change*, ed. J. S. Levine, MIT Press, 296-308, 1996.
69. P. D. Tyson, M. Garstang, R. J. Swap, E. V. Browell, R. D. Diab and **A. M. Thompson**, Transport and vertical structure of ozone and aerosol distributions over southern Africa, *Biomass Burning and Global Change*, ed. J. S. Levine, MIT Press, 403-421 1996.
70. D. J. Allen, R. B. Rood, **A. M. Thompson**, and R. D. Hudson, Three-dimensional Rn-222 calculations using assimilated meteorological data and a convective mixing algorithm, *J. Geophys. Res.*, **101**, 6,871-6, 881, 1996.
71. **A. M. Thompson**, Modeling framework for atmospheric trace gas measurements at the air-snow interface, in *Processes of Chemical Exchange Between the Atmosphere and Polar Snow*, ed. by E. W. Wolff and R. C. Bales, NATO ASI Springer-Verlag, **143**, 225-248, 1996.
72. **A. M. Thompson**, Evaluation of biomass burning effects on ozone during SAFARI/TRACE-A: Examples from process models, in *Biomass Burning and Global Change*, ed. J. S. Levine, MIT Press, Chapter 32, 1996.
73. **A. M. Thompson**, K. E. Pickering, D. P. McNamara, M. R. Schoeberl, R. D. Hudson, J. H. Kim, E. V. Browell, V. W. J. H. Kirchhoff, and D. Nganga, Where did tropospheric ozone over southern Africa and the tropical Atlantic come from in October 1992? Insights from TOMS, GTE/TRACE-A and SAFARI-92, *J. Geophys. Res.*, **101**, 24,251-24,278, 1996.
74. **A. M. Thompson**, Biomass burning and the environment: Accomplishments and research opportunities, *Atmos. Environ.*, **30** (19), I-ii, 1996.
75. D. J. Allen, P. Kasibhatla, **A. M. Thompson**, R. B. Rood, B. Doddridge, K. E. Pickering, R. D. Hudson, and S.-J. Lin, Transport-induced interannual variability of carbon monoxide determined using a chemistry and transport model, *J. Geophys. Res.*, **102**, 28,655-28,669, 1996.
76. N. C. Hsu, R. D. McPeters, C. J. Seftor, and **A. M. Thompson**, The effect of an improved cloud climatology on the TOMS total ozone record, *J. Geophys. Res.*, **102**, 4,247-4,255, 1997.
77. **A. Thompson**, T. Zenker, G. Bodeker, and D. McNamara, Ozone over southern Africa: Patterns and influences, *Fire in Southern African Savanna: Ecological and Atmospheric Perspectives*, ed. B. Van Wilgen, M. O. Andreae, J. G. Goldammer and J. A. Lindesay, Univ. of Witwatersrand Press, Chapter 9, 1997.
78. J. Lelieveld, P. J. Crutzen, D. Jacob and **A. M. Thompson**, *ibid*, Modeling of biomass burning influences on tropospheric ozone, Univ. of Witwatersrand Press, Chapter 10, 1997.
79. W. W. McMillan, L. L. Strow, W. L. Smith, H. L. Huang, **A. M. Thompson**, D. P. McNamara, and W. F. Ryan, Remote sensing of carbon monoxide over the continental United States on September 12-13, 1993, *J. Geophys. Res.*, **102**, 10,695-10,709, 1997.
80. J. R. McConnell, J. R. Winterle, R. C. Bales, **A. M. Thompson**, and R. W. Stewart, Physically based inversion of surface snow concentrations of H₂O₂ to atmospheric concentrations at South Pole, *Geophys. Res. Lett.*, **24**, 441-444, 1997.
81. **A. M. Thompson**, W.-K. Tao, K. E. Pickering, J. R. Scala, and J. Simpson, Tropical deep convection and ozone formation, *Bull. Amer. Met. Soc.*, **78**, 1,043-1,054, 1997.
82. P. D. Tyson, M. Garstang, **A. M. Thompson**, P. D'Abreton, R. D. Diab, and E. V. Browell, Atmospheric transport and photochemistry of ozone over south central southern Africa during SAFARI, *J. Geophys. Res.*, **102**, 10,623-10,635, 1997.
83. J. Olson, M. Prather, T. Berntsen, G. Carmichael, R. Chatfield, P. Connell, R. Derwent, L. Horowitz, S. Jin, M. Kanakidou, P. Kasibhatla, R. Kotomarthi, M. Kuhn, K. Law, S. Sillman, J. Penner, L. Perliski, F. Stordal, **A. Thompson**, and O. Wild, Results from the IPCC photochemical model intercomparison

- (PhotoComp), *J. Geophys. Res.*, **102**, 5,979-5,991, 1997.
84. **A. M. Thompson**, H. B. Singh, R. W. Stewart, T. L. Kucsera, and Y. Kondo, A Monte Carlo study of upper tropospheric reactive nitrogen during Pacific exploratory mission in the western Pacific Ocean (PEM-West B), *J. Geophys. Res.*, **102**, 28,437-28,446, 1997.
 85. J. Hansen, M. Sato, R. Ruedy, A. Lacis and 35 authors, **A. Thompson**, J. Wilder, R. Willson, and J. Zawodny, Forcings and chaos in interannual to decadal climate Change, *J. Geophys. Res.*, **102**, 25,679-25,720, 1997.
 86. M. Chin, R. B. Rood, D. J. Allen, M. O. Andreae, **A. M. Thompson**, S. Yvon-Lewis, R. R. Atlas, and J. V. Ardizzone, Processes controlling dimethyl sulfide over the ocean: Case studies using 3-D model driven by assimilated meteorological fields, *J. Geophys. Res.*, **103**, 8,341-8,353, 1998.
 87. J. R. McConnell, R. C. Bales, R. W. Stewart, **A. M. Thompson**, M. R. Albert, and R. Ramos, Physically based modeling of atmosphere-to-snow to-firn-transfer of H₂O₂ at South Pole, *J. Geophys. Res.*, **103**, 10,561-10,570, 1998.
 88. P. J. Bremaud, F. Taupin, **A. M. Thompson**, and N. Chaumerliac, Ozone nighttime recovery in the marine boundary layer: Measurement and simulation of the ozone diurnal cycle at Reunion Island, *J. Geophys. Res.*, **103**, 3,463-3,473, 1998.
 89. Y. J. Kaufman, P. V. Hobbs, V. W. J. H. Kirchhoff, P. Artaxo, L. A. Remer, B. N. Holben, M. D. King, E. M. Prins, D. E. Ward, K. M. Longo, L. F. Mattos, C. A. Nobre, J. D. Spinhirne, Q. Ji, **A. M. Thompson**, J. F. Gleason, S. A. Christopher, The Smoke, Cloud and Radiation experiment in Brazil (SCAR-B), *J. Geophys. Res.*, **103**, 31,783-31,808, 1998.
 90. R. D. Hudson and **A. M. Thompson**, Tropical Tropospheric Ozone (TTO) maps from TOMS by a modified-residual method, *J. Geophys. Res.*, **103**, 22,129-22,145, 1998.
 91. L. A. Remer, Y. J. Kaufman, B. N. Holben, **A. M. Thompson**, D. McNamara, Biomass burning aerosol size distribution and modeled optical properties, *J. Geophys. Res.*, **103**, 31,879 - 31,891, 1998.
 92. **A. M. Thompson**, L. C. Sparling, Y. Kondo, B. E. Anderson, G. L. Gregory, G. W. Sachse, Perspectives on NO, NO_y and fine aerosol sources and variability during SONEX, *Geophys. Res. Lett.*, **26**, 3073-3076, 1999.
 93. Y. Wang, S. C. Liu, B. E. Anderson, Y. Kondo, G. L. Gregory, G. W. Sachse, S. A. Vay, D. Blake, H. B. Singh, and **A. M. Thompson**, Evidence of convection as a dominant source of condensation nuclei in the northern midlatitude upper troposphere, *Geophys. Res. Lett.*, **27**, 369-372, 2000.
 94. H. B. Singh, **A. M. Thompson** and H. Schlager, The 1997 SONEX aircraft campaign and coordinated POLINAT-2 activity: Overview and accomplishments, *Geophys. Res. Lett.*, **26**, 3053-3056, 1999.
 95. Y. Kondo, M. Koike, H. Ikeda, B. E. Anderson, K. E. Brunke, Y. Zhao, K. Kita, T. Sugita, H. B. Singh, S. C. Liu, L. Jaeglé, **A. M. Thompson**, G. L. Gregory, R. Shetter, G. W. Sachse, E. V. Browell, and M. J. Mahoney, Impact of aircraft emission on NO_x in the lower most stratosphere at northern midlatitudes, *Geophys. Res. Lett.*, **26**, 3065-3068, 1999.
 96. S. C. Liu, H. Yu, Y. Wang, D. D. Davis, Y. Kondo, B. E. Anderson, G. W. Sachse, G. L. Gregory, B. Ridley, H. E. Fuelberg, **A. M. Thompson**, and H. B. Singh, Sources of reactive nitrogen in the upper troposphere during SONEX, *Geophys. Res. Lett.*, **26**, 2441-2444, 1999.
 97. K. M. Longo, **A. M. Thompson**, V. W. J. H. Kirchhoff, L. A. Remer, S. R. de Freitas, M. A. F. Silva Dias, P. Artaxo, W. Hart, J. D. Spinhirne, M. A. Yamasoe, Correlation between smoke and tropospheric ozone concentrations in Cuiabá during Smoke, Clouds, and Radiation-Brazil (SCAR-B), *J. Geophys. Res.*, **104**, 12,113 - 12, 129, 1999.
 98. **A. M. Thompson** and R. D. Hudson, Tropical Tropospheric Ozone (TTO) maps from Nimbus-7 and Earth-Probe TOMS by the modified-residual method: Evaluation with sondes, ENSO signals and trends from Atlantic regional time series, *J. Geophys. Res.*, **26**, 961-26,975, 1999.
 99. D. J. Allen, K. E. Pickering, G. L. Stenchikov, A. M. Thompson, and Y. Kondo, A 3-D NO_y simulation during SONEX using a stretched-grid chemical transport model, *J. Geophys. Res.*, **105**, 3851-3876, 2000.
 100. G. Bieberbach, Jr., H. E. Fuelberg, **A. M. Thompson**, A. Schmitt, J. R. Hannan, G. L. Gregory, Y. Kondo, R. D. Knabb, G. W. Sachse, and R. W. Talbot, A mesoscale numerical investigation of air traffic emissions over the North Atlantic during SONEX flight 8: A case study, *J. Geophys. Res.*, **105**, 3821-3832, 2000.
 101. J. Y. N. Cho, R. E. Newell, T. P. Bui, E. V. Browell, M. A. Fenn, B. L. Gary, M. J. Mahoney, G. L.

- Gregory, G. W. Sachse, S. A. Vay, T. L. Kucsera, and **A. M. Thompson**, Observations of convective and dynamical instabilities in tropopause folds and their contribution to stratosphere-troposphere exchange, *J. Geophys. Res.*, **104**, 21549-21568, 1999.
102. J. R. Hannan, H. E. Fuelberg, A. M. Thompson, G. Bieberbach Jr., R. D. Knabb, Y. Kondo, B. E. Anderson, E. V. Browell, G. L. Gregory, G. W. Sachse, and H. B. Singh, Atmospheric chemical transport based on high-resolution model-derived winds: A case study, *J. Geophys. Res.*, **105**, 3807-3820, 2000.
103. D. P. Jeker, L. Pfister, **A. M. Thompson**, D. Brunner, D. J. Boccippio, K. E. Pickering, H. Wernli, Y. Kondo, and J. Staehelin, Measurements of nitrogen oxides at the tropopause - Attribution to convection and correlation with lightning, *J. Geophys. Res.*, **105**, 3679-3700, 2000.
104. M. Koike, Y. Kondo, G. L. Gregory, B. E. Anderson, G. W. Sachse, D. Blake, H. B. Singh, **A. M. Thompson**, K. Kita, Y. Zhao, T. Sugita, R. Shetter, H. Ikeda, S. C. Liu, L. Jaeglé, and N. Toriyama, Impact of aircraft emissions on reactive nitrogen over the North Atlantic Flight Corridor region, *J. Geophys. Res.*, **105**, 3665-3678, 2000.
105. E. W. Meijer, P. F. J. van Velthoven, **A. M. Thompson**, L. Pfister, H. Schlager, P. Schulte, and H. Kelder, Model calculations of the impact of NO_x from air traffic, lightning, and surface emissions, compared with measurements, *J. Geophys. Res.*, **105**, 3833-3850, 2000.
106. I. J. Simpson, B. C. Sive, D. R. Blake, N. J. Blake, T. Y. Chen, J. P. Lopez, B. E. Anderson, G. W. Sachse, S. A. Vay, H. E. Fuelberg, Y. Kondo, **A. M. Thompson**, and F. S. Rowland, Nonmethane hydrocarbon measurements on the North Atlantic Flight Corridor during SONEX, *J. Geophys. Res.*, **105**, 3785-3790, 2000.
107. **A. M. Thompson**, B. G. Doddridge, J. C. Witte, R. D. Hudson, W. T. Luke, J. E. Johnson, B. J. Johnson, S. J. Oltmans, R. Weller, A tropical Atlantic paradox: Shipboard and satellite views of a tropospheric ozone maximum and wave-one in January-February 1999, *Geophys. Res. Lett.*, **27**, 3317-3320, 2000.
108. **A. M. Thompson**, H. B. Singh, and H. Schlager, Introduction to special section: SONEX (Subsonic Assessment Ozone and Nitrogen Oxides Experiment) and POLINAT (Pollution in North Atlantic Tracks), *J. Geophys. Res.*, **105**, 3595-3603, 2000.
109. M. Chin, R. B. Rood, S-J Lin, J-F Müller, **A. M. Thompson**, Atmospheric sulfur cycle simulated in the global model GOCART: Model description and global properties, *J. Geophys. Res.*, **105**, 24689-24712, 2000.
110. I. Folkens, S. J. Oltmans, **A. M. Thompson**, Tropical convective outflow and near-surface equivalent potential temperatures, *Geophys. Res. Lett.*, **27**, 2549-2552, 2000.
111. B. Lazzaratto, M. Frioud, G. Larchevêque, V. Mitev, P. Quaglia, V. Simeonov, **A. Thompson**, H. van den Bergh, B. Calpini, Ozone and water vapor measurements by Raman lidar in the planetary boundary layer: Error sources and field measurements, *Applied Optics*, **18**, 2985-2997, 2001.
112. K. J. Voss, E. J. Welton, P. K. Quinn, J. E. Johnson, **A. M. Thompson**, H. R. Gordon, LIDAR measurements during Aerosols99, *J. Geophys. Res.*, **106**, 20821-20831, 2001.
113. S. J. Oltmans, B. J. Johnson, J. M. Harris, H. Vömel, **A. M. Thompson**, K. Koshy, P. Simon, R. J. Bendura, J. A. Logan, F. Hasebe, M. Shiotani, V. W. J. H. Kirchhoff, M. Maata, G. Sami, A. Samad, J. Tabuadravu, H. Enriquez, M. Agama, J. Cornejo, F. Paredes, Ozone in the Pacific tropical troposphere from ozonesonde observations, *J. Geophys. Res.*, **106**, 32503-32526, 2001.
114. **A. M. Thompson**, J. C. Witte, R. D. Hudson, H. Guo, J. R. Herman, M. Fujiwara, Tropical tropospheric ozone and biomass burning, *Science*, **291**, 2128-2132, 2001.
115. K. E. Pickering, **A. M. Thompson**, H. C. Kim, A. J. DeCaria, L. Pfister, T. L. Kucsera, J. C. Witte, M. Avery, D. R. Blake, J. H. Crawford, B. G. Heikes, G. W. Sachse, S. T. Sandholm, R. W. Talbot, Trace gas transport and scavenging in PEM-Tropics-B SPCZ convection, *J. Geophys. Res.*, **106**, 32591-32608, 2001.
116. **A. M. Thompson**, Book Review of *Introduction to Atmospheric Chemistry*, by P. V. Hobbs, *Eos, Trans. AGU*, **82**, 490, 2001.
117. W. Peters, M. Krol, F. Dentener, **A. M. Thompson**, J. Lelieveld, Chemistry-transport modeling of the satellite observed distribution of tropical tropospheric ozone, *Atmos. Chem. Phys.*, **2**, 103-120, 2002.
118. K. Kourtidis, C. Zerefos, D. Balis, E. Kosmidis, S. Rapsomanikis, P. Perros, V. Simeonov, D. Melas, **A. Thompson**, J. Witte, B. Calpini, B. Rappenglueck, I. Isaksen, A. Papyannis, A. Hofzumahaus, H. Gimm, R. Drakou, Regional tropospheric ozone over eastern Mediterranean, *J. Geophys. Res.*, **107**,

- D18, 8140, doi: 10.1029/2000JD000140, 2002.
119. I. Folkins, C. Braun, **A. M. Thompson**, J. C. Witte, Tropical ozone as an indicator of deep convective outflow, *J. Geophys. Res.*, **107**, D13, doi: 10.1029/2001JD001178, 2002.
 120. J. E. Hansen, M. Sato, I. Nazarenko, R. Ruedy, A. Lacis, D. Koch, I. Tegen, T. Hall, D. Shindell, P. Stone, T. Novakov, L. Thomason, R. Wang, Y. Wang, D. Jacob, S. Hollandsworth, L. Bishop, J. Logan, **A. Thompson**, R. Stolarski, J. Lean, R. Willson, S. Levitus, J. Antonov, N. Rayner, D. Parker, J. Christy, Climate forcings in GISS SI2000 simulations, *J. Geophys. Res.*, **107**, 4347, doi: 10.1029/2001JD001143, 2002.
 121. R. J. Swap, H. J. Annegarn, J. T. Suttles, J. Haywood, M. C. Hemlinger, C. Hely, P. V. Hobbs, B. N. Holben, J. Ji, M. D. King, T. Landmann, W. Maenhaut, L. Otter, B. Pak, S. J. Piketh, S. Platnick, J. Privette, D. Roy, **A. M. Thompson**, D. Ward, R. Yokelson, The Southern African Regional Science Initiative (SAFARI-2000): Dry-Season Campaign, an Overview, *S. Afr. J. Science*, **98**, 125-130, 2002.
 122. **A. M. Thompson**, J. C. Witte, M. T. Freiman, N. A. Phahlane, G. J. R. Coetzee, Lusaka, Zambia, during SAFARI-2000: Convergence of Local and Imported Ozone Pollution, *Geophys. Res. Lett.*, **29**, 1976, doi: 10.1029/2002GL015399, 2002.
 123. **A. M. Thompson**, P. A. Newman, J. F. Gleason, W. H. Brune, R. R. Dickerson, Strategies for Observing and Modeling Pollution, *Eos, Trans. AGU*, **83**, doi: 10.1029/2002ES000008, p. 575, 2002.
 124. **A. M. Thompson**, J. C. Witte, R. D. McPeters, S. J. Oltmans, F. J. Schmidlin, J. A. Logan, M. Fujiwara, V. W. J. H. Kirchhoff, F. Posny, G. J. R. Coetzee, B. Hoegger, S. Kawakami, T. Ogawa, B. J. Johnson, H. Vömel, G. Labow, Southern Hemisphere Additional Ozonesondes (SHADOZ) 1998-2000 tropical ozone climatology. 1. Comparison with TOMS and ground-based measurements, *J. Geophys. Res.*, **108**, 8238, doi: 10.1029/2001JD000967, 2003.
 125. **A. M. Thompson**, J. C. Witte, S. J. Oltmans, F. J. Schmidlin, J. A. Logan, M. Fujiwara, V. W. J. H. Kirchhoff, F. Posny, G. J. R. Coetzee, B. Hoegger, S. Kawakami, T. Ogawa, J. P. F. Fortuin, H. M. Kelder, Southern Hemisphere Additional Ozonesondes (SHADOZ) 1998-2000 tropical ozone climatology. 2. Tropospheric Variability and the Zonal Wave-One, *J. Geophys. Res.*, **108**, 8241, doi: 10.1029/2002JD002241, 2003.
 126. R. D. Diab, A. Raghunandran, **A. M. Thompson**, V. Thouret, Classification of Tropospheric Ozone Profiles over Johannesburg Based on MOZAIC Aircraft Data, *Atmos. Chem. Phys.*, **3**, 713-723, 2003.
 127. G. S. Jenkins, J.-H. Ryu, **A. M. Thompson**, J. C. Witte, Linking Horizontal and Vertical Transport of Biomass Fire Emissions to the Tropical Atlantic Ozone Paradox during the Northern Hemisphere Winter Season. 1999, *J. Geophys. Res.*, **108**, 4745, doi: 10.1029/2002JD003297, 2003.
 128. T. Randriambelo, J.-L. Baray, S. Baldy, **A. M. Thompson**, S. J. Oltmans, P. Keckhut, Investigation of the Short-term Variability of Tropical Tropospheric Ozone, *Annales Geophysiques*, **21**, 2095-2106, 2003.
 129. W. Peters, M. C. Krol, J. P. F. Fortuin, H. M. Kelder, C. R. Becker, **A. M. Thompson**, J. Lelieveld, P. J. Crutzen, Tropospheric Ozone over a Tropical Atlantic Station in the Northern Hemisphere: Paramaribo, Surinam (6N, 55W), *Tellus B*, **56**, 21-34, 2004.
 130. **A. M. Thompson**, J. C. Witte, S. J. Oltmans, F. J. Schmidlin, SHADOZ (Southern Hemisphere Additional Ozonesondes): A tropical ozonesonde-radiosonde network for the atmospheric community, *Bull. Am. Meteorol. Soc.*, **85**, 1549-1564, 2004.
 131. S. J. Oltmans, B. J. Johnson, J. M. Harris, **A. M. Thompson**, H. Y. Liu, H. Vömel, C. Y. Chan, T. Fujimoto, V. G. Brackett, W. L. Chang, J.-P. Chen, J. H. Kim, L. Y. Chan, H.-W. Chang, Tropospheric Ozone over the North Pacific from Ozonesonde Observations, *J. Geophys. Res.*, **109**, D15S01, doi: 10.1029/2003JD003466, 2004.
 132. R. B. Chatfield, H. Guan, **A. M. Thompson**, J. C. Witte, Convective Lofting Links Indian Ocean Air Pollution to Paradoxical South Atlantic Ozone Maxima, *Geophys. Res. Lett.*, **31**, L06103, doi: 10.1029/2003GL018866, 2004.
 133. R. D. Diab, **A. M. Thompson**, K. Mari, L. Ramsay, G. J. R. Coetzee, Tropospheric Ozone Climatology over Irene, South Africa from 1990-1994 and 1998-2002, *J. Geophys. Res.*, **109**, D20, D20301, doi: 10.1029/2004JD004293, 2004.
 134. S. Solomon, D. W. J. Thompson, R. W. Portmann, S. J. Oltmans, **A. M. Thompson**, On the Distribution and Variability of Ozone in the Tropical Upper Troposphere: Implications for Tropical Deep Convection and Chemical-Dynamical Coupling, *Geophys. Res. Lett.*, **32**, L23813, doi: 10.1029/2005GL024323, 2005.

135. B. F. Taubman, J. C. Hains, **A. M. Thompson**, L.T. Marufu, B. G. Doddridge, J. W. Stehr, C. A. Piety, R. R. Dickerson, Aircraft Vertical Profiles of Trace Gas and Aerosol Pollution over the Mid-Atlantic U.S.: Statistics and Meteorological Cluster Analysis, *J. Geophys. Res.*, **111**, 2005JD006196, 2006.
136. B. Sauvage, V. Thouret, **A. M. Thompson**, J. C. Witte, J.-P. Cammas, P. Nedelec, G. Athier, MOZAIC and SHADOZ Teams, Enhanced View of the “Tropical Atlantic Ozone Paradox” and “Zonal Wave-one” from the In-situ MOZAIC and SHADOZ Data, *J. Geophys. Res.*, **111**, D01301, doi: 10.1029/2005JD006241, 2006.
137. P. J. Popp, T. P. Marcy, E. J. Jensen, B. Kärcher, D. W. Fahey, R. S. Gao, T. L. Thompson, K. H. Rosenlof, E.C. Richard, R. L. Herman, E. M. Weinstock, J. B. Smith, R. D. May, J. C. Wilson, A. J. Heymsfield, M. J. Mahoney, **A. M. Thompson**, The Observation of Nitric-acid Containing Particles in the Tropical Lower Stratosphere, *Atmos. Chem. Phys. Disc*, **6**, 601-611, 2006.
138. **A. M. Thompson**, J. C. Witte, H. G. J. Smit, S. J. Oltmans, B. J. Johnson, V. W. J. H. Kirchhoff, F. J. Schmidlin, Southern Hemisphere Additional Ozonesondes (SHADOZ) 1998-2004 tropical ozone climatology. 3. Instrumentation, Station Variability, Evaluation with Simulated Flight Profiles, *J. Geophys. Res.*, **112**, D03304, doi: 10.1029/2005JD007042, 2007.
139. H. Mao, R. W. Talbot, D. Troop, R. Johnson, S. Businger, **A. M. Thompson**, Smart Balloon Observations over the North Atlantic: Part II - O₃ Data Analysis and Modeling, *J. Geophys. Res.*, **111**, D23S56, 10.1029/2005JD006507, 2006.
140. G. A. Morris, S. Hersey, **A. M. Thompson**, A. Stohl, P. R. Colarco, W. W. McMillan, J. Warner, B. J. Johnson, J. C. Witte, T. L. Kucsera, D. E. Larko, S. J. Oltmans, Alaskan and Canadian forest fires exacerbate ozone pollution in Houston, Texas, on 19 and 20 July 2004, *J. Geophys. Res.*, **111**, D24S03, 10.1029/2006JD007090, 2006.
141. R. B. Chatfield, H. Guan, **A. M. Thompson**, H. G. J. Smit, Mechanisms for the Intraseasonal Variability of Tropospheric Ozone during the Indian Winter Monsoon, *J. Geophys. Res.*, **112**, D10303, doi: 10.1029/2006JD007347, 2007.
142. H. G. J. Smit, W. Straeter, B. J. Johnson, S. J. Oltmans, J. Davies, B. Hoegger, R. Stubi, F. J. Schmidlin, **A. M. Thompson**, J. C. Witte, I. Boyd, F. Posny, Assessment of the performance of ECC-ozonesondes under quasi-flight conditions in the environmental simulation chamber: Insights from the Jülich Ozone Sonde Intercomparison Experiment (JOSIE), *J. Geophys. Res.*, **112**, D19306, doi: 10.1029/2006JD007308, 2007.
143. O. R. Cooper, A. Stohl, M. Trainer, **A. M. Thompson**, J. C. Witte, S. J. Oltmans, B. J. Johnson, J. Merrill, J. L. Moody, G. Morris, D. Tarasick, G. Forbes, P. Nédélec, F. C. Fehsenfeld, J. Meagher, M. J. Newchurch, F. J. Schmidlin, S. Turquety, J. H. Crawford, K. E. Pickering, S. L. Baughcum, W. H. Brune, C. C. Brown, Large upper tropospheric ozone enhancements above mid-latitude North America during summer: In situ evidence from the IONS and MOZAIC ozone monitoring network, *J. Geophys. Res.*, **111**, D24S05, doi: 10.1029/2006JD007306, 2006.
144. **A. M. Thompson**, J. B. Stone, J. C. Witte, S. K. Miller, R. B. Pierce, S. J. Oltmans, O. R. Cooper, A. L. Loucks, B. F. Taubman, R. B. Chatfield, B. J. Johnson, E. Joseph, T. L. Kucsera, J. T. Merrill, G. A. Morris, S. Hersey, G. Forbes, M. J. Newchurch, F. J. Schmidlin, D. W. Tarasick, V. Thouret, J. P. Cammas, Intercontinental Transport Experiment Ozone Sonde Network Study (IONS, 2004): 1. Summertime UT/LS (Upper Troposphere/Lower Stratosphere) Ozone over Northeastern North America, *J. Geophys. Res.*, **112**, D12S12, doi: 10.1029/2006JD007441, 2007.
145. T. Chai, G. R. Carmichael, Y. Tang, A. Sandu, M. Hardesty, P. Pilewskie, S. Whitlow, E. V. Browell, M. A. Avery, V. Thouret, P. Nedelec, J. T. Merrill, **A. M. Thompson**, Four Dimensional Data Assimilation Experiments with ICARTT (International Consortium for Atmospheric Research on Transport and Transformation) Ozone Measurements, *J. Geophys. Res.*, **112**, D12S15, doi:10.1029/2006JD007763, 2007.
146. Folkins, I., P. Bernath, C. Boone, K. Walker, **A. M. Thompson**, J. C. Witte, The seasonal cycles of O₃, CO and Convective Outflow at the Tropical Tropopause, *Geophys. Res. Lett.*, **33**, L16802, doi: 10.1029/2006GL026602, 2006.
147. **A. M. Thompson**, J. B. Stone, J. C. Witte, S. K. Miller, S. J. Oltmans, K. L. Ross, T. L. Kucsera, J. T. Merrill, G. Forbes, D. W. Tarasick, E. Joseph, F. J. Schmidlin, W. W. McMillan, J. Warner, E. J. Hintsa, J. E. Johnson, Intercontinental Transport Experiment Ozone Sonde Network Study (IONS, 2004): 2. Tropospheric Ozone Budgets and Variability over Northeastern North America, *J. Geophys. Res.*, **112**,

- D12S13, doi: 10.1029/2006JD007670, 2007.
148. R. B. Pierce, T. K. Schaack, J. Al-Saadi, T. D. Fairlie, C. Kittaka, G. Lingenfelter, M. Natarajan, J. Olson, A. Soja, T. H. Zapotocny, A. Lenzen, J. Stobie, D. R. Johnson, M. Avery, G. Sachse, **A. Thompson**, R. Cohen, J. Dibb, J. Crawford, D. Rault, R. Martin, J. Szykman, J. Fishman, Chemical Data Assimilation Estimates of Continental US ozone and Nitrogen budgets during INTEX-A, *J. Geophys. Res.*, **112**, D12S18, doi: 10.1029/2006JD007722, 2007.
149. D.W. Tarasick, M.D. Moran, **A. M. Thompson**, T. Carey-Smith, Y. Rochon, V.S. Bouchet, W. Gong, P.A. Makar, C. Stroud, S. Menard, L.-P. Crevier, S. Cousineau, J.A. Pudykiewicz, A. Kallaur, R. Moffet, R. Menard, A. Robichaud, O.R. Coopers, S.J. Oltmans, J.C. Witte, G. Forbes, B.J. Johnson, J. Merrill, G. Morris, M.J. Newchurch, F.J. Schmidlin, E. Joseph, Comparison of Canadian Air Quality Forecast Models With Tropospheric Ozone Profile Measurements Above Mid-Latitude North America During the IONS/ICARTT Campaign: Evidence for Stratospheric Input, *J. Geophys. Res.*, **112**, D12S22, doi: 10.1029/2006JD007782, 2007.
150. J. M. Livingston, B. Schmid, J. Redemann, P. Russell, S. Ramirez, J. Eilers, W. Gore, S. Howard, J. Pommier, E. Fetzer, S. Seemann, E. Borbas, D. Wolfe, **A. M. Thompson**, Comparison of Water Vapor Measurements by Airborne Sun-photometer and Near-Coincident In Situ and Satellite Sensors during INTEX-ITCT 2004, *J. Geophys. Res.*, **112**, D12S16, doi: 10.1029/2006JD007733, 2007.
151. J. C. Witte, M. R. Schoeberl, A. R. Douglass, **A. M. Thompson**, The Quasi-biennial Oscillation in tropical ozone from SHADOZ and HALOE, *Atmos. Chem. Phys. Disc.*, **8**, 6355-6378, 2008.
152. R. Nassar, J. A. Logan, H. M. Worden, I. A. Megretskaja, K. W. Bowman, G. B. Osterman, **A. M. Thompson**, D. Tarasick, S. Austin, H. Claude, M. Dubey, W. Hocking, Bryan Johnson, E. Joseph, J. T. Merrill, G. Morris, M. J. Newchurch, S. Oltmans, F. Posny, F. Schmidlin, H. Vömel, D. Whiteman, J. Witte, Validation of Tropospheric Emission Spectrometer (TES) Nadir Ozone Profiles Using Ozone-sonde Measurements. *J. Geophys. Res.*, **113**, D15S17, doi:10.1029/2007JD008819, 2008.
153. T. Deshler, J. Mercer, H.G. J. Smit, B. J. Johnson, S. J. Oltmans, R. Stuebi, G. Levrat, J. Davies, **A. M. Thompson**, J. Witte, F. J. Schmidlin, G. Brothers, S. Toru, M. Proffitt, Balloon Experiment to Test ECC-ozone-sondes from Different Manufacturers, and with Different Cathode Solution Strengths: Results of the BESOS flight, *J. Geophys. Res.*, **113**, D04307, doi:10.1029/2007JD008975, 2008.
154. O. R. Cooper, M. Trainer, **A. M. Thompson**, S. J. Oltmans, D. W. Tarasick, J. C. Witte, A. Stohl, S. Eckhardt, J. Lelieveld, M. J. Newchurch, B. J. Johnson, R. W. Portmann, L. Kalnajs, M. K. Dubey, T. Leblanc, I. S. McDermid, G. Forbes, D. Wolfe, T. Carey-Smith, G. A. Morris, B. Lefer, B. Rappenglück, E. Joseph, F. Schmidlin, A. Ravishankara, J. Meagher, F. C. Fehsenfeld, T. J. Keating, R. A. Van Curen and K. Minschwaner, Evidence for a recurring eastern North American upper tropospheric ozone maximum during summer, *J. Geophys. Res.*, **112**, D23306, doi:10.1029/2007JD008910, 2007.
155. J. C. Hains, B. F. Taubman, **A. M. Thompson**, L. T. Marufu, J. W. Stehr, B. G. Doddridge, and R. R. Dickerson, A clustering methodology to identify distinct chemical events in the troposphere using aircraft trace gas and aerosol vertical profiles, *Atmos. Environ.*, **42**, 1727-1741, 2008.
156. M. R. Schoeberl, J. R. Ziemke, B. Bojkov, N. Livesey, B. Duncan, S. Strahan, L. Froidevaux, S. Kulawik, P. K. Bhartia, S. Chandra, P. Levelt, J. C. Witte, **A. M. Thompson**, et al., A Trajectory Based Estimate of the Tropospheric Column Ozone Column Using the Residual Method, *J. Geophys. Res.*, **112**, D24S49, doi:10.1029/2007JD008873, 2007.
157. Y. Jiang, N.J. Livesey, W.G. Read, J.W. Waters, B. Bojkov, T. Leblanc, I.S. McDermid, S. Godin-Beekmann, M.J. Filipiak, R.S. Harwood, R.A. Fuller, W.H. Daffer, B.J. Drouin, R.E. Cofield, D.T. Cuddy, R.F. Jarnot, B.W. Knosp, V.S. Perun, M.J. Schwartz, W.V. Snyder, P.C. Stek, R.P. Thurstans, P.A. Wagner, M. Allaart, S.B. Andersen, G. Bodeker, B. Calpini, H. Claude, G. Coetzee, J. Davies, H. De Backer, H. Dier, M. Fujiwara, B. Johnson, H. Kelder, N. P. Leme, G. König-Langlo, E. Kyro, G. Laneve, L. S. Fook, J. Merrill, G. Morris, M. Newchurch, S. Oltmans, M.C. Parrondos, F. Posny, F. Schmidlin, P. Skrivankova, R. Stubi, D. Tarasick, **A. Thompson**, V. Thouret, P. Viatte, H. Vömel, P. von Der Gathen, M. Yela, G. Zablocki, Validation of Aura Microwave Limb Sounder Ozone by Ozone-sonde and Lidar Measurements, *J. Geophys. Res.*, **112**, D24S doi:10.1029/2007JD008876, 2007.
158. J. Fishman, K. W. Bowman, J. P. Burrows, K. V. Chance, D. P. Edwards, R. V. Martin, G. A. Morris, R. B. Pierce, J. A. Al-Saadi, T. K. Schaack, **A. M. Thompson**, Remote Sensing of Tropospheric Pollution from Space, *Bull. Am. Meteor. Soc.*, **89**, 805-821, 2008.
159. B. Nardi, J. C. Gille, J. J. Barnett, C. Randall, V. L. Harvey, A. Waterfall, J. Reburn, T. Leblanc, S. Godin-

- Beekmann, T. McGee, L. Twigg, P. Bernath, B. Bojkov, C. Boone, C. Cavanaugh, M. Coffey, J. Craft, C. Craig, V. Dean, T. Eden, G. Francis, L. Froidevaux, C. Halvorson, J. Hannigan, C. Hepplewhite, D. Kinnison, R. Khosravi, C. Krinsky, A. Lambert, H. Lee, J. Loh, S. Massie, S. McDermid, D. Packman, **A. M. Thompson**, B. Torpy, J. Valverde-Canossa, K. Walker, C. Waymark, D. N. Whiteman, J. C. Witte, G. Young, Initial Validation of Ozone Measurements from the High Resolution Dynamic Limb Sounder (HIRDLS), *J. Geophys. Res.*, **113**, D16S36, doi:10.1029/2007JD008837, 2008.
160. I. Stajner, K. Wargan, S. Pawson, H. Hayashi, L-P. Chang., R. C. Hudman, L. Froidevaux, N. Livesey, P. Levelt, **A. M. Thompson**, D. W. Tarasick, René Stübi, S. B. Andersen, M. Yela, G. Koenig-Laslo, F. J. Schmidlin, J. C. Witte, Assimilated Ozone from EOS-Aura: Evaluation of the Tropopause Region and Tropospheric Columns, *J. Geophys. Res.*, **113**, D15S32, doi:10.1029/2007JD008863, 2008.
161. M. Parrington, D. B. A. Jones, K. W. Bowman, L. W. Horowitz, **A. M. Thompson**, D. Tarasick, and J. C. Witte, Constraining the Summertime Tropospheric Ozone Distribution over North America through Assimilation of Observations from the Tropospheric Emission Spectrometer, *J. Geophys. Res.*, doi:10.1029/2007JD009341, **112**, D18307, 2008.
162. G. B. Osterman, S.S. Kulawik, H.M. Worden, N.A.D. Richards, B.M. Fisher, A. Eldering, M.W. Shephard, L. Froidevaux, G. Labow, M. Luo, R.L. Herman, K.W. Bowman, **A.M. Thompson**, Validation of Tropospheric Emission Spectrometer (TES) Measurements of the Total, Stratospheric and Tropospheric Column Abundance of Ozone, *J. Geophys. Res.*, **113**, D15S16, doi:10.1029/2007JD008801, 2008.
163. Y. Tang, P. Lee, M. Tsidulko, H-C Huang, J. T. McQueen, G. J. DiMego, L. K. Emmons, R. B. Pierce, **A. M. Thompson**, H-M. Lin, D. Kang, D. Tong, S. Yu, R. Mathur, J. E. Pleim, T. L. Otte, G. Pouliot, J. O. Young, K. L. Schere, P. M. Davidson, I. Stajner, The Impact of Chemical Lateral Boundary Conditions on CMAQ Predictions of Tropospheric Ozone over the Continental United States, *Environ. Fluid Dynam.*, DOI 10.1007/s10652-008-9092-5, 2008.
164. **A. M. Thompson**, J. E. Yorks, S. K. Miller, J. C. Witte, K. M. Dougherty, G. A. Morris, D. Baumgardner, L. Ladino, B. Rappenglueck, Tropospheric Ozone Sources and Wave Activity over Mexico City and Houston during Milagro/Intercontinental Transport Experiment (INTEX-B) Ozonesonde Network Study, 2006 (IONS-06), *Atmos. Chem. Phys.*, **8**, 5113-5126, 2008.
165. G. G. Pfister, L. K. Emmons, P. G. Hess, J-F. Lamarque, **A. M. Thompson**, J. E. Yorks, Analysis of the Summer 2004 Ozone Budget over North America using IONS Observations and MOZART-4 Simulations, *J. Geophys. Res.*, **113**, D23306, doi:10.1029/2008JD010190, 2008.
166. J. E. Yorks, **A. M. Thompson**, E. Joseph, S. K. Miller, The Variability of Free Tropospheric Ozone over Beltsville, Maryland (39N, 77W) in the Summers 2004-2007, *Atmos. Environ.*, **43**, 1827-1838, 2009.
167. L. Zhang, D. J. Jacob, K. F. Boersma, D. A. Jaffe, J. R. Olson, K. W. Bowman, J. R. Worden, **A. M. Thompson**, M. A. Avery, R. C. Cohen, J. E. Dibb, F. M. Flocke, H. E. Fuelberg, L. G. Huey, W. W. McMillan, H. B. Singh, A. J. Weinheimer, Transpacific Transport of Ozone Pollution and the Effect of Recent Asian Emission Increases on Air Quality in North America: An integrated Analysis using Satellite, Aircraft, Ozonesonde, and Surface Observations, *Atmos. Chem. Phys.* **8**, 6117-6136, 2008.
168. L. Jourdain, S. S. Kulawik, H. M. Worden, K. E. Pickering, J. Worden, **A. M. Thompson** and TES co-authors, Lightning NO_x Emissions over the USA Investigated Using TES, NLDN, LRLDN, IONS Data and the GEOS-Chem Model, *Atmos. Chem. Phys. Disc.*, **9**, 1123-1155, 2009.
169. E. Dupuy et al. (AMT 99th co-author), Validation of Ozone measurement from the Atmospheric Chemistry Experiment (ACE), *Atmos. Chem. Phys.*, **9**, 287-343, 2009.
170. R. B. Pierce, J. A. Al-Saadi, C. Kittaka, T. Schaak, A. Lenzen, K. W. Bowman, J. Szykman, A. Soja, T. Ryerson, **A. M. Thompson**, P. K. Bhartia, Impacts of Background Ozone Production on Houston and Dallas, TX, Air Quality during the TEXAQS Field Mission, *J. Geophys. Res.*, **114**, D00F09, doi:10.1029/2008JD011337, 2009.
171. M. Parrington, D. B. A. Jones, K. W. Bowman, **A. M. Thompson**, D. W. Tarasick, J. Merrill, S. J. Oltmans, T. Leblanc, J. C. Witte, D. B. Miller, R. C. Hudman, The Impact of the Assimilation of Ozone from the Tropospheric Emission Spectrometer on Surface Ozone across North America, *Geophys. Res. Lett.*, **36**, L04802, doi:10.1029/2008GL036935, 2009.
172. G A. Morris, B. Ford, B. Rappenglück, **A. M. Thompson**, A. Mefferd, R. Ngan, B. Lefer, An evaluation of the influence of the morning residual layer on afternoon ozone concentrations in Houston using ozonesonde data, *Atmos. Environ.*, **43**, doi:10.1016/j.atmosenv.2009.06.057, 2009.
173. C. S. Boxe, J. R. Worden, G. B. Osterman, R. L. Herman, A. Eldering, D. W. Tarasick, **A. M.**

- Thompson**, S. J. Oltmans, Validation of Tropospheric Emission Spectrometer (TES) Nadir Stare Ozone Profiles Using Ozonesonde Measurements at Mid-to-high Latitudes during the Arctic Research on the Composition of the Troposphere from Aircraft and Satellites (ARCTAS), *Atmos. Chem. Phys.*, **9**, 27267-27301, 2009.
174. V. Sivakumar, H. Bencherif, N. Begue, **A. M. Thompson**, Tropopause characteristics and variability from 11-year SHADOZ observations in southern tropics and subtropics, *J. Appl. Meteor. Clim.*, submitted, 2009.
175. Q. Yang, D. M. Cunnold, Y. Choi, Y. Wang, L. Froidevaux, **A. M. Thompson**, P. K. Bhartia, A study of tropospheric ozone column enhancements over North America using satellite data and a global chemical model, *J. Geophys. Res.*, **115**, D08302, doi: 10.1029/2009JD012616, 2010.
176. D. J. Jacob, J. H. Crawford, H. Maring, J. E. Dibb, A. D. Clarke, R. A. Ferrare, C. A. Hostetler, P. B. Russell, H. B. Singh, **A. M. Thompson**, G. E. Shaw, E. McCauley, J. R. Pederson, J. A. Fisher, The ARCTAS aircraft mission: design and execution, *Atmos. Chem. Phys.*, **9**, 17073-17123, 2009.
177. **A. M. Thompson**, A.M. MacFarlane, G. A. Morris, J. E. Yorks, S. K. Miller, B. F. Taubman, G. Verver, H. Vömel, M. A. Avery, J. W. Hair, G. S. Diskin, E. V. Browell, J. M. Valverde-Canossa, T. L. Kucsera, C. A. Klich, D. L. Hlavka, Convective and wave signatures in ozone profiles over the equatorial Americas: Views from TC⁴ (2007) and SHADOZ, *J. Geophys. Res.*, doi: 10.1029/2009JD012909, in press, 2010.
178. H. Mao, M. Chen, J. Hegarty, R. Talbot, J. P. Koerner, **A. M. Thompson**, E. J. Williams, M. A. Avery, Seasonal Climate and Air Quality Simulations for the Northeastern U.S. Part I: Model Evaluation, *Atmos. Chem. Phys. Disc.*, **9**, 17851–17901, 2009.
179. G. A. Morris, **A. M. Thompson**, K. E. Pickering, S. Chen, E. Bucsel, P. Kucera, Observations of ozone production in a dissipating tropical convective cell during TC4, *Atmos. Chem. Phys.*, **10**, 18953-19004, 2010.
180. I. Petropavlovskikh, E. Ray, S. M. Davis, K. Rosenlof, G. Manney, R. Shetter, S. Hall, K. Ullmann, L. Pfister, J. Hair, M. Fenn, M. Avery, **A. M. Thompson**, Low ozone bubbles observed in the tropical tropopause layer during the TC4 campaign in 2007, *J. Geophys. Res.*, doi: 10.1029/2009JD012804, in press, 2010.
181. S. Lee, D. M. Shelow, **A. M. Thompson**, S. K. Miller, QBO and ENSO variability in temperature and ozone from SHADOZ (1998-2005), *J. Geophys. Res.*, doi: 10.1029/2009JD013320, in press, 2010.
182. **A. M. Thompson**, A. L. Allen, S. Lee, S. K. Miller, J. C. Witte, Gravity and Rossby wave signatures in the tropical troposphere and lower stratosphere based on Southern Hemisphere Additional Ozonesondes (SHADOZ), 1998-2007, *J. Geophys. Res.*, doi: 10.1029/2009JD013429, submitted, 2009.
183. M. A. Avery, J. Joiner, C. Twohy, D. McCabe, E. Atlas, D. Blake, P. Bui, J. Counse, J. Dibb, G. Diskin, R. Gao, P. Lawson, M. McGill, D. Rogers, G. Sachse, R. Salawitch, E. Scheuer, K. Severance, **A. M. Thompson**, C. Trepte, P. Wennberg, J. Ziemke, Convective distribution of tropospheric ozone and tracers in the central American ITCZ Region: Evidence from observations during TC4, *J. Geophys. Res.*, doi: 10.1029/2009JD013450, in press, 2010.
184. D. W. Tarasick, J. Jin, V. E. Fioletov, G. Liu, **A. M. Thompson**, S. J. Oltmans, An ozone climatology for INTEX and ARCTAS from IONS ozonesondes, *J. Geophys. Res.*, doi: 10.1029/2009JD012918, in press, 2010.
185. **A. M. Thompson**, S. J. Oltmans, D. W. Tarasick, P. Von der Gathen, H. G. J. Smit, J. C. Witte, Strategic ozone sounding networks: Review of design and accomplishments, *Atmos. Environ.*, D-10-0009, in press, 2010.
186. T. W. Walker, R. V. Martin, A. van Donkelaar, W. R. Leitch, A.M. MacDonald, K. Anlauf, R. C. Cohen, G. Huey, M. Avery, A. Weinheimer, F. Flocke, D. Tarasick, **A. M. Thompson**, D. G. Streets, X. Liu, Pacific transport of reactive nitrogen and ozone to Canada during spring, *Atmos. Chem. Phys.*, **10**, 8717-8764, 2010.
187. S. J. Oltmans, A.S. Lefohn, J.M. Harris, D.W. Tarasick, **A. M. Thompson**, H. Wernli, B. J. Johnson, J. Davies, P. Novelli, S. Montzka, C. Sweeney, L.C. Patrick, A. Jefferson, T. Dann, J.D. Ray, M. Shapiro, B.N. Holben, Enhanced ozone over western North America from biomass burning in Eurasia during April 2008 as seen in surface and profile observations, *Atmos. Environ.*, doi.org/10.1016/j.atmosenv.2010.07.004, in press, 2010.
188. M. Keywood, M. Kanakidou, A. Stohl, C. P. Meyer, K. Torseth, D. Edwards, J. Burrows, **A. M.**

REFEREED PUBLICATIONS

THOMPSON, ANNE M.

- Thompson**, U. Lohmann, Fire in the air: Biomass burning impacts in a changing climate, *Environ. Sci Tech.*, submitted, 2010.
189. D. C. Doughty, **A. M. Thompson**, M. R. Schoeberl, I. Stajner, K. Wargan, W. C. J. Hui, An intercomparison of tropospheric ozone retrievals derived from two Aura instruments and in-situ measurements in western North America in 2006, *J. Geophys. Res.*, doi: 10.1029/2010JD014703, submitted, 2010.
190. H. Morioka, M. Fujiwara, M. Shiotani, **A. M. Thompson**, J. C. Witte, S. J. Oltmans, Interannual variations of ozone in the tropical troposphere and tropopause region from the SHADOZ and other ozonesonde data sets, *J. Geophys. Res.*, to be submitted, 2010.

OTHER PAPERS, REPORTS:

1. "Acid Deposition Models and Physical Processes," NCAR-Acid Deposition Modeling Project, NCAR Tech. Note, 214 + STR, 1983. (Contributing Author)
2. "Tropospheric CH₄/CO/NO_x: The Next Fifty Years," **A. M. Thompson**, Proceedings, UNEP/USEPA International Conference on Environmental and Health Effects of Ozone Modification, Washington D.C., June 16-20, 1986.
3. "National Plan for Stratospheric Monitoring: 1988-1997," A. J. Miller, R. D. Hudson, W. G. Planet, E. Hilsenrath, R. B. Rood, D. F. Heath, J. Mentall, **A. M. Thompson**, J. A. Kaye, NOAA FCM-P17-1989, 1989.
4. "An Assessment Model for Atmospheric Composition," M. J. Prather, ed., Report of Workshop, Jan. 1989, NASA Conf. Pub. 3023 (Contributor).
5. "Model Estimates of Enhanced Photochemical Production of Ozone Resulting from Convective Transport of Precursors," K. E. Pickering, **A. M. Thompson**, and R. R. Dickerson, Preprint: Am. Meteor. Soc. Symposium on role of Clouds in Atmospheric Chemistry and Global Climate, Jan. 1989.
6. "Cumulus Clouds Model Estimates of Trace Gas Transports," M. Garstang, J. Scala, J. Simpson, W-K. Tao, **A. M. Thompson**, K. Pickering, and R. Harriss, Preprint: Am. Meteor. Soc. Symposium on role of Clouds in Atmospheric Chemistry and Global Climate, Jan. 1989.
7. "Comparison of Parameterized Nitric Acid Removal Rates Using a Coupled Stochastic-photochemical Model," R. W. Stewart, **A. M. Thompson**, and M. A. Owens, Preprint: Intl. Assn. Hydrol. Sci., **179**, May 1989.
8. "Chemical Fluxes in the Global Atmosphere," ed. by D. H. Lenschow and B. Hicks, NASA Workshop Report, (**A. M. Thompson**, Contributor), UCAR Pub., 1989.
9. "The Interaction of Convective Clouds and Chemistry in GTE/ABLE," **A. M. Thompson**, NASA/Goddard Space Flight Center, *Research and Technology Report*, 1989.
10. "Perturbations to UV Incident on Southern Hemisphere Oceans Following the Breakup of the Antarctic Ozone Hole," **A. M. Thompson**, in *Effects of Solar Uv Radiation on Geochemical Dynamics in Aquatic Environments*, ed. N. V. Blough and R. Zepp, WHOI Tech. Report 90-09, Woods Hole, MA, pp. 22-27, 1990.
11. "Model Estimates of the Effects of Deep Convective Clouds on Trace Gas Distributions and Concentrations," K. E. Pickering, **A. M. Thompson**, and R. R. Dickerson, *Proceedings, Intl. Conf. on Global and Regional Environ. Atmos. Chem.*, Beijing, May 1989.
12. "Greenhouse Gases and Aerosols," R. T. Watson, H. Rodhe, H. Oeschger, U. Siegenthaler, Scientific Assessment of Climate Change, Report to Intergovernmental Panel on Climate Change (IPCC) from Working Group 1, UNEP and WMO, 1990. (**A. M. Thompson**, Chapter Contributor).
13. "The Effect of Tropical Squall-type Convection on the Vertical Transport and Redistribution of Trace Gases," J. R. Scala, W. K. Tao, K. E. Pickering, **A. M. Thompson**, J. Simpson, and M. Garstang, Preprint: Seventh Joint Conference on Application of Air Pollution Meteorology with AWMA, 71st Annual Meeting, *Am. Met. Soc.*, Jan. 1991.
14. "Perturbations to Tropospheric UV and Ozone due to Stratospheric Ozone Depletion," **A. M. Thompson** and P. A. Newman, Preprint: Seventh Joint Conference on Application of Air Pollution Meteorology with AWMA, 71st Annual Meeting, *Am. Met. Soc.*, Jan. 1991.
15. "Ozone Production Potential During and Following Deep Convection," K. E. Pickering, **A. M. Thompson**, J. R. Scala, W. K. Tao, and J. Simpson, Preprint: Seventh Joint Conference on Application of Air Pollution Meteorology with AWMA, 71st Annual Meeting, *Am. Met. Soc.*, Jan. 1991.
16. "Tropospheric Processes and O₃-OH Chemistry," I. S. A. Isaksen, J. S. Fuglestad, C. Johnson, Y.-P. Lee, J. Lelieveld, R. Atkinson, H. Sidebottom, and **A. M. Thompson**, in *Scientific Assessment of Ozone Depletion: 1991*, WMO Global Ozone Research and Monitoring Project - Report No. 25, 1992.
17. "Atmospheres Panel Report to the Payload Panel," M. Schoeberl, J. Pfaendtner, R. Rood, **A. M. Thompson**, and B. Wielicki, *Palaeogeography, Palaeoclimatology, Palaeoecology (Global and Planetary Change Section)*, **98**, 9-21, 1992.
18. "Report of the Proceedings of the Colloquium and Workshop on Multiscale Coupled Modeling," S. E. Koch, Editor, (**A. M. Thompson**, Contributor), NASA Conf. Pub., 3217, 1993.
19. "Methane Increases in the Last Glacial Maximum," by I. Y. Fung, J. A. Chappellaz and **A. M. Thompson**, in *GSFC Research and Technology Report: 1992* Goddard Space Flight Center, 1993.

20. "Oxidants in the Unpolluted Marine Atmosphere," **A. M. Thompson**, chapter in *Advances in Environmental Science and Technology*, ed. J. Nriagu, Wiley, New York, Chapter 2, pp. 31-61, 1994.
21. "H_xO_y Measurements in the Atmosphere," W. B. Brune, D. R. Crosley, G. H. Mount, A. Hofzumahaus, H.-P. Dorn, D. Mihelcic, and **A. M. Thompson**, in *Report on Atmospheric Chemistry*, National Academy of Sciences, ed. A. Ravishankara, to be published, 1994.
22. "Development of Modified TOMS O₃ Algorithm for Marine Stratocumulus Regions," **A. M. Thompson** and R. D. McPeters, in *GSFC Research and Technology Report: 1993 Goddard Space Flight Center*, pp. 90-91, 1994.
23. "Tropospheric Chemistry," **A. M. Thompson**, in *NCCS Highlights: FY93*, Earth & Space Sciences, GSFC, 1994.
24. "Biomass Burning in the Global Environment: First Results from the IGAC/BIBEX Field Campaign STARE/TRACE-A/SAFARI-92," M. O. Andreae, J. Fishman, M. Garstang, J. G. Goldammer, C. O. Justice, J. S. Levine, R. J. Scholes, B. J. Stocks, **A. M. Thompson**, B. van Wilgen, and the STARE/TRACE-A/SAFARI-92 Science Team, *Global Atmospheric-Biospheric Chemistry: The First IGAC Scientific Conference*, ed. R. Prinn, Plenum Press, New York, 83-101, 1994.
25. "Workshop Summary: Aircraft Mission Measurement Strategies for the NASA Subsonic Assessment Program" D. Baumgardner and **A. Thompson**, NCAR Tech. Note, TN+411+Proc, NCAR, RAF/ATD, Boulder CO, Dec. 1994
26. "NASA Atmospheric Effects of Aviation Project: Status and Plans" H. L. Wesoky, A.M. Thompson and R. S. Stolarski, Symposium on Impact of Emissions from Aircraft and Spacecraft upon the Atmosphere, *Proceedings*, DLR Symposium, Köln, Apr. 1994.
27. "CO Changes and Atmospheric Oxidizing Capacity," by **A. M. Thompson** in *Report of the WMO-Sponsored Meeting of Carbon Monoxide Experts*, ed. P. C. Novelli and R. Rosson, WMO, **98**, pp. 38-40, 1994.
28. UNEP/WMO 1994 Ozone Assessment, Chapter 11 (**A. M. Thompson**, co-author); Chapter 5 (**A. M. Thompson**, contributor), ed. D. L. Albritton, R. T. Watson, and P. Aucamp, UNEP WMO Report 37, 1994.
29. "Ozone Changes in the Future: Key Processes and Prediction of Trends," **A. M. Thompson** in *The Chemistry of the Atmosphere - Oxidants and Oxidation in the Earth's Atmosphere*, 7th BOC Priestley Conference, Royal Society of Chemistry, 1995.
30. "Atmospheric Effects of Aviation: First Subsonic Assessment Program Report," ed. **A. M. Thompson**, R. R. Friedl, and H. L. Wesoky, NASA Ref. Pub., 1385, 1996.
31. "Photochemical Processes in the Upper Troposphere: A Monte Carlo Study of HO_x and NO_x Chemistry," **A. M. Thompson**, R. W. Stewart, and T. L. Kucsera, *Proceedings for the 6th Symposium ISEEQS, "Preservation of Our World in the Wake of Change,"* ed. Y. Steinberger, Jerusalem, 30 June - 4 July 1996.
32. "Implications of Imprecision in Kinetic Rate Data for Photochemical Model Calculations," R. W. Stewart and **A. M. Thompson**, Aircraft Effects Symposium Proceedings, Comite Avion Ozone, 15-18 Oct. 1996, Paris, ed. D. Gufond.
33. "Tropospheric Ozone at Cuiaba during SCAR-B and TRACE-A," **A. M. Thompson**, D. P. McNamara, V. W. J. Kirchhoff, and A. Setzer, SCAR-B, NASA-AEB Special SCAR-B Symposium, Fortaleza, Brazil, 4-8 Nov. 1996.
34. "Ozonesonde Observations in the Cerrado Troposphere during SCAR-B," V. W. J. H. Kirchhoff, J. R. Alves, A. G. Motta, D. Mauzerall, D. Jacob, D. McNamara, and **A. M. Thompson**, SCAR-B, NASA-AEB Special SCAR-B Symposium, Fortaleza, Brazil, 4-8 Nov. 1996.
35. "Using Remote Sensing to Study Tropospheric Ozone and Ozone Precursor Sources in Southern Africa and Brazil," **A. M. Thompson**, Preprint: 5th AMS Southern Hemisphere Conference, Pretoria, South Africa, April 1997.
36. "Tropospheric Ozone and Related Processes", J. Lelieveld, **A. M. Thompson**, Chapter 8 in WMO Global Ozone Research and Monitoring Project - Report No. 44: Scientific Assessment of Ozone Depletion 1998, Geneva, 1999.
37. "SHADOZ (Southern Hemisphere Additional Ozonesondes): A new data set for the Earth Science Community," **A. M. Thompson** and J. C. Witte, *Earth Observer*, **11** (4), 27-30, 1999.

38. "SHADOZ (Southern Hemisphere Additional Ozonesondes): An Ozone Network and Resource for Remote Sensing Research and Education," **A. M. Thompson** and J. C. Witte, Proceedings of International Symposium on Remote Sensing of Environment, Cape Town, So. Africa, March 2000.
39. "Tropospheric ozone pollution from space: New views from the TOMS (Total Ozone Mapping Spectrometer)," A.M. Thompson, R. D. Hudson, A. D. Frolov, J. C. Witte, and T. L. Kucsera, Proceedings of AMS Annual Meeting Millennium Symposium on Atmospheric Chemistry, Jan. 2001.
40. "Tropospheric ozone from space: Tracking pollution with the TOMS (Total Ozone Mapping Spectrometer) instrument," **A. M. Thompson**, R. D. Hudson, A. D. Frolov, J.C. Witte and T. L. Kucsera, IGARSS Proceedings, Meeting, July 2001, IEEE Publ., Piscataway, NJ, 2001.
41. **A. M. Thompson**, P. A. Newman, J. F. Gleason, W. H. Brune, and R. R. Dickerson, Report on a Workshop on Regional-to-Global Pollution, *Earth Observer*, Aug.-Sept. issue, 2002.
42. "Atmospheric Effects of Biomass Burning," **A. M. Thompson**, Chapter 14 in J. Wiley Handbook of Weather, Climate, and Water, ed. B. Colman and T. Potter, 2003.
43. **A. M. Thompson**, J. C. Witte, S. J. Oltmans, F. J. Schmidlin, SHADOZ (Southern Hemisphere Additional Ozonesondes): A New Source of Ozone and Temperature Data from a Tropical Network, *SPARC Newsletter*, Jan.-Mar. 2003, issue.
44. **A. M. Thompson**, "Intercontinental Transport of Ozone from Tropical Biomass Burning" in A. Stohl, ed. *Intercontinental Transport*, Springer-Verlag, Chapter 9, 2004.
45. **A. M. Thompson**, "Ozone from Soundings: A Vital Element of Regional and Global Measurement Strategies," in *Observing Systems for Atmospheric Composition: Satellite, Aircraft Sensor Web And Ground-based Observational Methods And Strategies*, ISBN: 0387307192, ed. G. Visconti, P. DiCarlo, W. H. Brune, A. Wahner, M. R. Schoerberl, Springer, 2006.
46. **A. M. Thompson**, "Atmospheric Ozone: Multiple Roles in Global Change," in *Windswept Notes*, ed. A. Pszenny, Mount Washington Observatory Notes, Fall 2007.
47. "Earth Observations from Space: The First Fifty Years of Scientific Achievements," a Report to the NAS/NRC, **A. M. Thompson**, Committee Member (Co-author Chapter 5), National Academies Press, ISBN 13-978-0-309-11095-2, 2007.
48. **A. M. Thompson**, An Overview of Strategic Ozone Sounding Networks: Insights into Ozone Budgets, UT/LS Processes and Tropical Climate Signatures, *Protecting the Ozone Layer*, C. Zerefos, Ed., Springer, pp 237-249, ISBN - 978-90-481-2468-8, 2009.