

**Peer-reviewed Journal Articles from 2000 to Present**  
**Excludes submitted and in press papers**  
**12 February 2008**

- Adachi, K., S.H. Chung, H. Friedrich, and P.R. Buseck, Fractal parameters of individual soot particles determined using electron tomography: Implications for optical properties, *Journal of Geophysical Research*, *112*, doi:10.1029/2006JD008296, 2007.
- Adachi, A., T. Kobayashi, K.S. Gage, D.A. Carter, L.M. Hartten, W.L. Clark, and M. Fukuda, Evaluation of three-beam and four-beam profiler wind measurement techniques using a five-beam wind profiler and collocated meteorological tower, *Journal of Atmospheric and Oceanic Technology*, *22*, 1167-1180, doi:1110.1175/JTECH1777.1161, 2005.
- Adachi, A., W.L. Clark, L.M. Hartten, K.S. Gage, and T. Kobayashi, An observational study of a shallow gravity current triggered by katabatic flow, *Annales Geophysicae*, *22*, 3937-3950, 2004.
- Aldener, M., S.S. Brown, H. Stark, E.J. Williams, B.M. Lerner, W.C. Kuster, P.D. Goldan, P.K. Quinn, T.S. Bates, F.C. Fehsenfeld, and A.R. Ravishankara, Reactivity and loss mechanisms of NO<sub>3</sub> and N<sub>2</sub>O<sub>5</sub> in a polluted marine environment: Results from in situ measurements during New England Air Quality Study 2002, *Journal of Geophysical Research*, *111*, doi:10.1029/2006JD007252, 2006.
- Aldener, M., S.S. Brown, H. Stark, J.S. Daniel, and A.R. Ravishankara, Near-IR absorption of water vapor: Pressure dependence of line strengths and an upper limit for continuum absorption, *Journal of Molecular Spectroscopy*, *232*, 223-230, doi:210.1016/j.jms.2005.1004.1011, 2005.
- Alexander, M.J., and K.H. Rosenlof, Gravity-wave forcing in the stratosphere: Observational constraints from the Upper Atmosphere Research Satellite and implications for parameterization in global models, *Journal of Geophysical Research*, *108*, doi:10.1029/2003JD003373, 2003.
- Allan, J.D., A.E. Delia, H. Coe, K.N. Bower, M.R. Alfarra, J.L. Jimenez, A.M. Middlebrook, F. Drewnick, T.B. Onasch, M.R. Canagaratna, J.T. Jayne, and D.R. Worsnop, Technical note: A generalized method for the extraction of chemically resolved mass spectra from Aerodyne aerosol mass spectrometer data, *Journal of Aerosol Science*, *35*, 909-922, doi:910.1016/j.jaerosci.2004.1002.1007, 2004.
- Altartatz, O., I. Koren, T. Reisin, A. Kostinski, G. Feingold, Z. Levin, and Y. Yin, Aerosols' influence on the interplay between condensation, evaporation and rain in warm cumulus cloud, *Atmospheric Chemistry Physics*, *8*, 15-24, 2008.
- Andersen, S.B., E.C. Weatherhead, A. Stevermer, J. Austin, C. Brühl, E.L. Fleming, J. de Grandpré, V. Grewe, I. Isaksen, G. Pitari, R.W. Portmann, B. Rognerud, J.E. Rosenfield, S. Smyshlayev, T. Nagashima, G.J.M. Velders, D.K. Weisenstein, and J. Xia, Comparison of recent modeled and observed trends in total column ozone, *Journal of Geophysical Research*, *111*, doi:10.1029/2005JD006091, 2006.
- Anderson, J., J.M. Russell, III, S. Solomon, and L.E. Deaver, Halogen Occultation Experiment confirmation of stratospheric chlorine decreases in accordance with the Montreal Protocol, *Journal of Geophysical Research*, *105*, 4483-4490, 2000.
- Angevine, W.M., Transitional, entraining, cloudy, and coastal boundary layers, *Acta Geophysica*, *56*, 2-20, doi:10.2478/s11600-11007-10035-11601, 2008.

- Angevine, W.M., M. Tjernström, and M. Zagar, Modeling of the coastal boundary layer and pollutant transport in New England, *Journal of Applied Meteorology and Climatology*, 45, 137-154, doi:10.1175/JAM2333.1171, 2006.
- Angevine, W.M., J.E. Hare, C.W. Fairall, D.E. Wolfe, R.J. Hill, W.A. Brewer, and A.B. White, Structure and formation of the highly stable marine boundary layer over the Gulf of Maine, *Journal of Geophysical Research*, 111, doi:10.1029/2006JD007465, 2006.
- Angevine, W.M., An integrated turbulence scheme for boundary layers with shallow cumulus applied to pollutant transport, *Journal of Applied Meteorology*, 44, 1436-1452, doi:10.1175/JAM2284.1431, 2005.
- Angevine, W.M., C.J. Senff, A.B. White, E.J. Williams, J. Koermer, S.T.K. Miller, R. Talbot, P.E. Johnston, S.A. McKeen, and T. Downs, Coastal boundary layer influence on pollutant transport in New England, *Journal of Applied Meteorology*, 43, 1425-1437, 2004.
- Angevine, W., M. Zagar, M. Tjernström, C. Senff, and A. White, Transport of urban pollution in coastal New England, *Bulletin of the American Meteorological Society*, 85, 1066, doi:10.1175/BAMS-1085-1068-1066, 2004.
- Angevine, W.M., A.B. White, C.J. Senff, M. Trainer, R.M. Banta, and M.A. Ayoub, Urban-rural contrasts in mixing height and cloudiness over Nashville in 1999, *Journal of Geophysical Research*, 108, 4092, doi:10.1029/2001JD001061, 2003.
- Angevine, W.M., and K. Mitchell, Evaluation of the NCEP Mesoscale Eta Model convective boundary layer for air quality applications, *Monthly Weather Review*, 129, 2761-2775, 2001.
- Angevine, W.M., H.K. Baltink, and F.C. Bosveld, Observations of the morning transition of the convective boundary layer, *Boundary-Layer Meteorology*, 101, 209-227, 2001.
- Atlas, D., C.W. Ulbrich, and C.R. Williams, Physical origin of a wet microburst: Observations and theory, *Journal of the Atmospheric Sciences*, 61, 1186-1196, 2004.
- Atlas, D., and C.R. Williams, The anatomy of a continental tropical convective storm, *Journal of the Atmospheric Sciences*, 60, 3-15, 2003.
- Atlas, D., and C.R. Williams, Radar echoes from lightning and their microphysical environment, *Geophysical Research Letters*, 30, doi:10.1029/2002GL016521, 2003.
- Bais, A.F., S. Madronich, J. Crawford, S.R. Hall, B. Mayer, M. van Weele, J. Lenoble, J.G. Calvert, C.A. Cantrell, R.E. Shetter, A. Hofzumahaus, P. Koepke, P.S. Monks, G. Frost, R. McKenzie, N. Krotkov, A. Kylling, W.H. Swartz, S. Lloyd, G. Pfister, T.J. Martin, E.-P. Roeth, E. Griffioen, A. Ruggaber, M. Krol, A. Kraus, G.D. Edwards, M. Mueller, B.L. Lefer, P. Johnston, H. Schwander, D. Flittner, B.G. Gardiner, J. Barrick, and R. Schmitt, International Photolysis Frequency Measurement and Model Intercomparison (IPMMI): Spectral actinic solar flux measurements and modeling, *Journal of Geophysical Research*, 108, doi:10.1029/2002JD002891, 2003.
- Banta, R.M., L. Mahrt, D. Vickers, J. Sun, B.B. Balsley, Y.L. Pichugina, and E.J. Williams, The very stable boundary layer on nights with weak low-level jets, *Journal of the Atmospheric Sciences*, 64, 3068-3090, doi:10.1175/JAS4002.3061, 2007.
- Banta, R.M., Y.L. Pichugina, and W.A. Brewer, Turbulent velocity-variance profiles in the stable

boundary layer generated by a nocturnal low-level jet, *Journal of the Atmospheric Sciences*, *63*, 2700-2719, doi:2710.1175/JAS3776.2701, 2006.

Banta, R.M., C.J. Senff, J. Nielsen-Gammon, L.S. Darby, T.B. Ryerson, R.J. Alvarez, S.P. Sandberg, E.J. Williams, and M. Trainer, A bad air day in Houston, *Bulletin of the American Meteorological Society*, *86*, 657-669, doi:610.1175/BAMS-1186-1175-1657, 2005.

Bao, J.-W., S.A. Michelson, S.A. McKeen, and G.A. Grell, Meteorological evaluation of a weather-chemistry forecasting model using observations from the TEXAS AQS 2000 field experiment, *Journal of Geophysical Research*, *110*, doi:10.1029/2004JD005024, 2005.

Barket, D.J.J., J.W. Grossenbacher, J.M. Hurst, P.B. Shepson, K. Olszyna, T. Thornberry, M.A. Carroll, J. Roberts, C. Stroud, J. Bottenheim, and T. Biesenthal, A study of the NO<sub>x</sub> dependence of isoprene oxidation, *Journal of Geophysical Research*, *109*, doi:10.1029/2003JD003965, 2004.

Barth, M.C., S.-W. Kim, C. Wang, K.E. Pickering, L.E. Ott, G. Stenchikov, M. Leriche, S. Cautenet, J.-P. Pinty, C. Barthe, C. Mari, J.H. Helsdon, R.D. Farley, A.M. Fridlind, A.S. Ackerman, V. Spiridonov, and B. Telenta, Cloud-scale model intercomparison of chemical constituent transport in deep convection, *Atmospheric Chemistry and Physics*, *7*, 4709-4731, 2007.

Barth, M.C., S.-W. Kim, W.C. Skamarock, A.L. Stuart, K.E. Pickering, and L.E. Ott, Simulations of the redistribution of formaldehyde, formic acid, and peroxides in the 10 July 1996 Stratospheric-Tropospheric Experiment: Radiation, Aerosols, and Ozone deep convection storm, *Journal of Geophysical Research*, *112*, doi:10.1029/2006JD008046, 2007.

Bates, T.S., T.L. Anderson, T. Baynard, T. Bond, O. Boucher, G. Carmichael, A. Clarke, C. Erlick, H. Guo, L. Horowitz, S. Howell, S. Kulkarni, H. Maring, A. McComiskey, A. Middlebrook, K. Noone, C.D. O'Dowd, J. Ogren, J. Penner, P.K. Quinn, A.R. Ravishankara, D.L. Savoie, S.E. Schwartz, Y. Shinozuka, Y. Tang, R.J. Weber, and Y. Wu, Aerosol direct radiative effects over the northwest Atlantic, northwest Pacific, and North Indian Oceans: Estimates based on in-situ chemical and optical measurements and chemical transport modeling, *Atmospheric Chemistry and Physics*, *6*, 1657-1732, 2006.

Battaglia, A., C. Kummerow, D.-B. Shin, and C.R. Williams, Constraining microwave brightness temperatures by radar brightband observations, *Journal of Atmospheric and Oceanic Technology*, *20*, 856-871, 2003.

Baumann, K., E.J. Williams, W.M. Angevine, J.M. Roberts, R.B. Norton, G.J. Frost, F.C. Fehsenfeld, S.R. Springston, S.B. Bertman, and B. Hartsell, Ozone production and transport near Nashville, Tennessee: Results from the 1994 study at New Hendersonville, *Journal of Geophysical Research*, *105*, 9137-9153, 2000.

Baynard, T., E.R. Lovejoy, A. Pettersson, S.S. Brown, D. Lack, H. Osthoff, P. Massoli, S. Ciciora, W.P. Dubé, and A.R. Ravishankara, Design and application of a pulsed cavity ring-down aerosol extinction spectrometer for field measurements, *Aerosol Science and Technology*, *41*, 447-462, doi:410.1080/02786820701222801, 2007.

Baynard, T., R.M. Garland, A.R. Ravishankara, M.A. Tolbert, and E.R. Lovejoy, Key factors influencing the relative humidity dependence of aerosol light scattering, *Geophysical Research Letters*, *33*, doi:10.1029/2005GL024898, 2006.

- Beirle, S., N. Spichtinger, A. Stohl, K.L. Cummins, T. Turner, D. Boccippio, O.R. Cooper, M. Wenig, M. Grzegorski, U. Platt, and T. Wagner, Estimating the NO<sub>x</sub> produced by lightning from GOME and NLDN data: A case study in the Gulf of Mexico, *Atmospheric Chemistry and Physics*, 6, 1075-1089, 2006.
- Bonasoni, P., P. Cristofanelli, F. Calzolari, U. Bonafè, F. Evangelisti, A. Stohl, S.Z. Sajani, R. van Dingenen, T. Colombo, and Y. Balkanski, Aerosol-ozone correlations during dust transport episodes, *Atmospheric Chemistry and Physics*, 4, 1201-1215, doi:1680-7324/acp/2004-1204-1201, 2004.
- Boulter, J.E., D.J. Cziczo, A.M. Middlebrook, D.S. Thomson, and D.M. Murphy, Design and performance of a pumped counterflow virtual impactor, *Aerosol Science and Technology*, 40, 969-976, doi:910.1080/02786820600840984, 2006.
- Bowman, K.P., L.L. Pan, T. Campos, and R. Gao, Observations of fine-scale transport structure in the upper troposphere from the High-performance Instrumented Airborne Platform for Environmental Research, *Journal of Geophysical Research*, 112, doi:10.1029/2007JD008685, 2007.
- Braban, C.F., J.P.D. Abbatt, and D.J. Cziczo, Deliquescence of ammonium sulfate particles at sub-eutectic temperatures, *Geophysical Research Letters*, 28, 3879-3882, 2001.
- Brasseur, G.P., M. Schultz, C. Granier, M. Saunois, T. Diehl, M. Botzet, E. Roeckner, and S. Walters, Impact of climate change on the future chemical composition of the global troposphere, *Journal of Climate*, 19, 3932-3951, doi:3910.1175/JCLI3832.3931, 2006.
- Brioude, J., O.R. Cooper, M. Trainer, T.B. Ryerson, J.S. Holloway, T. Baynard, J. Peischl, C. Warneke, J.A. Neuman, J. deGouw, A. Stohl, S. Eckhardt, G.J. Frost, S.A. McKeen, E.-Y. Hsie, F.C. Fehsenfeld, and P. Nédélec, Mixing between a stratospheric intrusion and a biomass burning plume, *Atmospheric Chemistry and Physics*, 7, 4229-4235, 2007.
- Brioude, J., J.-P. Cammas, and O.R. Cooper, Stratosphere-troposphere exchange in a summertime extratropical low: Analysis, *Atmospheric Chemistry and Physics*, 6, 2337-2353, 2006.
- Brock, C.A., P.K. Hudson, E.R. Lovejoy, A. Sullivan, J.B. Nowak, L.G. Huey, O.R. Cooper, D.J. Cziczo, J.A. deGouw, F.C. Fehsenfeld, J.S. Holloway, G. Hübler, B.G. Lafleur, D.M. Murphy, J.A. Neuman, D.K. Nicks, Jr., D.A. Orsini, D.D. Parrish, T.B. Ryerson, D.J. Tanner, C. Warneke, R.J. Weber, and J.C. Wilson, Particle characteristics following cloud-modified transport from Asia to North America, *Journal of Geophysical Research*, 109, doi:10.1029/2003JD004198, 2004.
- Brock, C.A., D. Eatough, and P.A. Solomon, Preface to special section on particulate matter: Atmospheric sciences, exposure, and the fourth colloquium on particulate matter and human health, *Journal of Geophysical Research*, 109, doi:10.1029/2004JD005040, 2004.
- Brock, C.A., M. Trainer, T.B. Ryerson, J.A. Neuman, D.D. Parrish, J.S. Holloway, D.K. Nicks, Jr., G.J. Frost, G. Hübler, F.C. Fehsenfeld, J.C. Wilson, J.M. Reeves, B.G. Lafleur, H. Hilbert, E.L. Atlas, S.G. Donnelly, S.M. Schauffler, V.R. Stroud, and C. Wiedinmyer, Particle growth in urban and industrial plumes in Texas, *Journal of Geophysical Research*, 108, doi:10.1029/2002JD002746, 2003.
- Brock, C.A., R.A. Washenfelder, M. Trainer, T.B. Ryerson, J.C. Wilson, J.M. Reeves, L.G. Huey, J.S. Holloway, D.D. Parrish, G. Hübler, and F.C. Fehsenfeld, Particle growth in the plumes of coal-fired

power plants, *Journal of Geophysical Research*, 107, doi:10.1029/2001JD001062, 2002.

Brock, C.A., F. Schröder, B. Kärcher, A. Petzold, R. Busen, and M. Fiebig, Ultrafine particle size distributions measured in aircraft exhaust plumes, *Journal of Geophysical Research*, 105, 26555-26567, 2000.

Brooks, S.D., D. Baumgardner, B. Gandrud, J.E. Dye, M.J. Northway, D.W. Fahey, T.P. Bui, O.B. Toon, and M.A. Tolbert, Measurements of large stratospheric particles in the Arctic polar vortex, *Journal of Geophysical Research*, 108, doi:10.1029/2002JD003278, 2003.

Brown, S.S., W.P. Dubé, H.D. Osthoff, D.E. Wolfe, W.M. Angevine, and A.R. Ravishankara, High resolution vertical distributions of NO<sub>3</sub> and N<sub>2</sub>O<sub>5</sub> through the nocturnal boundary layer, *Atmospheric Chemistry and Physics*, 7, 139-149, 2007.

Brown, S.S., W.P. Dubé, H.D. Osthoff, J. Stutz, T.B. Ryerson, A.G. Wollny, C.A. Brock, C. Warneke, J.A. deGouw, E. Atlas, J.A. Neuman, J.S. Holloway, B.M. Lerner, E.J. Williams, W.C. Kuster, P.D. Goldan, W.M. Angevine, M. Trainer, F.C. Fehsenfeld, and A.R. Ravishankara, Vertical profiles in NO<sub>3</sub> and N<sub>2</sub>O<sub>5</sub> measured from an aircraft: Results from the NOAA P-3 and surface platforms during New England Air Quality Study 2004, *Journal of Geophysical Research*, 112, doi:10.1029/2007JD008883, 2007.

Brown, S.S., W.P. Dubé, H.D. Osthoff, W.M. Angevine, D.E. Wolfe, and A.R. Ravishankara, High resolution distributions of NO<sub>3</sub> and N<sub>2</sub>O<sub>5</sub> through the nocturnal boundary layer, *Atmospheric Chemistry and Physics Discussions*, 6, 9431-9458, 2006.

Brown, S.S., J.A. Neuman, T.B. Ryerson, M. Trainer, W.P. Dubé, J.S. Holloway, C. Warneke, J.A. deGouw, S.G. Donnelly, E. Atlas, B. Matthew, A.M. Middlebrook, R. Peltier, R.J. Weber, A. Stohl, J.F. Meagher, F.C. Fehsenfeld, and A.R. Ravishankara, Nocturnal odd-oxygen budget and its implications for ozone loss in the lower troposphere, *Geophysical Research Letters*, 33, doi:10.1029/2006GL025900, 2006.

Brown, S.S., T.B. Ryerson, A.G. Wollny, C.A. Brock, R. Peltier, A.P. Sullivan, R.J. Weber, W.P. Dubé, M. Trainer, J.F. Meagher, F.C. Fehsenfeld, and A.R. Ravishankara, Variability in nocturnal nitrogen oxide processing and its role in regional air quality, *Science*, 311, 67-70, doi:10.1126/science.1120120, 2006.

Brown, S.S., H.D. Osthoff, H. Stark, W.P. Dubé, T.B. Ryerson, C. Warneke, J.A. deGouw, A.G. Wollny, D.D. Parrish, F.C. Fehsenfeld, and A.R. Ravishankara, Aircraft observations of daytime NO<sub>3</sub> and N<sub>2</sub>O<sub>5</sub> and their implications for tropospheric chemistry, *Journal of Photochemistry and Photobiology A: Chemistry*, 176, 270-278, doi:10.1016/j.jphotochem.2005.1010.1004, 2005.

Brown, S.S., J.E. Dibb, H. Stark, M. Aldener, M. Vozella, S. Whitlow, E.J. Williams, B.M. Lerner, R. Jakoubek, A.M. Middlebrook, J.A. deGouw, C. Warneke, P.D. Goldan, W.C. Kuster, W.M. Angevine, D.T. Sueper, P.K. Quinn, T.S. Bates, J.F. Meagher, F.C. Fehsenfeld, and A.R. Ravishankara, Nighttime removal of NO<sub>x</sub> in the summer marine boundary layer, *Geophysical Research Letters*, 31, doi:10.1029/2004GL019412, 2004.

Brown, S.S., Absorption spectroscopy in high-finesse cavities for atmospheric studies, *Chemical Reviews*, 103, 5219-5238, doi:10.1021/cr020645c, 2003.

Brown, S.S., H. Stark, and A.R. Ravishankara, Applicability of the steady state approximation to the

interpretation of atmospheric observations of  $\text{NO}_3$  and  $\text{N}_2\text{O}_5$ , *Journal of Geophysical Research*, *108*, doi:10.1029/2003JD003407, 2003.

Brown, S.S., H. Stark, T.B. Ryerson, E.J. Williams, D.K. Nicks, Jr., M. Trainer, F.C. Fehsenfeld, and A.R. Ravishankara, Nitrogen oxides in the nocturnal boundary layer: Simultaneous in situ measurements of  $\text{NO}_3$ ,  $\text{N}_2\text{O}_5$ ,  $\text{NO}_2$ ,  $\text{NO}$ , and  $\text{O}_3$ , *Journal of Geophysical Research*, *108*, doi:10.1029/2002JD002917, 2003.

Brown, S.S., H. Stark, and A.R. Ravishankara, Cavity ring-down spectroscopy for atmospheric trace gas detection: Application to the nitrate radical ( $\text{NO}_3$ ), *Applied Physics B: Laser and Optics*, *75*, 173-182, doi:10.1007/s00340-00002-00980-y, 2002.

Brown, S.S., H. Stark, S.J. Ciciora, R.J. McLaughlin, and A.R. Ravishankara, Simultaneous *in situ* detection of atmospheric  $\text{NO}_3$  and  $\text{N}_2\text{O}_5$  via cavity ring-down spectroscopy, *Review of Scientific Instruments*, *73*, 3291-3301, 2002.

Brown, S.S., H. Stark, S.J. Ciciora, and A.R. Ravishankara, In-situ measurement of atmospheric  $\text{NO}_3$  and  $\text{N}_2\text{O}_5$  via cavity ring-down spectroscopy, *Geophysical Research Letters*, *28*, 3227-3230, 2001.

Brown, S.S., J.B. Burkholder, R.K. Talukdar, and A.R. Ravishankara, Reaction of hydroxyl radical with nitric acid: Insights into its mechanism, *Journal of Physical Chemistry A*, *105*, 1605-1614, doi: 10.1021/jp002394m, 2001.

Brown, S.S., R.W. Wilson, and A.R. Ravishankara, Absolute intensities for third and fourth overtone absorptions in  $\text{HNO}_3$  and  $\text{H}_2\text{O}_2$  measured by cavity ring down spectroscopy, *Journal of Physical Chemistry A*, *104*, 4976-4983, doi: 10.1021/jp000439d, 2000.

Brown, S.S., A.R. Ravishankara, and H. Stark, Simultaneous kinetics and ring-down: Rate coefficients from single cavity loss temporal profiles, *The Journal of Physical Chemistry A*, *104*, 7044-7052, doi: 10.1021/jp0013715, 2000.

Burkholder, J.B., T. Baynard, A.R. Ravishankara, and E.R. Lovejoy, Particle nucleation following the  $\text{O}_3$  and  $\text{OH}$  initiated oxidation of *a*-Pinene and *b*-Pinene between 278 and 320 K, *Journal of Geophysical Research*, *112*, doi:10.1029/2006JD007783, 2007.

Burkholder, J.B., J. Curtius, A.R. Ravishankara, and E.R. Lovejoy, Laboratory studies of the homogeneous nucleation of iodine oxides, *Atmospheric Chemistry and Physics*, *4*, 19-34, 2004.

Burkholder, J.B., M.K. Gilles, T. Gierczak, and A.R. Ravishankara, The atmospheric degradation of 1-bromopropane ( $\text{CH}_3\text{CH}_2\text{CH}_2\text{Br}$ ): The photochemistry of bromoacetone, *Geophysical Research Letters*, *29*, doi:10.1029/2002GL014712, 2002.

Burkholder, J.B.,  $\text{NO}_3$  yield in the  $\text{O}(^3\text{P}) + \text{BrONO}_2$  reaction, *Journal of Physical Chemistry A*, *104*, 6733-6737, doi: 10.1021/jp9942926, 2000.

Burkholder, J.B., and A.R. Ravishankara, Rate coefficient for the reaction:  $\text{O} + \text{NO}_2 + \text{M} \rightarrow \text{NO}_3 + \text{M}$ , *Journal of Physical Chemistry A*, *104*, 6752-6757, doi: 10.1021/jp000169z, 2000.

Burkholder, J.B., M. Mills, and S.A. McKeen, Upper limit for the UV absorption cross sections of  $\text{H}_2\text{SO}_4$ , *Geophysical Research Letters*, *27*, 2493-2496, 2000.

Burkholder, J.B., and J.J. Orlando, UV absorption cross-sections of *cis*- $\text{BrONO}$ , *Chemical Physics*

*Letters*, 317, 603-608, 2000.

Burkholder, J.B., G. Knight, and J.J. Orlando, UV absorption spectrum of BrOCl, *Journal of Photochemistry and Photobiology A: Chemistry*, 134, 133-137, 2000.

Canagaratna, M.R., J.T. Jayne, J.L. Jiménez, J.D. Allan, M.R. Alfarra, Q. Zhang, T.B. Onasch, F. Drewnick, H. Coe, A. Middlebrook, A. Delia, L.R. Williams, A.M. Trimborn, M.J. Northway, C.E. Kolb, P. Davidovits, and D.R. Worsnop, Chemical and microphysical characterization of ambient aerosols with the Aerodyne aerosol mass spectrometer, *Mass Spectrometry Reviews*, 26, 185-222, doi:10.1002/mas.20115, 2007.

Canty, T., E.D. Riviére, R.J. Salawitch, G. Berthet, J.-B. Renard, K. Pfeilsticker, M. Dorf, A. Butz, H. Bösch, R.M. Stimpfle, D.M. Wilmouth, E.C. Richard, D.W. Fahey, P.J. Popp, M.R. Schoeberl, L.R. Lait, and T.P. Bui, Nighttime OCIO in the winter Arctic vortex, *Journal of Geophysical Research*, 110, 2005.

Cappa, C.D., E.R. Lovejoy, and A.R. Ravishankara, Determination of evaporation rates and vapor pressures of very low volatility compounds: A study of the C4-C10 dicarboxylic acids, *Journal of Physical Chemistry A*, 111, 3099-3109, doi:10.1021/jp068686q 2007.

Carlton, A.G., B.J. Turpin, K.E. Altieri, A. Reff, S. Seitzinger, A. Reff, H.-J. Lim, and B. Ervens, Atmospheric oxalic acid and SOA production from glyoxal: Results of aqueous photooxidation experiments, *Atmospheric Environment*, 41, 7588-7602, doi:10.1016/j.atmosenv.2007.7505.7035, 2007.

Carrera, P., J.H. Churnside, G. Boyra, V. Marques, C. Scalabrin, and A. Uriarte, Comparison of airborne lidar with echosounders: A case study in the coastal Atlantic waters of southern Europe, *ICES Journal of Marine Science*, 63, 1736-1750, doi:10.1016/j.icesjms.2006.1707.1004, 2006.

Carslaw, K.S., J.A. Kettleborough, M.J. Northway, S. Davies, R.S. Gao, D.W. Fahey, D.G. Baumgardner, M.P. Chipperfield, and A. Kleinböhl, A vortex-scale simulation of the growth and sedimentation of large nitric acid hydrate particles, *Journal of Geophysical Research*, 107, doi:10.1029/2001JD000467, 2002.

Chai, T., G.R. Carmichael, Y. Tang, A. Sandu, M. Hardesty, P. Pilewskie, S. Whitlow, E.V. Browell, M.A. Avery, P. Nédélec, J.T. Merrill, A.M. Thompson, and E. Williams, Four-dimensional data assimilation experiments with International Consortium for Atmospheric Research on Transport and Transformation ozone measurements, *Journal of Geophysical Research*, 112, doi:10.1029/2006JD007763, 2007.

Chameides, W.L., K. Demerjian, D.L. Albritton, P. Amar, A. Barrera, F. Guzman, A. Dunker, H. Feldman, A. Hansen, J. Hales, G. Hidy, P. Roth, C. Olivotto, E. Owczarski, R. Patterson, R. Scheffe, K. Schere, and L. Schultz, Assessing policy-relevant science for managing ozone air quality, *Environmental Manager*, November, 11-15, 2000.

Chen, G., L.G. Huey, M. Trainer, D. Nicks, J. Corbett, T. Ryerson, D. Parrish, J.A. Neuman, J. Nowak, D. Tanner, J. Holloway, C. Brock, J. Crawford, J.R. Olson, A. Sullivan, R. Weber, S. Schauffler, S. Donnelly, E. Atlas, J. Roberts, F. Flocke, G. Hübler, and F. Fehsenfeld, An investigation of the chemistry of ship emission plumes during ITCT 2002, *Journal of Geophysical Research*, 110, doi:10.1029/2004JD005236, 2005.

- Churnside, J.H., and J.J. Wilson, Ocean color inferred from radiometers on low-flying aircraft, *Sensors*, *8*, 860-876, 2008.
- Churnside, J.H., Polarization effects on oceanographic lidar, *Optics Express*, *16*, 1196-1207, 2008.
- Churnside, J.H., and J.J. Wilson, Power spectrum and fractal dimension of laser backscattering from the ocean, *Journal of the Optical Society of America A*, *23*, 2829-2833, 2006.
- Churnside, J.H., and R.E. Thorne, Comparison of airborne lidar measurements with 420 kHz echosounder measurements of zooplankton, *Applied Optics*, *44*, 5504-5511, 2005.
- Churnside, J.H., and L.A. Ostrovsky, Lidar observation of a strongly nonlinear internal wave train in the Gulf of Alaska, *International Journal of Remote Sensing*, *26*, 167-177, doi:10.1080/01431160410001735076, 2005.
- Ciesielski, P.E., R.H. Johnson, P.T. Haertel, and J. Wang, Corrected TOGA COARE sounding humidity data: Impact on diagnosed properties of convection and climate over the warm pool, *Journal of Climate*, *16*, 2370-2384, 2003.
- Cifelli, R., C.R. Williams, D.K. Rajopadhyaya, S.K. Avery, K.S. Gage, and P.T. May, Drop-size distribution characteristics in tropical mesoscale convective systems, *Journal of Applied Meteorology*, *39*, 760-777, 2000.
- Cohn, S.A., and W.M. Angevine, Boundary layer height and entrainment zone thickness measured by lidars and wind-profiling radars, *Journal of Applied Meteorology*, *39*, 1233-1247, 2000.
- Collins, W.D., V. Ramaswamy, M.D. Schwarzkopf, Y. Sun, R.W. Portmann, Q. Fu, S.E.B. Casanova, J.-L. Dufresne, D.W. Fillmore, P.M.D. Forster, V.Y. Galin, L.K. Gohar, W.J. Ingram, D.P. Kratz, M.-P. Lefebvre, J. Li, P. Marquet, V. Oinas, Y. Tsushima, T. Uchiyama, and W.Y. Zhong, Radiative forcing by well-mixed greenhouse gases: Estimates from climate models in the Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report (AR4), *Journal of Geophysical Research*, *111*, doi:10.1029/2005JD006713, 2006.
- Cooper, O.R., 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, J. Meagher, F.C. Fehsenfeld, T.J. Keating, R.A. Van Curen, and K. Minschwaner, Evidence for a recurring eastern North America upper tropospheric ozone maximum during summer, *Journal of Geophysical Research*, *112*, doi:10.1029/2007JD008710, 2007.
- Cooper, O.R., A. Stohl, M. Trainer, A.M. Thompson, J.C. Witte, S.J. Oltmans, G. Morris, K.E. Pickering, J.H. Crawford, G. Chen, R.C. Cohen, T.H. Bertram, P. Wooldridge, A. Perring, W.H. Brune, J. Merrill, J.L. Moody, D. Tarasick, P. Nédélec, G. Forbes, M.J. Newchurch, F.J. Schmidlin, B.J. Johnson, S. Turquety, S.L. Baughcum, X. Ren, F.C. Fehsenfeld, J.F. Meagher, N. Spichtinger, C.C. Brown, S.A. McKeen, I.S. McDermid, and T. Leblanc, Large upper tropospheric ozone enhancements above midlatitude North America during summer: In situ evidence from the IONS and MOZAIC ozone measurement network, *Journal of Geophysical Research*, *111*, doi:10.1029/2006JD007306, 2006.
- Cooper, O.R., A. Stohl, G. Hübler, E.-Y. Hsie, D.D. Parrish, A.F. Tuck, G.N. Kiladis, S.J. Oltmans, B.J.



- Johnson, M. Shapiro, J.L. Moody, and A.S. Lefohn, Direct transport of mid-latitude stratospheric ozone into the lower troposphere and marine boundary layer of the tropical Pacific Ocean, *Journal of Geophysical Research*, *110*, doi: 10.1029/2005JD005783, 2005.
- Cooper, O.R., A. Stohl, S. Eckhardt, D.D. Parrish, S.J. Oltmans, B.J. Johnson, P. Nédélec, F.J. Schmidlin, M.J. Newchurch, Y. Kondo, and K. Kita, A springtime comparison of tropospheric ozone and transport pathways on the east and west coasts of the United States, *Journal of Geophysical Research*, *110*, doi:10.1029/2004JD005183, 2005.
- Cooper, O.R., C. Forster, D. Parrish, M. Trainer, E. Dunlea, T. Ryerson, G. Hübler, F. Fehsenfeld, D. Nicks, J. Holloway, J. deGouw, C. Warneke, J.M. Roberts, F. Flocke, and J. Moody, A case study of transpacific warm conveyor belt transport: Influence of merging airstreams on trace gas import to North America, *Journal of Geophysical Research*, *109*, doi:10.1029/2003JD003624, 2004.
- Cooper, O., C. Forster, D. Parrish, E. Dunlea, G. Hübler, F. Fehsenfeld, J. Holloway, S. Oltmans, B. Johnson, A. Wimmers, and L. Horowitz, On the life cycle of a stratospheric intrusion and its dispersion into polluted warm conveyor belts, *Journal of Geophysical Research*, *109*, doi:10.1029/2003JD004006, 2004.
- Cooper, O.R., J.L. Moody, D.D. Parrish, M. Trainer, T.B. Ryerson, J.S. Holloway, G. Hübler, F.C. Fehsenfeld, and M.J. Evans, Trace gas composition of midlatitude cyclones over the western North Atlantic Ocean: A conceptual model, *Journal of Geophysical Research*, *107*, doi:10.1029/2001JD000901, 2002.
- Cooper, O.R., J.L. Moody, D.D. Parrish, M. Trainer, T.B. Ryerson, J.S. Holloway, G. Hübler, F.C. Fehsenfeld, and A. Stohl, Trace gas composition of midlatitude cyclones over the western North Atlantic Ocean: A seasonal comparison of O<sub>3</sub> and CO, *Journal of Geophysical Research*, *107*, 4057, doi:10.1029/2001JD000902, 2002.
- Cooper, O.R., J.L. Moody, D.D. Parrish, M. Trainer, T.B. Ryerson, J.S. Holloway, G. Hübler, F.C. Fehsenfeld, S.J. Oltmans, and M.J. Evans, Trace gas signatures of the airstreams within North Atlantic cyclones: Case studies from the North Atlantic Regional Experiment (NARE '97) aircraft intensive, *Journal of Geophysical Research*, *106*, 5437-5456, 2001.
- Curtius, J., K.D. Froyd, and E.R. Lovejoy, Cluster ion thermal decomposition (I): Experimental kinetics study and ab initio calculations for HSO<sub>4</sub><sup>-</sup> (H<sub>2</sub>SO<sub>4</sub>)<sub>x</sub>(HNO<sub>3</sub>)<sub>y</sub>, *The Journal of Physical Chemistry A*, *105*, 10867-10873, doi: 10.1021/jp0124950, 2001.
- Custer, T.G., S. Kato, V.M. Bierbaum, C.J. Howard, and G.C. Morrison, Gas-phase kinetics and mechanism of the reactions of protonated hydrazine with carbonyl compounds. Gas-phase hydrazone formation: Kinetics and mechanism, *Journal of the American Chemical Society*, *126*, 2744-2754, doi:10.1021/ja0350886, 2004.
- Cziczo, D.J., D.S. Thomson, T.L. Thompson, P.J. DeMott, and D.M. Murphy, Particle analysis by laser mass spectrometry (PALMS) studies of ice nuclei and other low number density particles, *International Journal of Mass Spectrometry*, *258*, 21-29, doi:10.1016/j.ijms.2006.1005.1013, 2006.
- Cziczo, D.J., P.J. DeMott, S.D. Brooks, A.J. Prenni, D.S. Thomson, D. Baumgardner, J.C. Wilson, S.M. Kreidenweis, and D.M. Murphy, Observations of organic species and atmospheric ice formation, *Geophysical Research Letters*, *31*, doi:10.1029/2004GL019822, 2004.

- Cziczo, D.J., D.M. Murphy, P.K. Hudson, and D.S. Thomson, Single particle measurements of the chemical composition of cirrus ice residue during CRYSTAL-FACE, *Journal of Geophysical Research*, *109*, doi:10.1029/2003JD004032, 2004.
- Cziczo, D.J., P.J. DeMott, C. Brock, P.K. Hudson, B. Jesse, S.M. Kreidenweis, A.J. Prenni, J. Schreiner, D.S. Thomson, and D.M. Murphy, A method for single particle mass spectrometry of ice nuclei, *Aerosol Science and Technology*, *37*, 460-470, doi: 10.1080/02786820390112687, 2003.
- Cziczo, D.J., D.M. Murphy, D.S. Thomson, and M.N. Ross, Composition of individual particles in the wakes of an Athena II rocket and the space shuttle, *Geophysical Research Letters*, *29*, doi:10.1029/2002GL015991, 2002.
- Cziczo, D.J., D.S. Thomson, and D.M. Murphy, Ablation, flux, and atmospheric implications of meteors inferred from stratospheric aerosol, *Science*, *291*, 1772-1775, 2001.
- Cziczo, D.J., and J.P.D. Abbatt, Ice nucleation in  $\text{NH}_4\text{HSO}_4$ ,  $\text{NH}_4\text{NO}_3$ , and  $\text{H}_2\text{SO}_4$  aqueous particles: Implications for cirrus cloud formation, *Geophysical Research Letters*, *28*, 963-966, 2001.
- Dabberdt, W.F., M.A. Carroll, D. Baumgardner, G. Carmichael, R. Cohen, T. Dye, J. Ellis, G. Grell, S. Grimmond, S. Hanna, J. Irwin, B. Lamb, S. Madronich, J. McQueen, J. Meagher, T. Odman, J. Pleim, H.P. Schmid, and D.L. Westphal, Meteorological research needs for improved air quality forecasting, *Bulletin of the American Meteorological Society*, *85*, 563-586, doi:10.1175/BAMS-1185-1174-1563, 2004.
- Damoah, R., N. Spichtinger, C. Forster, P. James, I. Mattis, U. Wandinger, S. Beirle, T. Wagner, and A. Stohl, Around the world in 17 days – hemispheric-scale transport of forest fire smoke from Russia in May 2003, *Atmospheric Chemistry and Physics*, *4*, 1311-1321, doi:10.1680-7324/acp/3005-1314-1311, 2004.
- Daniel, J.S., G.J.M. Velders, S. Solomon, M. McFarland, and S.A. Montzka, Present and future sources and emissions of halocarbons: Towards new constraints, *Journal of Geophysical Research*, *112*, doi:10.1029/2006JD007275, 2007.
- Daniel, J.S., R.W. Portmann, H.L. Miller, S. Solomon, A.O. Langford, C.S. Eubank, R. Schofield, D.D. Turner, and M.D. Shupe, Cloud property estimates from zenith spectral measurements of scattered sunlight between 0.9 and 1.7  $\mu\text{m}$ , *Journal of Geophysical Research*, *111*, doi:10.1029/2005JD006641, 2006.
- Daniel, J.S., S. Solomon, H.G. Kjaergaard, and D.P. Schofield, Atmospheric water vapor complexes and the continuum, *Geophysical Research Letters*, *31*, doi:10.1029/2003GL018914, 2004.
- Daniel, J.S., S. Solomon, H.L. Miller, A.O. Langford, R.W. Portmann, and C.S. Eubank, Retrieving cloud information from passive measurements of solar radiation absorbed by molecular oxygen and  $\text{O}_2\text{-O}_2$ , *Journal of Geophysical Research*, *108*, doi:10.1029/2002JD002994, 2003.
- Daniel, J.S., S. Solomon, R.W. Portmann, A.O. Langford, C.S. Eubank, E.G. Dutton, and W. Madsen, Cloud liquid water and ice measurements from spectrally resolved near-infrared observations: A new technique, *Journal of Geophysical Research*, *107*, doi:10.1029/2001JD000688, 2002.
- Danilin, M.Y., P.J. Popp, R.L. Herman, M.K.W. Ko, M.N. Ross, C.E. Kolb, D.W. Fahey, L.M. Avallone, D.W. Toohey, B.A. Ridley, O. Schmid, J.C. Wilson, D.G. Baumgardner, R.R. Friedl, T.L.

Thompson, and J.M. Reeves, Quantifying uptake of  $\text{HNO}_3$  and  $\text{H}_2\text{O}$  by alumina particles in Athena-2 rocket plume, *Journal of Geophysical Research*, *108*, 4141, doi:10.1029/2002JD002601, 2003.

Darby, L.S., S.A. McKeen, C.J. Senff, A.B. White, R.M. Banta, M.J. Post, W.A. Brewer, R. Marchbanks, R.J. Alvarez II, S.E. Peckham, H. Mao, and R. Talbot, Ozone differences between near-coastal and offshore sites in New England: Role of meteorology, *Journal of Geophysical Research*, *112*, doi:10.1029/2007JD008446, 2007.

Darby, L.S., and G.S. Poulos, The evolution of lee-wave-rotor activity in the lee of Pike's Peak under the influence of a cold frontal passage: Implications for aircraft safety, *Monthly Weather Review*, *134*, 2857-2876, 2006.

Darby, L.S., K.J. Allwine, and R.M. Banta, Nocturnal low-level jet in a mountain basin complex: II, Transport and diffusion of tracer under stable conditions, *Journal of Applied Meteorology*, *45*, 740-753, doi:10.1175/JAM2367.1171, 2006.

Darby, L.S., Cluster analysis of surface winds in Houston, Texas, and the impact of wind patterns on ozone, *Journal of Applied Meteorology*, *44*, 1788-1806, doi:10.1175/JAM2320.1781, 2005.

Darby, L.S., R.M. Banta, W.A. Brewer, W.D. Neff, R.D. Marchbanks, B.J. McCarty, C.J. Senff, A.B. White, W.M. Angevine, and E.J. Williams, Vertical variations in  $\text{O}_3$  concentrations before and after a gust front passage, *Journal of Geophysical Research*, *107*, 4176, doi:10.1029/2001JD000996, 2002.

Davies, S., M.P. Chipperfield, K.S. Carslaw, B.-M. Sinnhuber, J.G. Anderson, R.M. Stimpfle, D.M. Wilmouth, D.W. Fahey, P.J. Popp, E.C. Richard, P. von der Gathen, H. Jost, and C.R. Webster, Modeling the effect of denitrification on Arctic ozone depletion during winter 1999/2000, *Journal of Geophysical Research*, *108*, doi:10.1029/2001JD000445, 2003.

Davis, M.E., R.K. Talukdar, G. Notte, G.B. Ellison, and J.B. Burkholder, Rate coefficients for the OH + pinonaldehyde ( $\text{C}_{10}\text{H}_{16}\text{O}_2$ ) reaction between 297 and 374 K, *Environmental Science and Technology*, *41*, 3959-3965, doi:10.1021/es070048d, 2007.

Davis, M.E., M.K. Gilles, A.R. Ravishankara, and J. Burkholder, Rate coefficients for the reaction of OH with (E) -2-pentenal, (E) -2-hexenal, and (E) -2-heptenal, *Physical Chemistry Chemical Physics*, *9*, 2240-2248, doi:10.1039/b700235a, 2007.

de F. Forster, P.M., J.B. Burkholder, C. Clerbaux, P.F. Coheur, M. Dutta, L.K. Gohar, M.D. Hurley, G. Myhre, R.W. Portmann, K.P. Shine, T.J. Wallington, and D. Wuebbles, Resolution of the uncertainties in the radiative forcing of HFC-134a, *Journal of Quantitative Spectroscopy & Radiative Transfer*, *93*, 447-460, doi:10.1016/j.jqsrt.2004.1008.1038, 2005.

de F. Forster, P.M., and S. Solomon, Observations of a "weekend effect" in diurnal temperature range, *Proceedings of the National Academy of Sciences of the United States of America*, *100*, 11225-11230, doi:10.1073/pnas.2034034100, 2003.

de Reus, M., H. Fischer, F. Arnold, J.A. deGouw, R. Holzinger, C. Warneke, and J. Williams, On the relationship between acetone and carbon monoxide in air masses of different origin, *Atmospheric Chemistry and Physics*, *3*, 1709-1723, 2003.

- deGouw, J., and C. Warneke, Measurements of volatile organic compounds in the earth's atmosphere using proton-transfer-reaction mass spectrometry, *Mass Spectrometry Reviews*, *26*, 223-257, doi:210.1002/mas.20119, 2007.
- deGouw, J.A., C. Warneke, A. Stohl, A.G. Wollny, C.A. Brock, O.R. Cooper, J.S. Holloway, M. Trainer, F.C. Fehsenfeld, E.L. Atlas, S.G. Donnelly, V. Stroud, and A. Lueb, Volatile organic compounds composition of merged and aged forest fire plumes from Alaska and western Canada, *Journal of Geophysical Research*, *111*, doi:10.1029/2005JD006175, 2006.
- deGouw, J.A., A.M. Middlebrook, C. Warneke, P.D. Goldan, W.C. Kuster, J.M. Roberts, F.C. Fehsenfeld, D.R. Worsnop, M.R. Canagaratna, A.A.P. Pszenny, W.C. Keene, M. Marchewka, S.B. Bertman, and T.S. Bates, Budget of organic carbon in a polluted atmosphere: Results from the New England Air Quality Study in 2002, *Journal of Geophysical Research*, *110*, doi:10.1029/2004JD005623, 2005.
- deGouw, J.A., O.R. Cooper, C. Warneke, P.K. Hudson, F.C. Fehsenfeld, J.S. Holloway, G. Hübler, D.K. Nicks, Jr., J.B. Nowak, D.D. Parrish, T.B. Ryerson, E.L. Atlas, S.G. Donnelly, S.M. Schauffler, V. Stroud, K. Johnson, G.R. Carmichael, and D.G. Streets, Chemical composition of air masses transported from Asia to the U.S. West Coast during ITCT 2K2: Fossil fuel combustion versus biomass-burning signatures, *Journal of Geophysical Research*, *109*, doi:10.1029/2003JD004202, 2004.
- deGouw, J., C. Warneke, R. Holzinger, T. Klüpfel, and J. Williams, Inter-comparison between airborne measurements of methanol, acetonitrile and acetone using two differently configured PTR-MS instruments, *International Journal of Mass Spectrometry*, *239*, 129-137, doi: 110.1016/j.ijms.2004.1007.1025, 2004.
- deGouw, J.A., C. Warneke, D.D. Parrish, J.S. Holloway, M. Trainer, and F.C. Fehsenfeld, Emission sources and ocean uptake of acetonitrile (CH<sub>3</sub>CN) in the atmosphere, *Journal of Geophysical Research*, *108*, doi:10.1029/2002JD002897, 2003.
- deGouw, J.A., C. Warneke, T. Karl, G. Eerdekens, C. van der Veen, and R. Fall, Sensitivity and specificity of atmospheric trace gas detection by proton-transfer-reaction mass spectrometry, *International Journal of Mass Spectrometry*, *223-224*, 365-382, 2003.
- deGouw, J.A., P.D. Goldan, C. Warneke, W.C. Kuster, J.M. Roberts, M. Marchewka, S.B. Bertman, A.A.P. Pszenny, and W.C. Keene, Validation of proton transfer reaction-mass spectrometry (PTR-MS) measurements of gas-phase organic compounds in the atmosphere during the New England Air Quality Study (NEAQS) in 2002, *Journal of Geophysical Research*, *108*, doi:10.1029/2003JD003863, 2003.
- deGouw, J.A., C.J. Howard, T.G. Custer, B.M. Baker, and R. Fall, Proton-transfer chemical-ionization mass spectrometry allows real-time analysis of volatile organic compounds released from cutting and drying of crops, *Environmental Science and Technology*, *34*, 2640-2648, doi: 2610.1021/es991219k, 2000.
- DeMott, P.J., D.J. Cziczo, A.J. Prenni, D.M. Murphy, S.M. Kreidenweis, D.S. Thomson, R. Borys, and D.C. Rogers, Measurements of the concentration and composition of nuclei for cirrus formation, *Proceedings of the National Academy of Sciences* *100*, 14655-14660, doi:14610.11073/pnas.2532677100, 2003.

- Desai, A.R., K.J. Davis, C.J. Senff, S. Ismail, E.V. Browell, D.R. Stauffer, and B.P. Reen, A case study on the effects of heterogeneous soil moisture on mesoscale boundary-layer structure in the southern Great Plains, U.S.A. Part I: Simple prognostic model, *Boundary-Layer Meteorology*, *119*, 195-238, doi:10.1007/s10546-10005-19024-10546, 2006.
- Dhaniyala, S., P.O. Wennberg, R.C. Flagan, D.W. Fahey, M.J. Northway, R.S. Gao, and T.P. Bui, Stratospheric aerosol sampling: Effect of a blunt-body housing on inlet sampling characteristics, *Aerosol Science and Technology*, *38*, 1080-1090, doi: 10.1080/027868290885818, 2004.
- Dobson, C.M., G.B. Ellison, A.F. Tuck, and V. Vaida, Atmospheric aerosols as prebiotic chemical reactors, *Proceedings of the National Academy of Sciences*, *97*, 11864-11868, doi:11810.11073/pnas.200366897, 2000.
- Donaldson, D.J., H. Tervahattu, A.F. Tuck, and V. Vaida, Organic aerosols and the origin of life: An hypothesis, *Origins of Life and the Evolution of the Biosphere*, *34*, 57-67, 2004.
- Donaldson, D.J., A.F. Tuck, and V. Vaida, Atmospheric photochemistry via vibrational overtone absorption, *Chemical Reviews*, *103*, 4717-4729, doi:4710.1012/cr0206519, 2003.
- Donaldson, D.J., A.F. Tuck, and V. Vaida, The asymmetry of organic aerosol fission and prebiotic chemistry, *Origins of Life and the Evolution of the Biosphere*, *32*, 237-245, 2002.
- Donaldson, D.J., A.F. Tuck, and V. Vaida, Spontaneous fission of atmospheric aerosol particles, *Physical Chemistry Chemical Physics*, *3*, 5270-5273, 2001.
- Donaldson, D.J., A.F. Tuck, and V. Vaida, Enhancement of HO<sub>x</sub> at high solar zenith angles by overtone-induced dissociation of HNO<sub>3</sub> and HNO<sub>4</sub>, *Physical Chemistry Earth (C)*, *25*, 223-227, 2000.
- Drobinski, P., P. Carlotti, J.-L. Redelsperger, R.M. Banta, V. Masson, and R.K. Newsom, Numerical and experimental investigation of the neutral atmospheric surface layer, *Journal of the Atmospheric Sciences*, *64*, 137-156, doi:10.1175/JAS3831.1171, 2007.
- Dubé, W.P., S.S. Brown, H.D. Osthoff, M.R. Nunley, S.J. Ciciora, M.W. Paris, R.J. McLaughlin, and A.R. Ravishankara, Aircraft instrument for simultaneous, *in situ* measurement of NO<sub>3</sub> and N<sub>2</sub>O<sub>5</sub> via pulsed cavity ring-down spectroscopy, *Review of Scientific Instruments*, *77*, doi:10.1063/1061.2176058 2006.
- Dunlea, E.J., R.K. Talukdar, and A.R. Ravishankara, Kinetic studies of the reactions of O<sub>2</sub>(b<sup>1</sup>Σ<sub>g</sub><sup>+</sup>) with several atmospheric molecules, *Journal of Physical Chemistry*, *109*, 3912-3920, doi:3910.1021/jp044129x, 2005.
- Dunlea, E., and A.R. Ravishankara, Kinetic studies of the reactions of O(<sup>1</sup>D) with several atmospheric molecules, *Physical Chemistry Chemical Physics*, *6*, 2152-2161, doi: 2110.1039/b400247d, 2004.
- Dunlea, E.J., and A.R. Ravishankara, Measurement of the rate coefficient for the reaction of O (<sup>1</sup>D) with H<sub>2</sub>O and re-evaluation of the atmospheric OH production rate, *Physical Chemistry Chemical Physics*, *6*, 3333-3340, doi: 3310.1039/b402483d, 2004.
- Dunlea, E.J., A.R. Ravishankara, R.S. Strekowski, J.M. Nicovich, and P.H. Wine, Temperature-dependent quantum yields for O(<sup>3</sup>P) and O(<sup>1</sup>D) production from photolysis of O<sub>3</sub> at 248 nm, *Physical Chemistry Chemical Physics*, *6*, 5484-5489, doi: 5410.1039/b414326d, 2004.

- Dvortsov, V.L., and S. Solomon, Response of the stratospheric temperatures and ozone to past and future increases in stratospheric humidity, *Journal of Geophysical Research*, *106*, 7505-7514, 2001.
- Dye, J.E., B.A. Ridley, W. Skamarock, M. Barth, M. Venticinque, E. Defer, P. Blanchet, C. Thery, P. Laroche, K. Baumann, G. Hübler, D.D. Parrish, T. Ryerson, M. Trainer, G. Frost, J.S. Holloway, T. Matejka, D. Bartels, F.C. Fehsenfeld, A. Tuck, S.A. Rutledge, T. Lang, J. Stith, and R. Zerr, An overview of the Stratospheric-Tropospheric Experiment: Radiation, Aerosols, and Ozone (STERAO)-Deep convection experiment with results for the July 10, 1996 storm, *Journal of Geophysical Research*, *105*, 10023-10045, 2000.
- Eckhardt, S., A. Stohl, H. Wernli, P. James, C. Forster, and N. Spichtinger, A 15-year climatology of warm conveyor belts, *Journal of Climate*, *17*, 218-237, 2004.
- Eckhardt, S., A. Stohl, S. Beirle, N. Spichtinger, P. James, C. Forster, C. Junker, T. Wagner, U. Platt, and S.G. Jennings, The North Atlantic Oscillation controls air pollution transport to the Arctic, *Atmospheric Chemistry and Physics*, *3*, 1769-1778, 2003.
- Eisele, F.L., E.R. Lovejoy, E. Kosciuch, K.F. Moore, R.L. Mauldin, III, J.N. Smith, P.H. McMurry, and K. Lida, Negative atmospheric ions and their potential role in ion induced nucleation, *Journal of Geophysical Research*, *111*, doi:10.1029/2005JD006568, 2006.
- Eliason, T.L., S. Aloisio, D.J. Donaldson, D.J. Cziczo, and V. Vaida, Processing of unsaturated organic acid films and aerosols by ozone, *Atmospheric Environment*, *37*, 2207-2219, doi:2210.1016/S1352-2310(2203)00149-00143, 2003.
- Emeis, S., M. Harris, and R.M. Banta, Boundary-layer anemometry by optical remote sensing for wind energy applications, *Meteorologische Zeitschrift*, *16*, 337-347, doi:310.1127/0941-2948/2007/0225, 2007.
- Ervens, B., M. Cubison, E. Andrews, G. Feingold, J.A. Ogren, J.L. Jimenez, P. DeCarlo, and A. Nenes, Prediction of cloud condensation nucleus number concentration using measurements of aerosol size distributions and composition and light scattering enhancement due to humidity *Journal of Geophysical Research*, *112*, doi:10.1029/2006JD007426, 2007.
- Ervens, B., and S.M. Kreidenweis, SOA formation by biogenic and carbonyl compounds: Data evaluation and application, *Environmental Science and Technology*, *41*, 3904-3910, doi:3910.1021/es061946x, 2007.
- Ervens, B., G. Feingold, and S.M. Kreidenweis, Influence of water-soluble organic carbon on cloud drop number concentration, *Journal of Geophysical Research*, *110*, doi:10.1029/2004JD005634, 2005.
- Ervens, B., G. Feingold, G.J. Frost, and S.M. Kreidenweis, A modeling study of aqueous production of dicarboxylic acids: 1, Chemical pathways and speciated organic mass production, *Journal of Geophysical Research*, *109*, doi:10.1029/2003JD004387, 2004.
- Eyring, V., N.R.P. Harris, M. Rex, T.G. Shepherd, D.W. Fahey, G.T. Amanatidis, J. Austin, M.P. Chipperfield, M. Dameris, P.M. de F. Forster, A. Gettelman, H.F. Graf, T. Nagashima, P.A. Newman, S. Pawson, M.J. Prather, J.A. Pyle, R.J. Salawitch, B.D. Santer, and D.W. Waugh, A strategy for process-oriented validation of coupled chemistry-climate models, *Bulletin of the*

*American Meteorological Society*, 86, 1117-1133, doi:1110.1175/BAMS-1186-1118-1117, 2005.

- Fahey, D.W., J.H. Churnside, J.W. Elkins, A.J. Gasiewski, K.H. Rosenlof, S. Summers, M. Aslaksen, T.A. Jacobs, J.D. Sellars, C.D. Jennison, L.C. Freudingner, and M. Cooper, Altair unmanned aircraft system achieves demonstration goals, *EOS, Transactions, American Geophysical Union*, 87, 197-201, 2006.
- Fahey, D.W., R.S. Gao, K.S. Carslaw, J. Kettleborough, P.J. Popp, M.J. Northway, J.C. Holecek, S.C. Ciciora, R.J. McLaughlin, T.L. Thompson, R.H. Winkler, D.G. Baumgardner, B. Gandrud, P.O. Wennberg, S. Dhaniyala, K. McKinney, T. Peter, R.J. Salawitch, T.P. Bui, J.W. Elkins, C.R. Webster, E.L. Atlas, H. Jost, J.C. Wilson, R.L. Herman, A. Kleinböhl, and M. von König, The detection of large HNO<sub>3</sub>-containing particles in the winter Arctic stratosphere, *Science*, 291, 1026-1031, 2001.
- Fahey, D.W., R.S. Gao, L.A. Del Negro, E.R. Keim, S.R. Kawa, R.J. Salawitch, P.O. Wennberg, T.F. Hanisco, E.J. Lanzendorf, K.K. Perkins, S.A. Lloyd, W.H. Swartz, M.H. Proffitt, J.J. Margitan, J.C. Wilson, R.M. Stimpfle, R.C. Cohen, C.T. McElroy, C.R. Webster, M. Loewenstein, J.W. Elkins, and T.P. Bui, Ozone destruction and production rates between spring and autumn in the Arctic stratosphere, *Geophysical Research Letters*, 27, 2605-2608, 2000.
- Fehsenfeld, F.C., G. Ancellet, T.S. Bates, A.H. Goldstein, R.M. Hardesty, R. Honrath, K.S. Law, A.C. Lewis, R. Leitch, S. McKeen, J. Meagher, D.D. Parrish, A.A.P. Pszenny, P.B. Russell, H. Schlager, J. Seinfeld, R. Talbot, and R. Zbinden, International Consortium for Atmospheric Research on Transport and Transformation (ICARTT): North America to Europe—Overview of the 2004 summer field study, *Journal of Geophysical Research*, 111, doi:10.1029/2006JD007829, 2006.
- Fehsenfeld, F.C., L.G. Huey, E. Leibrock, R. Dissly, E. Williams, T.B. Ryerson, R. Norton, D.T. Sueper, and B. Hartsell, Results from an informal intercomparison of ammonia measurement techniques, *Journal of Geophysical Research*, 107, doi:10.1029/2001JD001327, 2002.
- Feierabend, K.J., L. Zhu, R.K. Talukdar, and J.B. Burkholder, Rate coefficients for the OH + HC(O)C(O)H (glyoxal) reaction between 210 and 390 K, *Journal of Physical Chemistry A*, 112, doi:10.1021/jp0768571, 2008.
- Feierabend, K.J., D.K. Havey, S.S. Brown, and V. Vaida, Experimental absolute intensities of the 4ν<sub>9</sub> and 5ν<sub>9</sub> O-H stretching overtones of H<sub>2</sub>SO<sub>4</sub>, *Chemical Physics Letters*, 420, 438-442, doi:10.1016/j.cplett.2006.1001.1013, 2006.
- Feingold, G., R. Furrer, P. Pilewskie, L.A. Remer, Q. Min, and H. Jonsson, Aerosol indirect effect studies at Southern Great Plains during the May 2003 Intensive Operations Period, *Journal of Geophysical Research*, 111, doi:10.1029/2004JD005648, 2006.
- Feingold, G., H. Jiang, and J.Y. Harrington, On smoke suppression of clouds in Amazonia, *Geophysical Research Letters*, 32, doi:10.1029/2004GL021369, 2005.
- Feingold, G., G.J. Frost, and A.R. Ravishankara, Role of NO<sub>3</sub> in sulfate production in the wintertime northern latitudes, *Journal of Geophysical Research*, 107, 4640, doi:10.1029/2002JD002288, 2002.
- Ferlemann, R., N. Bauer, R. Fitzenberger, H. Harder, H. Osterkamp, D. Perner, U. Platt, M.

- Schneider, P. Vradelis, and K. Pfeilsticker, Differential optical absorption spectroscopy instrument for stratospheric balloonborne trace-gas studies, *Applied Optics*, *39*, 2377-2386, 2000.
- Ferrare, R., G. Feingold, S. Ghan, J. Ogren, B. Schmid, S.E. Schwartz, and P. Sheridan, Preface to special section: Atmospheric Radiation Measurement Program May 2003 Intensive Operations Period examining aerosol properties and radiative influences, *Journal of Geophysical Research*, *111*, doi:10.1029/2005JD006908, 2006.
- Fischer, H., M. de Reus, M. Traub, J. Williams, J. Lelieveld, J.A. deGouw, C. Warneke, H. Schlager, A. Minikin, R. Scheele, and P. Siegmund, Deep convective injection of boundary layer air into the lowermost stratosphere at midlatitudes, *Atmospheric Chemistry and Physics*, *3*, 739-745, 2003.
- Flad, J.E., S.S. Brown, J.B. Burkholder, H. Stark, and A.R. Ravishankara, Absorption cross sections for the  $\tilde{A}^2A(0,9^0,0)$   $^2A(0,0^1,0)$  band of the HCO radical, *Physical Chemistry Chemical Physics*, *8*, 3636-3642, doi:10.1039/b607185f, 2006.
- Flatau, M.K., P.J. Flatau, J. Schmidt, and G.N. Kiladis, Delayed onset of the 2002 Indian monsoon, *Geophysical Research Letters*, *30*, doi:10.1029/2003GL017434, 2003.
- Forster, C., O. Cooper, A. Stohl, S. Eckhardt, P. James, E. Dunlea, D.K. Nicks, Jr., J.S. Holloway, G. Hübler, D.D. Parrish, T.B. Ryerson, and M. Trainer, Lagrangian transport model forecasts and a transport climatology for the Intercontinental Transport and Chemical Transformation 2002 (ITCT 2K2) measurement campaign, *Journal of Geophysical Research*, *109*, doi:10.1029/2003JD003589, 2004.
- Fortin, T.J., B.J. Howard, D.D. Parrish, P.D. Goldan, W.C. Kuster, E.L. Atlas, and R.A. Harley, Temporal changes in U.S. benzene emissions inferred from atmospheric measurements, *Environmental Science and Technology*, *39*, 1403-1408, doi:10.1021/es049316n, 2005.
- Fried, A., Y.-N. Lee, G.J. Frost, B. Wert, B. Henry, J.R. Drummond, G. Hübler, and T. Jobson, Airborne CH<sub>2</sub>O measurements over the North Atlantic during the 1997 NARE campaign: Instrument comparisons and distributions, *Journal of Geophysical Research*, *107*, doi:10.1029/2000JD000260, 2002.
- Friedlingstein, P., and S. Solomon, Contributions of past and present human generations to committed warming due to carbon dioxide, *Proceedings of the National Academy of Sciences of the United States of America*, *102*, 10832-10836, doi:10.1073/pnas.0504755102, 2005.
- Frost, G.J., S.A. McKeen, M. Trainer, T.B. Ryerson, J.A. Neuman, J.M. Roberts, A. Swanson, J.S. Holloway, D.T. Sueper, T. Fortin, D.D. Parrish, F.C. Fehsenfeld, F. Flocke, S.E. Peckham, G.A. Grell, D. Kowal, J. Cartwright, N. Auerbach, and T. Habermann, Effects of changing power plant NO<sub>x</sub> emissions on ozone in the eastern United States: Proof of concept, *Journal of Geophysical Research*, *111*, doi:10.1029/2005JD006354, 2006.
- Frost, G.J., A. Fried, Y.-N. Lee, B. Wert, B. Henry, J.R. Drummond, M.J. Evans, F.C. Fehsenfeld, P.D. Goldan, J.S. Holloway, G. Hübler, R. Jakoubek, B.T. Jobson, K. Knapp, W.C. Kuster, J. Roberts, J. Rudolph, T.B. Ryerson, A. Stohl, C. Stroud, D.T. Sueper, M. Trainer, and J. Williams, Comparisons of box model calculations and measurements of formaldehyde from the 1997 North Atlantic Regional Experiment, *Journal of Geophysical Research*, *107*, 10.1029/2001JD000896, 2002.



- Froyd, K.D., and E.R. Lovejoy, Experimental thermodynamics of cluster ions composed of H<sub>2</sub>SO<sub>4</sub> and H<sub>2</sub>O. 1. Positive Ions, *Journal of Physical Chemistry A*, *107*, 9812-9824, doi:9810.1021/jp027803o, 2003.
- Fueglistaler, S., B.P. Luo, S. Buss, H. Wernli, C. Voigt, M. Müller, R. Neuber, C.A. Hostetler, L.R. Poole, H. Flentje, D.W. Fahey, M.J. Northway, and T. Peter, Large NAT particle formation by mother clouds: Analysis of SOLVE/THESEO-2000 observations, *Geophysical Research Letters*, *29*, doi:10.1029/2001GL014548, 2002.
- Gage, K.S., W.L. Clark, C.R. Williams, and A. Tokay, Determining reflectivity measurement error from serial measurements using paired disdrometers and profilers, *Geophysical Research Letters*, *31*, doi:10.1029/2004GL020591, 2004.
- Gage, K.S., and E.E. Gossard, Recent developments in observations, modeling and understanding atmospheric turbulence and waves in radar and atmospheric science: A collection of essays in honor of David Atlas, R.M. Wakimoto and R. Srivastava, *Meteorological Monographs*, *30*, 139-174, 2003.
- Gage, K.S., C.R. Williams, W.L. Clark, P.E. Johnston, and D.A. Carter, Profiler contributions to Tropical Rainfall Measuring Mission (TRMM) Ground Validation Field Campaigns, *Journal of Atmospheric and Oceanic Technology*, *19*, 843-863, 2002.
- Gage, K.S., C.R. Williams, P.E. Johnston, W.L. Ecklund, R. Cifelli, A. Tokay, and D.A. Carter, Doppler radar profilers as calibration tool for scanning radars, *Journal of Applied Meteorology*, *39*, 2209-2222, 2000.
- Gallar, C., C.A. Brock, J.L. Jimenez, and C. Simons, A variable supersaturation condensation particle sizer, *Aerosol Science and Technology*, *40*, doi:10.1080/02786820600643339, 2006.
- Gao, R.-s., S.R. Hall, W.H. Swartz, J.P. Schwarz, J.R. Spackman, L.A. Watts, D.W. Fahey, K.C. Aikin, R.E. Shetter, and T.P. Bui, Calculations of solar shortwave heating rates due to black carbon and ozone absorption using in situ measurements, *Journal of Geophysical Research*, *inpress*, 2008.
- Gao, R.S., J.P. Schwarz, K.K. Kelly, D.W. Fahey, L.A. Watts, T.L. Thompson, J.R. Spackman, J.G. Slowik, E.S. Cross, J.-H. Han, P. Davidovits, T.B. Onasch, and D.R. Worsnop, A novel method for estimating light-scattering properties of soot aerosols using a modified single-particle soot photometer, *Aerosol Science and Technology*, *41*, 125-135, doi:110.1080/02786820601118398, 2007.
- Gao, R.S., D.W. Fahey, P.J. Popp, T.P. Marcy, R.L. Herman, E.M. Weinstock, J.B. Smith, D.S. Sayres, J.V. Pittman, K.H. Rosenlof, T.L. Thompson, T.P. Bui, D.G. Baumgardner, B.E. Anderson, G. Kok, and A.J. Weinheimer, Measurements of relative humidity in a persistent contrail, *Atmospheric Environment*, *40*, 1590-1600, doi:1510.1016/j.atmosenv.2005.1511.1021, 2006.
- Gao, R.S., P.J. Popp, D.W. Fahey, T.P. Marcy, R.L. Herman, E.M. Weinstock, D.G. Baumgardner, T.J. Garrett, K.H. Rosenlof, T.L. Thompson, T.P. Bui, B.A. Ridley, S.C. Wofsy, O.B. Toon, M.A. Tolbert, B. Kärcher, T. Peter, P.K. Hudson, A.J. Weinheimer, and A.J. Heymsfield, Evidence that nitric acid increases relative humidity in low-temperature cirrus clouds, *Science*, *303*, 516-520, 2004.

- Gao, R.S., P.J. Popp, E.A. Ray, K.H. Rosenlof, M.J. Northway, D.W. Fahey, A.F. Tuck, C.R. Webster, D.F. Hurst, S.M. Schauffler, H. Jost, and T.P. Bui, Role of  $\text{NO}_y$  as a diagnostic of small-scale mixing in a denitrified polar vortex, *Journal of Geophysical Research*, *107*, doi:10.1029/2002JD002332, 2002.
- Gao, R.S., L.A. Del Negro, W.H. Swartz, R.J. Salawitch, S.A. Lloyd, M.H. Proffitt, D.W. Fahey, S.G. Donnelly, J.A. Neuman, R.M. Stimpfle, and T.P. Bui,  $\text{J}_{\text{NO}_2}$  at high solar zenith angles in the lower stratosphere, *Journal of Geophysical Research*, *28*, 2405-2408, 2001.
- Gao, R.S., E.C. Richard, P.J. Popp, G.C. Toon, D.F. Hurst, P.A. Newman, J.C. Holecek, M.J. Northway, D.W. Fahey, M.Y. Danilin, B. Sen, K. Aikin, P.A. Romashkin, J.W. Elkins, C.R. Webster, S.M. Schauffler, J.B. Greenblat, C.T. McElroy, L.R. Lait, T.P. Bui, and D. Baumgardner, Observational evidence for the role of denitrification in Arctic stratospheric ozone loss, *Geophysical Research Letters*, *28*, 2879-2882, 2001.
- Garland, R.M., A.R. Ravishankara, E.R. Lovejoy, M.A. Tolbert, and T. Baynard, Parameterization for the relative humidity dependence of light extinction: Organic-ammonium sulfate aerosol, *Journal of Geophysical Research*, *112*, doi:10.1029/2006JD008179, 2007.
- Garrett, T.J., L. Avey, P.I. Palmer, A. Stohl, J.A. Neuman, C.A. Brock, T.B. Ryerson, and J.S. Holloway, Quantifying wet scavenging processes in aircraft observations of nitric acid and cloud condensation nuclei, *Journal of Geophysical Research*, *111*, doi:10.1029/2006JD007416, 2006.
- Gettelman, A., E.M. Weinstock, E.J. Fetzer, F.W. Irion, A. Eldering, E.C. Richard, K.H. Rosenlof, T.L. Thompson, J.V. Pittman, C.R. Webster, and R.L. Herman, Validation of Aqua satellite data in the upper troposphere and lower stratosphere with in situ aircraft instruments, *Geophysical Research Letters*, *31*, doi: 10.1029/2004GL020730, 2004.
- Geyer, A., B. Alicke, R. Ackermann, M. Martinez, H. Harder, W. Brune, P. di Carlo, E. Williams, T. Jobson, S. Hall, R. Shetter, and J. Stutz, Direct observations of daytime  $\text{NO}_3$ : Implications for urban boundary layer chemistry, *Journal of Geophysical Research*, *108*, doi:10.1029/2002JD002967, 2003.
- Gierczak, T., J.B. Burkholder, and A.R. Ravishankara, Rate coefficients for the reaction of OH with OClO between 242 and 392 K, *International Journal of Chemical Kinetics*, *38*, 234-241, doi:10.1002/kin.20158, 2006.
- Gierczak, T., E. Jiménez, V. Riffault, J.B. Burkholder, and A.R. Ravishankara, Thermal decomposition of  $\text{HO}_2\text{NO}_2$  (Peroxynitric Acid, PNA): Rate coefficient and determination of the enthalpy of formation, *Journal of Physical Chemistry A*, *109*, 586-596, doi:10.1021/jp046632f, 2005.
- Gierczak, T., M.K. Gilles, S. Bauerle, and A.R. Ravishankara, Reaction of hydroxyl radical with acetone. 1. Kinetics of the reactions of OH, OD, and  $^{18}\text{OH}$  with acetone and acetone- $d_6$ , *The Journal of Physical Chemistry A*, *107*, 5014-5020, doi:10.1021/jp027301a, 2003.
- Gierczak, T., and A.R. Ravishankara, Does the  $\text{HO}_2$  radical react with ketones?, *International Journal of Chemical Kinetics*, *32*, 573-580, 2000.
- Gilles, M.K., J.B. Burkholder, T. Gierczak, P. Marshall, and A.R. Ravishankara, Rate coefficient and product branching measurements for the reaction OH + bromopropane from 230 to 360 K, *The Journal of Physical Chemistry A*, *106*, 5358-5366, doi:10.1021/jp014736+, 2002.

- Gilles, M.K., D.C. McCabe, J.B. Burkholder, and A.R. Ravishankara, Measurement of rate coefficient for the reaction of OH with BrO, *The Journal of Physical Chemistry A*, *105*, 5849-5853, doi: 5810.1021/jp0039666, 2001.
- Gilles, M.K., R.K. Talukdar, and A.R. Ravishankara, Rate coefficients for the OH + CF<sub>3</sub>I reaction between 271 and 370 K, *The Journal of Physical Chemistry A*, *104*, 8945-8950, doi: 8910.1021/jp001827i, 2000.
- Gilles, M.K., and A.R. Ravishankara, Upper limit for the rate coefficient for the reaction of OH with N<sub>2</sub>O<sub>5</sub>, *Physical Chemistry Chemical Physics*, *2*, 4045-4048, doi: 4010.1039/b004184j, 2000.
- Goldan, P.D., W.C. Kuster, E. Williams, P.C. Murphy, F.C. Fehsenfeld, and J. Meagher, Nonmethane hydrocarbon and oxy hydrocarbon measurements during the 2002 New England Air Quality Study, *Journal of Geophysical Research*, *109*, doi:10.1029/2003JD004455, 2004.
- Goldan, P.D., D.D. Parrish, W.C. Kuster, M. Trainer, S.A. McKeen, J. Holloway, B.T. Jobson, D.T. Sueper, and F.C. Fehsenfeld, Airborne measurements of isoprene, CO, and anthropogenic hydrocarbons and their implications, *Journal of Geophysical Research*, *105*, 9091-9105, 2000.
- Goldfarb, L., J.B. Burkholder, and A.R. Ravishankara, Kinetics of the O + ClO reaction, *The Journal of Physical Chemistry A*, *105*, 5402-5409, doi: 5410.1021/jp0100351, 2001.
- Goldstein, A.H., D.B. Millet, M. McKay, L. Jaeglé, L. Horowitz, O. Cooper, R. Hudman, D.J. Jacob, S. Oltmans, and A. Clarke, Impact of Asian emissions on observations at Trinidad Head, California, during ITCT 2K2, *Journal of Geophysical Research*, *109*, doi:10.1029/2003JD004406, 2004.
- Granier, C., U. Niemeier, J.H. Jungclaus, L. Emmons, P. Hess, J.-F. Lamarque, S. Walters, and G.P. Brasseur, Ozone pollution from future ship traffic in the Arctic northern passages, *Geophysical Research Letters*, *33*, doi:10.1029/2006GL026180, 2006.
- Granier, C., and G.P. Brasseur, The impact of road traffic on global tropospheric ozone, *Geophysical Research Letters*, *30*, 1086, doi:10.1029/2002GL015972, 2003.
- Granier, C., G. Pétron, J.-F. Muller, and G.P. Brasseur, The impact of natural and anthropogenic hydrocarbons on the tropospheric budget of carbon monoxide, *Atmospheric Environment*, *34*, 5255-5270, 2000.
- Grell, G.A., S.E. Peckham, R. Schmitz, S.A. McKeen, G. Frost, W.C. Skamarock, and B. Eder, Fully coupled "online" chemistry within the WRF model, *Atmospheric Environment*, *39*, 6957-6975, doi:6910.1016/j.atmosenv.2005.6904.6027, 2005.
- Grell, G.A., R. Knoche, S.E. Peckham, and S.A. McKeen, Online versus offline air quality modeling on cloud-resolving scales, *Geophysical Research Letters*, *31*, doi:10.1029/2004GL020175, 2004.
- Grimsdell, A.W., and W.M. Angevine, Observations of the afternoon transition of the convective boundary layer, *Journal of Applied Meteorology*, *41*, 3-11, 2002.
- Haag, W., B. Kärcher, J. Ström, A. Minikin, U. Lohmann, J. Ovarlez, and A. Stohl, Freezing thresholds and cirrus cloud formation mechanisms inferred from in situ measurements of relative humidity, *Atmospheric Chemistry and Physics*, *3*, 1791-1806, 2003.
- Haertel, P.T., and G.N. Kiladis, Dynamics of 2-day equatorial waves, *Journal of the Atmospheric*

*Sciences*, 61, 2707-2721, 2004.

- Hanisco, T.F., J.B. Smith, R.M. Stimpfle, D.M. Wilmouth, J.G. Anderson, E.C. Richard, and T.P. Bui, In situ observations of HO<sub>2</sub> and OH obtained on the NASA ER-2 in the high-CIO conditions of the 1999/2000 Arctic polar vortex, *Journal of Geophysical Research*, 107, doi:10.1029/2001JD001024, 2002.
- Hanson, D.R., and E.R. Lovejoy, Measurement of the thermodynamics of the hydrated dimer and trimer of sulfuric acid, *Journal of Physical Chemistry A*, 110, 9525-9528, doi:9510.1021/jp062844w, 2006.
- Harley, R.A., S.A. McKeen, J. Pearson, M.O. Rodgers, and W.A. Lonneman, Analysis of motor vehicle emissions during the Nashville/Middle Tennessee Ozone Study, *Journal of Geophysical Research*, 106, 3559-3567, 2001.
- Harris, N.R.P., J.C. Farman, and D.W. Fahey, Comment on "Effects of cosmic rays on atmospheric chlorofluorocarbon dissociation and ozone depletion", *Physical Review Letters*, 89, 219801-219801, 2002.
- Hartten, L.M., and P.A. Datulayta, Seasonal and interannual variations in the daily cycle of winds over the Galápagos, *Journal of Climate*, 17, 4522-4530, 2004.
- Hartten, L.M., and K.S. Gage, ENSO's impact on the annual cycle: The view from Galápagos, *Geophysical Research Letters*, 27, 385-388, 2000.
- Harwood, M.H., J.M. Roberts, G.J. Frost, A.R. Ravishankara, and J.B. Burkholder, Photochemical studies of CH<sub>3</sub>C(O)OONO<sub>2</sub> (PAN) and CH<sub>3</sub>CH<sub>2</sub>C(O)OONO<sub>2</sub> (PPN): NO<sub>3</sub> quantum yields, *The Journal of Physical Chemistry A*, 107, 1148-1154, doi: 1110.1021/jp0264230, 2003.
- Hawes, A.K., S. Solomon, R.W. Portmann, J.S. Daniel, A.O. Langford, H.L. Miller, C.S. Eubank, P. Goldan, C. Wiedinmyer, E. Atlas, A. Hansel, and A. Wisthaler, Airborne observations of vegetation and implications for biogenic emission characterization, *Journal of Environmental Monitoring*, 5, 977-983, doi:910.1039/b308911h, 2003.
- Heald, C.L., D.J. Jacob, S. Turquety, R.C. Hudman, R.J. Weber, A.P. Sullivan, R.E. Peltier, E.L. Atlas, J.A. deGouw, C. Warneke, J.S. Holloway, J.A. Neuman, F.M. Flocke, and J.H. Seinfeld, Concentrations and sources of organic carbon aerosols in the free troposphere over North America, *Journal of Geophysical Research*, 111, doi:10.1029/2006JD007705, 2006.
- Henne, S., M. Furger, S. Nyeki, M. Steinbacher, B. Neiningner, S.F.J. deWekker, J. Dommen, N. Spichtinger, A. Stohl, and A. Prévôt, Quantification of topographic venting of boundary layer air to the free troposphere, *Atmospheric Chemistry and Physics*, 3, 5205-5236, 2003.
- Herman, R.L., K. Drdla, J.R. Spackman, D.F. Hurst, P.J. Popp, C.R. Webster, P.A. Romashkin, J.W. Elkins, E.M. Weinstock, B.W. Gandrud, G.C. Toon, M.R. Schoeberl, H. Jost, E.L. Atlas, and T.P. Bui, Hydration, dehydration, and the total hydrogen budget of the 1999/2000 winter Arctic stratosphere, *Journal of Geophysical Research*, 108, doi:10.1029/2001JD001257, 2003.
- Herndon, S.C., M.S. Zahniser, D.D. Nelson, Jr., J. Shorter, J.B. McManus, R. Jiménez, C. Warneke, and J.A. deGouw, Airborne measurements of HCHO and HCOOH during the New England Air Quality Study 2004 using a pulsed quantum cascade laser spectrometer, *Journal of Geophysical*

*Research*, 112, doi:10.1029/2006JD007600, 2007.

Herndon, S.C., and A.R. Ravishankara, Kinetics of the reaction of SH and SD with NO<sub>2</sub>, *Journal of Physical Chemistry A*, 110, 106-113, doi:10.1021/jp053918r, 2006.

Herndon, S.C., T. Gierczak, R.K. Talukdar, and A.R. Ravishankara, Kinetics of the reaction of OH with several alkyl halides, *Physical Chemistry Chemical Physics*, 3, 4529-4535, doi: 4510.1039/b105188c, 2001.

Hicke, J., and A.F. Tuck, Polar stratospheric cloud impacts on Antarctic stratospheric heating rates, *Quarterly Journal of the Royal Meteorological Society*, 127, 1645-1658, 2001.

Hoelzemann, J.J., M.G. Schultz, G.P. Brasseur, and C. Granier, Global wildland fire emission model (GWEM): Evaluating the use of global area burnt satellite data, *Journal of Geophysical Research*, 109, doi:10.1029/2003JD003666, 2004.

Hofzumahaus, A., B.L. Lefer, P.S. Monks, S.R. Hall, A. Kylling, B. Mayer, R.E. Shetter, W. Junkermann, A. Bais, J.G. Calvert, C.A. Cantrell, S. Madronich, G.D. Edwards, A. Kraus, M. Müller, B. Bohn, R. Schmitt, P. Johnston, R. McKenzie, G.J. Frost, E. Griffioen, M. Krol, T. Martin, G. Pfister, E.P. Röth, A. Ruggaber, W.H. Swartz, S.A. Lloyd, and M. Van Weele, Photolysis frequency of O<sub>3</sub> to O(<sup>1</sup>D): Measurements and modeling during the International Photolysis Frequency Measurement and Modeling Intercomparison (IPMMI), *Journal of Geophysical Research*, 109, doi:10.1029/2003JD004333, 2004.

Holloway, J.S., R.O. Jakoubek, D.D. Parrish, C. Gerbig, A. Volz-Thomas, S. Schmitgen, A. Fried, B. Wert, B. Henry, and J.R. Drummond, Airborne intercomparison of vacuum ultraviolet fluorescence and tunable diode laser absorption measurements of tropospheric carbon monoxide, *Journal of Geophysical Research*, 105, 24251-24261, 2000.

Horowitz, L.W., S. Walters, D.L. Mauzeral, L.K. Emmons, P.J. Rasch, C. Granier, X. Tie, J.-F. Lamarque, M.G. Schultz, G.S. Tyndall, J.J. Orlando, and G.P. Brasseur, A global simulation of tropospheric ozone and related tracers: Description and evaluation of MOZART, version 2, *Journal of Geophysical Research*, 108, 4784, doi:4710.1029/2002JD002853, 2003.

Houze, R.A., Jr., S. Brodzik, C. Schumacker, S.E. Yuter, and C.R. Williams, Uncertainties in oceanic radar rain maps at Kwajalein and implications for satellite validation, *Journal of Applied Meteorology*, 43, 1114-1132, 2004.

Hudman, R.C., D.J. Jacob, S. Turquety, E.M. Leibensperger, L.T. Murray, S. Wu, A.B. Gilliland, M. Avery, T.H. Bertram, W. Brune, R.C. Cohen, J.E. Dibb, F.M. Flocke, A. Fried, J. Holloway, J.A. Neuman, R. Orville, A. Perring, X. Ren, G.W. Sachse, H.B. Singh, A. Swanson, and P.J. Wooldridge, Surface and lightning sources of nitrogen oxides over the United States: Magnitudes, chemical evolution, and outflow, *Journal of Geophysical Research*, 112, doi:10.1029/2006JD007912, 2007.

Hudman, R.C., D.J. Jacob, O.R. Cooper, M.J. Evans, C.L. Heald, R.J. Park, F. Fehsenfeld, F. Flocke, J. Holloway, G. Hübler, K. Kita, M. Koike, Y. Kondo, A. Neuman, J. Nowak, S. Oltmans, D. Parrish, J.M. Roberts, and T. Ryerson, Ozone production in transpacific Asian pollution plumes and implications for ozone air quality in California, *Journal of Geophysical Research*, 109, doi:10.1029/2004JD004974, 2004.

- Hudson, P.K., D.M. Murphy, D.J. Cziczo, D.S. Thomson, J.A. deGouw, C. Warneke, J. Holloway, H.-J. Jost, and G. Hübler, Biomass-burning particle measurements: Characteristic composition and chemical processing, *Journal of Geophysical Research*, *109*, doi:10.1029/2003JD004398, 2004.
- Huntrieser, H., J. Heland, H. Schlager, C. Forster, A. Stohl, H. Aufmhoff, F. Arnold, H.E. Scheel, M. Campana, S. Gilge, R. Eixmann, and O. Cooper, Intercontinental air pollution transport from North America to Europe: Experimental evidence from airborne measurements and surface observations, *Journal of Geophysical Research*, *110*, doi:10.1029/2004JD005045, 2005.
- Jacob, D.J., B.D. Field, Q. Li, D.R. Blake, J. deGouw, C. Warneke, A. Hansel, A. Wisthaler, H.B. Singh, and A. Guenther, Global budget of methanol: Constraints from atmospheric observations, *Journal of Geophysical Research*, *110*, doi: 10.1029/2004JD005172, 2005.
- Jaffe, D., J. Snow, and O. Cooper, The 2001 Asian dust events: Transport and impact on surface aerosol concentrations in the U.S., *EOS, Transactions, American Geophysical Union*, *84*, 501-507, 2003.
- Jaffe, D., H. Price, D.D. Parrish, A. Goldstein, and J. Harris, Increasing background ozone during spring on the west coast of North America, *Geophysical Research Letters*, *30*, doi:10.1029/2003GL017024, 2003.
- James, P., A. Stohl, N. Spichtinger, S. Eckhardt, and C. Forster, Climatological aspects of the extreme European rainfall of August 2002 and a trajectory method for estimating the associated evaporative source regions, *Natural Hazards and Earth System Sciences*, *4*, 733-746, SRef-ID: 1684-9981/nhess/2004-1684-1733, 2004.
- Jensen, E.J., J.B. Smith, L. Pfister, J.V. Pittman, E.M. Weinstock, D.S. Sayres, R.L. Herman, R.F. Troy, K.H. Rosenlof, T.L. Thompson, A.M. Fridlind, P.K. Hudson, D.J. Cziczo, A.J. Heymsfield, C. Schmitt, and J.C. Wilson, Ice supersaturations exceeding 100% at the cold tropical tropopause: Implications for cirrus formation and dehydration, *Atmospheric Chemistry Physics*, *5*, 851-886, doi:1680-7324/acp/2005-1685-1851, 2005.
- Jiang, H., H. Xue, A. Teller, G. Feingold, and Z. Levin, Aerosol effects on the lifetime of shallow cumulus, *Geophysical Research Letters*, *33*, doi:10.1029/2006GL026024, 2006.
- Jiang, H., and G. Feingold, Effect of aerosol on warm convective clouds: Aerosol-cloud-surface flux feedbacks in a new coupled large eddy model, *Journal of Geophysical Research*, *111*, doi:10.1029/2005JD006138, 2006.
- Jiménez, E., T. Gierczak, H. Stark, J.B. Burkholder, and A.R. Ravishankara, Quantum yields of OH, HO<sub>2</sub>, and NO<sub>3</sub> in the UV photolysis of HO<sub>2</sub>NO<sub>2</sub>, *Physical Chemistry Chemical Physics*, *7*, 342-348, doi:310.1039/b413429j, 2005.
- Jiménez, E., T. Gierczak, H. Stark, J.B. Burkholder, and A.R. Ravishankara, Reaction of OH with HO<sub>2</sub>NO<sub>2</sub> (Peroxynitric Acid): Rate coefficients between 218 and 335 K and product yields at 298 K, *Journal of Physical Chemistry A*, *108*, 1139-1149, doi:1110.1102/jp0363489, 2004.
- Jiménez, E., M.K. Gilles, and A.R. Ravishankara, Kinetics of the reactions of the hydroxyl radical with CH<sub>3</sub>OH and C<sub>2</sub>H<sub>5</sub>OH between 235 and 360 K, *Journal of Photochemistry and Photobiology A: Chemistry*, *157*, 237-245, doi:210.1016/S1010-6030(1003)00073-X, 2003.

- Jobson, B.T., C.M. Berkowitz, W.C. Kuster, P.D. Goldan, E.J. Williams, F.C. Fehsenfeld, E.C. Apel, T. Karl, W.A. Lonneman, and D. Riemer, Hydrocarbon source signatures in Houston, Texas: Influence of the petrochemical industry, *Journal of Geophysical Research*, *109*, doi:10.1029/2004JD004887, 2004.
- Johnston, P.E., L.M. Hartten, C.H. Love, D.A. Carter, and K.S. Gage, Range errors in wind profiling caused by strong reflectivity gradients, *Journal of Atmospheric and Oceanic Technology*, *19*, 934-953, 2002.
- Jones, G.V., M.A. White, O.R. Cooper, and K. Storchmann, Climate change and global wine quality, *Climatic Change*, *73*, 319-343, doi:10.1007/s10584-10005-14704-10582, 2005.
- Jost, H.-J., K. Drdla, A. Stohl, L. Pfister, M. Loewenstein, J.P. Lopez, P.K. Hudson, D.M. Murphy, D.J. Cziczko, M. Fromm, T.P. Bui, J. Dean-Day, C. Gerbig, M.J. Mahoney, E.C. Richard, N. Spichtinger, J.V. Pittman, E.M. Weinstock, J.C. Wilson, and I. Xueref, In-situ observations of mid-latitude forest fire plumes deep in the stratosphere, *Geophysical Research Letters*, *31*, doi:10.1029/2003GL019253, 2004.
- Karl, T., F. Harren, C. Warneke, J. deGouw, C. Grayless, and R. Fall, Senescing grass crops as regional sources of reactive volatile organic compounds, *Journal of Geophysical Research*, *110*, doi: 10.1029/2005JD005777, 2005.
- Karl, T., T. Jobson, W.C. Kuster, E. Williams, J. Stutz, R. Shetter, S.R. Hall, P. Goldan, F. Fehsenfeld, and W. Lindinger, Use of proton-transfer-reaction mass spectrometry to characterize volatile organic compound sources at the La Porte super site during the Texas Air Quality Study 2000, *Journal of Geophysical Research*, *108*, doi:10.1029/2002JD003333, 2003.
- Kasibhatla, P., H. Levy, II, W.J. Moxim, S.N. Pandis, J.J. Corbett, M.C. Peterson, R.E. Honrath, G.J. Frost, K. Knapp, D.D. Parrish, and T.B. Ryerson, Do emissions from ships have a significant impact on concentrations of nitrogen oxides in the marine boundary layer?, *Geophysical Research Letters*, *27*, 2229-2232, 2000.
- Kaspers, K.A., R.S.W. van de Wal, J.A. deGouw, C.M. Hofstede, M.R. van den Broeke, C. van der Veen, R.E.M. Neubert, H.A.J. Meijer, C.A.M. Brenninkmeijer, L. Karlöf, and J.-G. Winther, Analyses of firn gas samples from Dronning Maud Land, Antarctica: Study of nonmethane hydrocarbons and methyl chloride, *Journal of Geophysical Research*, *109*, doi:10.1029/2003JD003950, 2004.
- Kaspers, K.A., R.S.W. van de Wal, J.A. deGouw, C.M. Hofstede, M.R. van den Broeke, C.H. Reijmer, C. van der Veen, R.E.M. Neubert, H.A.J. Meijer, C.A.M. Brenninkmeijer, L. Karlöf, and J.-G. Winther, Seasonal cycles of nonmethane hydrocarbons and methyl chloride, as derived from firn air from Dronning Maud Land, Antarctica, *Journal of Geophysical Research*, *109*, doi:10.1029/2004JD004629, 2004.
- Kazil, J., E.R. Lovejoy, E.J. Jensen, and D.R. Hanson, Is aerosol formation in cirrus clouds possible?, *Atmospheric Chemistry and Physics*, *7*, 1407-1413, 2007.
- Kazil, J., and E.R. Lovejoy, A semi-analytical method for calculating rates of new sulfate aerosol formation from the gas phase, *Atmospheric Chemistry and Physics*, *7*, 3447-3459, 2007.
- Kazil, J., E.R. Lovejoy, M.C. Barth, and K. O'Brien, Aerosol nucleation over oceans and the role of

- galactic cosmic rays, *Atmospheric Chemistry and Physics*, *6*, 4905-4924, 2006.
- Kazil, J., E.R. Lovejoy, E.J. Jensen, and D.R. Hanson, Is aerosol formation in cirrus clouds possible?, *Atmospheric Chemistry and Physics Discussions*, *6*, 12179-12197, 2006.
- Kazil, J., and E.R. Lovejoy, Tropospheric ionization and aerosol production: A model study, *Journal of Geophysical Research*, *109*, doi:10.1029/2004JD004852, 2004.
- Keeley, S.P.E., N.P. Gillett, D.W.J. Thompson, S. Solomon, and P.M.D. Forster, Is Antarctic climate most sensitive to ozone depletion in the middle or lower stratosphere?, *Geophysical Research Letters*, *34*, doi:10.1029/2007GL031238, 2007.
- Keenan, T.D., S. Rutledge, R. Carbone, J.C. Wilson, T. Takahashi, P.T. May, N. Tapper, M. Platt, J. Hacker, S. Sekelsky, M. Moncrieff, K. Saito, G. Holland, A. Crook, and K.S. Gage, The Maritime Continent Thunderstorm Experiment (MCTEX): Overview and some results, *Bulletin of the American Meteorological Society*, *81*, 2433-2455, 2000.
- Kiemle, C., W.A. Brewer, G. Ehret, R.M. Hardesty, A. Fix, C. Senff, M. Wirth, G. Poberaj, and M.A. LeMone, Latent heat flux profiles from collocated airborne water vapor and wind lidars during IHOP 2002, *Journal of Atmospheric and Oceanic Technology*, *24*, 627-639, doi:10.1175/JTECH1997.1171, 2007.
- Kiladis, G.N., K.H. Straub, and P.T. Haertel, Zonal and vertical structure of the Madden-Julian oscillation, *Journal of the Atmospheric Sciences*, *62*, 2790-2809, doi:10.1175/JAS3520.2791, 2005.
- Kiladis, G.N., K.H. Straub, G.C. Reid, and K.S. Gage, Aspects of interannual and intraseasonal variability of the tropopause and lower stratosphere, *Quarterly Journal of the Royal Meteorological Society*, *127*, 1961-1984, 2001.
- Kim, S.-W., C.-H. Moeng, J.C. Weil, and M.C. Barth, Comment on "Fumigation of pollutants in and above the entrainment zone into a growing convective boundary layer: A large-eddy simulation", *Atmospheric Environment*, *41*, 7679-7682, doi:10.1016/j.atmosenv.2007.7607.7017, 2007.
- Kim, C.-H., S.M. Kreidenweis, G. Feingold, K.G. Anlauf, and W.R. Leitch, Measurement and interpretation of cloud effects on the concentrations of hydrogen peroxide and organoperoxides over Ontario, Canada, *Atmospheric Research*, *81*, 140-149, doi:10.1016/j.atmosres.2005.1011.1009, 2006.
- Kim, S.-W., A. Heckel, S.A. McKeen, G.J. Frost, E.-Y. Hsie, M.K. Trainer, A. Richter, J.P. Burrows, S.E. Peckham, and G.A. Grell, Satellite-observed U.S. power plant NO<sub>x</sub> emission reductions and their impact on air quality, *Geophysical Research Letters*, *33*, doi:10.1029/2006GL027749, 2006.
- Kim, C.-H., S.M. Kreidenweis, G. Feingold, G.J. Frost, and M. Trainer, Modeling cloud effects on hydrogen peroxide and methylhydroperoxide in the marine atmosphere, *Journal of Geophysical Research*, *107*, 10.129/2000JD000285, 2002.
- Kita, K., Y. Morino, Y. Kondo, Y. Komazaki, N. Takegawa, Y. Miyazaki, J. Hirokawa, S. Tanaka, T.L. Thompson, R.-S. Gao, and D.W. Fahey, A chemical ionization mass spectrometer for ground-based measurements of nitric acid, *Journal of Atmospheric and Oceanic Technology*, *23*, doi:10.1175/JTECH1900.1101, 2006.



- Knight, G., A.R. Ravishankara, and J.B. Burkholder, UV absorption cross sections of HO<sub>2</sub>NO<sub>2</sub> between 343 and 273 K, *Physical Chemistry Chemical Physics*, *4*, 1432-1437, doi:10.1039/b108904h, 2002.
- Knight, G., A.R. Ravishankara, and J.B. Burkholder, Laboratory studies of OBrO, *The Journal of Physical Chemistry A*, *104*, 11121-11125, doi: 11110.11021/jp002226u, 2000.
- Koch, S.E., B.D. Jamison, C. Lu, T.L. Smith, E.I. Tollerud, C. Girz, N. Wang, T.P. Lane, M.A. Shapiro, D.D. Parrish, and O.R. Cooper, Turbulence and gravity waves within an upper-level front, *Journal of the Atmospheric Sciences*, *62*, 3885-3908, doi:3810.1175/JAS3574.3881, 2005.
- Koch, L.C., P. Marshall, and A.R. Ravishankara, An investigation of the reaction of CH<sub>3</sub>S with CO, *Journal of Physical Chemistry A*, *108*, 5205-5212, doi:5210.1012/jp049193t, 2004.
- Koehler, K.A., S.M. Kreidenweis, P.J. DeMott, A.J. Prenni, C.M. Carrico, B. Ervens, and G. Feingold, Water activity and activation diameters from hygroscopicity data. Part II: Application to organic species, *Atmospheric Chemistry and Physics*, *6*, 795-809, 2006.
- Kokhanovsky, A.A., V.V. Rozanov, T. Nauss, C. Reudenach, J.S. Daniel, H.L. Miller Jr., and J.P. Burrows, The semianalytical cloud retrieval algorithm for SCIAMACHY I. The validation, *Atmospheric Chemistry and Physics*, *6*, 1905-1911, 2006.
- Kokhanovsky, A.A., V.V. Rozanov, T. Nauss, C. Reudenach, J.S. Daniel, H.L. Miller, and J.P. Burrows, The semianalytical cloud retrieval algorithm for SCIAMACHY: I, The validation, *Atmospheric Chemistry and Physics*, *5*, 1995-2015, 2005.
- Konopka, P., J.-U. Groöb, G. Günther, D.S. McKenna, R. Müller, J.W. Elkins, D. Fahey, and P. Popp, Weak impact of mixing on chlorine deactivation during SOLVE/THESEO 2000: Lagrangian modeling (CLaMS) versus ER-2 in situ observations, *Journal of Geophysical Research*, *108*, doi:10.1029/2001JD000876, 2003.
- Kormann, R., H. Fischer, M. de Reus, M.G. Lawrence, C. Brühl, R. von Kuhlmann, R. Holzinger, J. Williams, J. Lelieveld, C. Warneke, J.A. deGouw, J. Heland, H. Ziereis, and H. Schlager, Formaldehyde over the eastern Mediterranean during MINOS: Comparison of airborne in-situ measurements with 3D-model results, *Atmospheric Chemistry and Physics*, *3*, 851-861, 2003.
- Kovacs, T.A., W.H. Brune, H. Harder, M. Martinez, J.B. Simpas, G.J. Frost, E.J. Williams, T. Jobson, C. Stroud, V.L. Young, A. Fried, and B. Wert, Direct measurements of urban OH reactivity during Nashville SOS in summer 1999, *Journal of Environmental Monitoring*, *5*, 68-74, doi:10.1039/b204339d, 2003.
- Krasnoperov, L.N., E.N. Chesnokov, H. Stark, and A.R. Ravishankara, Unimolecular dissociation of formyl radical, HCO→H + CO, studied over 1-100 bar pressure range, *Journal of Physical Chemistry*, *108*, 11526-11536, doi: 11510.11021/jp0403994, 2004.
- Kreidenweis, S.M., K. Koehler, P.J. DeMott, A.J. Prenni, C. Carrico, and B. Ervens, Water activity and activation diameters from hygroscopicity data, *Atmospheric Chemistry Physics*, *5*, 1357-1370, 2006.
- Kuester, M.A., M.J. Alexander, and E.A. Ray, A modelling study of gravity waves over Hurricane Humberto (2001), *Journal of the Atmospheric Sciences*, *in press*, 2007.

- Kuster, W.C., F.J.M. Harren, and J.A. deGouw, Inter-comparison of laser photoacoustic spectroscopy and gas chromatography techniques for measurements of ethene in the atmosphere, *Environmental Science and Technology*, *39*, 4581-4585, doi:4510.1021/es0504385, 2005.
- Kuster, W.C., B.T. Jobson, T. Karl, D. Riemer, E.C. Apel, P.D. Goldan, and F.C. Fehsenfeld, Intercomparison of volatile organic carbon measurement techniques and data at La Porte during the TexAQSt2000 Air Quality Study, *Environmental Science and Technology*, *38*, 221-228, doi: 210.1021/es034710r, 2004.
- Lack, D.A., E.R. Lovejoy, T. Baynard, A. Pettersson, and A.R. Ravishankara, Aerosol absorption measurement using photoacoustic spectroscopy: Sensitivity, calibration and uncertainty developments, *Aerosol Science and Technology*, *40*, 697-708, doi:610.1080/02786820600803917, 2006.
- Lamarque, J.-F., J.T. Kiehl, G.P. Brasseur, T. Butler, P. Cameron-Smith, W.D. Collins, W.J. Collins, C. Granier, D. Hauglustaine, P.G. Hess, E.A. Holland, L. Horowitz, M.G. Lawrence, D. McKenna, P. Merilees, M.J. Prather, P.J. Rasch, D. Rotman, D. Shindell, and P. Thornton, Assessing future nitrogen deposition and carbon cycle feedback using a multimodel approach: Analysis of nitrogen deposition, *Journal of Geophysical Research*, *110*, doi:10.1029/2005JD005825, 2005.
- Lamarque, J.-F., P. Hess, L. Emmons, L. Buja, W. Washington, and C. Granier, Tropospheric ozone evolution between 1890 and 1990, *Journal of Geophysical Research*, *110*, doi:10.1029/JD005537, 2005.
- Langford, A.O., R. Schofield, J.S. Daniel, R.W. Portmann, M.L. Melamed, H.L. Miller Jr., E.G. Dutton, and S. Solomon, On the variability of the Ring effect in the near ultraviolet: Understanding the role of aerosols and multiple scattering, *Atmospheric Chemistry and Physics*, *7*, 575-586, 2007.
- Langford, A.O., R.W. Portmann, J.S. Daniel, H.L. Miller, C.S. Eubank, S. Solomon, and E.G. Dutton, Retrieval of ice crystal effective diameters from ground-based near-infrared spectra of optically thin cirrus, *Journal of Geophysical Research*, *110*, doi:10.1029/2005JD005761, 2005.
- Langford, A.O., R.W. Portmann, J.S. Daniel, H.L. Miller, and S. Solomon, Spectroscopic measurements of NO<sub>2</sub> in a Colorado thunderstorm: Determination of the mean production by cloud-to-ground lightning flashes, *Journal of Geophysical Research*, *109*, doi:10.1029/2003JD004158, 2004.
- Lee, Y.S., D.R. Collins, R. Li, K.P. Bowman, and G. Feingold, Expected impact of an aged biomass burning aerosol on cloud condensation nuclei and cloud droplet concentrations, *Journal of Geophysical Research*, *111*, doi:10.1029/2005JD006464, 2006.
- Lee, S.-H., D.M. Murphy, D.S. Thomson, and A.M. Middlebrook, Nitrate and oxidized organic ions in single particle mass spectra during the 1999 Atlanta Supersite Project, *Journal of Geophysical Research*, *108*, doi:10.1029/2001JD001455, 2003.
- Lee, S.-H., D.M. Murphy, D.S. Thomson, and A.M. Middlebrook, Chemical components of single particles measured with Particle Analysis by Laser Mass Spectrometry (PALMS) during the Atlanta Supersite Project: Focus on organic/sulfate, lead, soot, and mineral particles, *Journal of Geophysical Research*, *107*, doi: 10.1029/2000JD000011, 2002.
- Leibrock, E., L.G. Huey, P.D. Goldan, W.C. Kuster, E. Williams, and F.C. Fehsenfeld, Ground-based

intercomparison of two isoprene measurement techniques, *Atmospheric Chemistry and Physics*, *3*, 67-72, 2003.

- Leibrock, E., and L.G. Huey, Ion chemistry for the detection of isoprene and other volatile organic compounds in ambient air, *Geophysical Research Letters*, *27*, 1719-1722, 2000.
- Lelieveld, J., H. Berresheim, S. Borrmann, P.J. Crutzen, F.J. Dentener, H. Fischer, J. Feichter, P.J. Flatau, J. Heland, R. Holzinger, R. Kormann, M.G. Lawrence, Z. Levin, K.M. Markowicz, N. Mihalopoulos, A. Minikin, V. Ramanathan, M. de Reus, G.J. Roelofs, H.A. Scheeren, J. Sciare, H. Schlager, M. Schultz, P. Siegmund, B. Steil, E.G. Stephanou, P. Stier, M. Traub, C. Warneke, J. Williams, and H. Ziereis, Global air pollution crossroads over the Mediterranean, *Science*, *298*, 794-799, 2002.
- LeMone, M.A., R.L. Grossman, R.T. McMillen, K.-N. Liou, S.C. Ou, S. McKeen, W. Angevine, K. Ikeda, and F. Chen, Cases-97: Late-morning warming and moistening of the convective boundary layer over the Walnut River watershed, *Boundary-Layer Meteorology*, *104*, 1-52, 2002.
- Li, Q., D.J. Jacob, J.W. Munger, R.M. Yantosca, and D.D. Parrish, Export of  $\text{NO}_y$  from the North American boundary layer: Reconciling aircraft observations and global model budgets, *Journal of Geophysical Research*, *109*, doi:10.1029/2003JD004086, 2004.
- Li, Q., D.J. Jacob, I. Bey, P.I. Palmer, D. B.N., B.D. Field, R.V. Martin, A.M. Fiore, R.M. Yantosca, D.D. Parrish, P.G. Simmonds, and S.J. Oltmans, Transatlantic transport of pollution and its effects on surface ozone in Europe and North America, *Journal of Geophysical Research*, *107*, 4166, doi:4110.1029/2001JD001422, 2002.
- Liebmann, B., G.N. Kiladis, C.S. Vera, A.C. Saulo, and L.M.V. Carvalho, Subseasonal variations of rainfall in South America in the vicinity of the low-level jet east of the Andes and comparison to those in the south Atlantic convergence zone, *Journal of Climate*, *17*, 3829-3842, 2004.
- Longfellow, C.A., A.R. Ravishankara, and D.R. Hanson, Reactive and nonreactive uptake on hydrocarbon soot:  $\text{HNO}_3$ ,  $\text{O}_3$ , and  $\text{N}_2\text{O}_5$ , *Journal of Geophysical Research*, *105*, 24345-24350, 2000.
- Lovejoy, S., A.F. Tuck, S.J. Hovde, and D. Schertzer, Do stable atmospheric layers exist?, *Geophysical Research Letters*, *35*, doi:10.1029/2007GL032122, 2008.
- Lovejoy, S., A.F. Tuck, S.J. Hovde, and D. Schertzer, Is isotropic turbulence relevant in the atmosphere?, *Geophysical Research Letters*, *34*, doi:1029.2007GL029359, 2007.
- Lovejoy, E.R., J. Curtius, and K.D. Froyd, Atmospheric ion-induced nucleation of sulphuric acid and water, *Journal of Geophysical Research*, *109*, doi:10.1029/2003JD004460, 2004.
- Lovejoy, S., D. Schertzer, and A.F. Tuck, Fractal aircraft trajectories and nonclassical turbulent exponents, *Physical Review E*, *70*, doi:10.1103/PhysRevE.1170.036306, 2004.
- Lovejoy, E.R., and J. Curtius, Cluster ion thermal decomposition (II): Master equation modeling in the low-pressure limit and fall-off regions. Bond energies for  $\text{HSO}_4^- (\text{H}_2\text{SO}_4)_x (\text{HNO}_3)_y$ , *The Journal of Physical Chemistry A*, *105*, 10874-10883, doi: 10810.11021/jp012496s, 2001.
- Lovejoy, E.R., and R. Bianco, Temperature dependence of cluster ion decomposition in a quadrupole ion trap, *Journal of Physical Chemistry A*, *104*, 10280-10287, doi: 10210.11021/jp001216q, 2000.

- Machol, J.L., T. Ayers, K.T. Schwenz, K.W. Koenig, R.M. Hardesty, C.J. Senff, M.A. Krainak, J.B. Abshire, H.E. Bravo, and S.P. Sandberg, Preliminary measurements with an automated compact differential absorption lidar for the profiling of water vapor: Errata, *Applied Optics*, *45*, 3544-3544, 2006.
- Majda, A.J., B. Khouider, G.N. Kiladis, K.H. Straub, and M.G. Shefter, A model for convectively coupled tropical waves: Nonlinearity, rotation, and comparison with observations, *Journal of the Atmospheric Sciences*, *61*, 2188-2205, 2004.
- Marculli, C.A., M.R. Canagaratna, D.R. Worsnop, R. Bahreini, J.A. deGouw, C. Warneke, P.D. Goldan, W.C. Kuster, E.J. Williams, B.M. Lerner, J.M. Roberts, J.F. Meagher, F.C. Fehsenfeld, L. Marchewka, S.M. Bertman, and A.M. Middlebrook, Cluster analysis of the organic peaks in bulk mass spectra obtained during the 2002 New England Air Quality Study with an Aerodyne aerosol mass spectrometer, *Atmospheric Chemistry and Physics*, *6*, 5649-5666, 2006.
- Marcy, T.P., P.J. Popp, R.S. Gao, D.W. Fahey, E.A. Ray, E.C. Richard, T.L. Thompson, E.L. Atlas, M. Loewenstein, S.C. Wofsy, S. Park, E.M. Weinstock, W.H. Swartz, and M.J. Mahoney, Measurements of trace gases in the tropical tropopause layer, *Atmospheric Environment*, *41*, 7253-7261, doi:10.1016/j.atmosenv.2007.7205.7032, 2007.
- Marcy, T.P., R.S. Gao, M.J. Northway, P.J. Popp, H. Stark, and D.W. Fahey, Using chemical ionization mass spectrometry for detection of HNO<sub>3</sub>, HCl, and ClONO<sub>2</sub> in the atmosphere, *International Journal of Mass Spectrometry*, *243*, 63-70, doi:10.1016/j.ijms.2004.1011.1012, 2005.
- Marcy, T.P., D.W. Fahey, R.S. Gao, P.J. Popp, E.C. Richard, T.L. Thompson, K.H. Rosenlof, E.A. Ray, R.J. Salawitch, C.S. Atherton, D.J. Bergmann, B.A. Ridley, A.J. Weinheimer, M. Loewenstein, E.M. Weinstock, and M.J. Mahoney, Quantifying stratospheric ozone in the upper troposphere with in situ measurements of HCl, *Science*, *304*, 261-265, 2004.
- Marengo, J.A., T. Ambrizzi, G. Kiladis, and B. Liebmann, Upper-air wave trains over the Pacific Ocean and wintertime cold surges in tropical-subtropical South America leading to freezes in southern and southeastern Brazil, *Theoretical and Applied Climatology*, *73*, 223-242, doi:10.1007/s00704-00001-00669x, 2002.
- Martin, R.V., C.E. Sioris, K. Chance, T.B. Ryerson, T.H. Bertram, P.J. Wooldridge, R.C. Cohen, J.A. Neuman, A. Swanson, and F.M. Flocke, Evaluation of space-based constraints on global nitrogen oxide emissions with regional aircraft measurements over and downwind of eastern North American, *Journal of Geophysical Research*, *111*, doi:10.1029/2005JD006680, 2006.
- Martin, R.V., D.D. Parrish, T.B. Ryerson, D.K. Nicks, Jr., K. Chance, T.P. Kurosu, D.J. Jacob, E.D. Sturges, A. Fried, and B.P. Wert, Evaluation of GOME satellite measurements of tropospheric NO<sub>2</sub> and HCHO using regional data from aircraft campaigns in the southeastern United States, *Journal of Geophysical Research*, *109*, doi:10.1029/2004JD004869, 2004.
- Martinez, M., H. Harder, T.A. Kovacs, J.B. Simpas, J. Bassis, R. Leshner, W.H. Brune, G.J. Frost, E.J. Williams, C.A. Stroud, B.T. Jobson, J.M. Roberts, S.R. Hall, R.E. Shetter, B. Wert, A. Fried, B. Alicke, J. Stutz, V.L. Young, A.B. White, and R.J. Zamora, OH and HO<sub>2</sub> concentrations, sources and loss rates during the Southern Oxidants Study in Nashville, TN, summer 1999, *Journal of Geophysical Research*, *108*, 4617, doi:10.1029/2003JD003551, 2003.
- Matsumi, Y., F.J. Comes, G. Hancock, A. Hofzumahaus, A.J. Hynes, M. Kawasaki, and A.R.

Ravishankara, Quantum yields for production of O(<sup>1</sup>D) in the ultraviolet photolysis of ozone: Recommendation based on evaluation of laboratory data, *Journal of Geophysical Research*, 107, doi: 10/1029/2001JD000510, 2002.

Matthews, A.J., and G.N. Kiladis, A model of Rossby wave linked to convection over the eastern tropical Pacific, *Journal of the Atmospheric Sciences*, 57, 3785-3798, 2000.

May, P.T., A.R. Jameson, T.D. Keenan, P.E. Johnston, and C. Lucas, Combined wind profiler/polarimetric radar studies of the vertical motion and microphysical characteristics of tropical sea-breeze thunderstorms, *Monthly Weather Review*, 130, 2228-2239, 2002.

May, P.T., A.R. Jameson, T.D. Keenan, and P.E. Johnston, A comparison between polarimetric radar and wind profiler observations of precipitation in tropical showers, *Journal of Applied Meteorology*, 40, 1702-1716, 2001.

McCabe, D.C., I.W.M. Smith, B. Rajakumar, and A.R. Ravishankara, Rate coefficients for the relaxation of OH ( $v = 1$ ) by O<sub>2</sub> at temperatures from 204-371 K and by N<sub>2</sub>O from 243-372 K, *Chemical Physics Letters*, 421, 111-117, doi:10.1016/j.cplett.2006.1001.1037, 2006.

McCabe, D.C., B. Rajakumar, P. Marshall, I.W.M. Smith, and A.R. Ravishankara, The relaxation of OH ( $v = 1$ ) and OD ( $v = 1$ ) by H<sub>2</sub>O and D<sub>2</sub>O at temperatures from 251 to 390 K, *Physical Chemistry Chemical Physics*, 8, 4563-4574, doi:4510.1039/b609330b, 2006.

McCabe, D.C., S.S. Brown, M.K. Gilles, R.K. Talukdar, I.W.M. Smith, and A.R. Ravishankara, Kinetics of the removal of OH( $v=1$ ) and OD( $v=1$ ) by HNO<sub>3</sub> and DNO<sub>3</sub> from 253 to 383K, *Journal of Physical Chemistry A*, 107, 7762-7769, doi:7710.1021/jp0346413, 2003.

McCabe, D.C., T. Gierczak, R.K. Talukdar, and A.R. Ravishankara, Kinetics of the reaction OH + CO under atmospheric conditions, *Geophysical Research Letters*, 28, 3135-3138, 2001.

McCaffery, S.J., S.A. McKeen, E.-Y. Hsie, D.D. Parrish, O.R. Cooper, J.S. Holloway, G. Hübler, F.C. Fehsenfeld, and M. Trainer, A case study of stratosphere-troposphere exchange during the 1996 North Atlantic Regional Experiment, *Journal of Geophysical Research*, 109, doi:10.1029/2003JD004007, 2004.

McClenny, W.A., E.J. Williams, R.C. Cohen, and J. Stutz, Preparing to measure the effects of the NO<sub>x</sub> SIP call: Methods for ambient air monitoring of NO, NO<sub>2</sub>, NO<sub>y</sub> and individual NO<sub>z</sub> species, *Journal of the Air & Waste Management Association*, 52, 542-562, 2002.

McFiggans, G., P. Artaxo, U. Baltensperger, H. Coe, M.C. Facchini, G. Feingold, S. Fuzzi, M. Gysel, A. Laaksonen, U. Lohmann, T.F. Mentel, D.M. Murphy, C.D. O'Dowd, J.R. Snider, and E. Weingartner, The effect of physical and chemical aerosol properties on warm cloud droplet activation, *Atmospheric Chemistry and Physics*, 6, 2593-2649, 2006.

McFiggans, G., P. Artaxo, U. Baltensperger, H. Coe, M.C. Facchini, G. Feingold, S. Fuzzi, M. Gysel, A. Laaksonen, U. Lohmann, T.F. Mentel, D.M. Murphy, C.D. O'Dowd, J.R. Snider, and E. Weingartner, The effect of physical and chemical aerosol properties on warm cloud droplet activation, *Atmospheric Chemistry and Physics Discussions*, 5, 8507-8646, 2005.

McKeen, S., S.H. Chung, J. Wilczak, G. Grell, I. Djalalova, S. Peckham, W. Gong, V. Bouchet, R. Moffet, Y. Tang, G.R. Carmichael, R. Mathur, and S. Yu, Evaluation of several PM<sub>2.5</sub> forecast

models using data collected during the ICARTT/NEAQS 2004 field study, *Journal of Geophysical Research*, 112, doi:10.1029/2006JD007608, 2007.

McKeen, S., J. Wilczak, G. Grell, I. Djalalova, S. Peckham, E.-Y. Hsie, W. Gong, V. Bouchet, S. Menard, R. Moffet, J. McHenry, J. McQueen, Y. Tang, G.R. Carmichael, M. Pagowski, A. Chan, T. Dye, G. Frost, P. Lee, and R. Mathur, Assessment of an ensemble of seven real-time ozone forecasts over eastern North America during the summer of 2004, *Journal of Geophysical Research*, 110, doi:10.1029/2005JD005858, 2005.

McKeen, S.A., G. Wotawa, D.D. Parrish, J.S. Holloway, M.P. Buhr, G. Hübler, F.C. Fehsenfeld, and J.F. Meagher, Ozone production from Canadian wildfires during June and July of 1995, *Journal of Geophysical Research*, 107, 4192, doi:10.1029/2001JD000697, 2002.

McKinney, K.A., P.O. Wennberg, S. Dhaniyala, D.W. Fahey, M.J. Northway, K.F. Künzi, A. Kleinböhl, M. Sinnhuber, H. Küllmann, H. Bremer, M.J. Mahoney, and T.P. Bui, Trajectory studies of large HNO<sub>3</sub>-containing PSC particles in the Arctic: Evidence for the role of NAT, *Geophysical Research Letters*, 31, doi:10.1029/2003GL018430, 2004.

McMurry, P.H., M. Fink, H. Sakurai, M.R. Stolzenburg, R.L. Mauldin, III, J. Smith, F. Eisele, K. Moore, S. Sjostedt, D. Tanner, L.G. Huey, J.B. Nowak, E. Edgerton, and D. Voisin, A criterion for new particle formation in the sulfur-rich Atlanta atmosphere, *Journal of Geophysical Research*, 110, doi:10.1029/2005JD005901, 2005.

Meagher, J.F., Ozone's janus face, *Forum for Applied Research and Public Policy*, Fall, 52-57, 2001.

Meehl, G.A., R. Lukas, G.N. Kiladis, and K.M. Weickmann, Time and space scale interactions in the climate system: Implications for climate variability and predictability, *Climate Dynamics*, 17, 753-775, 2001.

Melamed, M.L., S. Solomon, J.S. Daniel, A.O. Langford, R.W. Portmann, T.B. Ryerson, D.K. Nicks, Jr., and S.A. McKeen, Measuring reactive nitrogen emissions from point sources using visible spectroscopy from aircraft, *Journal of Environmental Monitoring*, 5, 29-34, doi:10.1039/b204220g, 2003.

Mena-Carrasco, M., Y. Tang, G.R. Carmichael, T. Chai, N. Thongbongchoo, J.E. Campbell, S. Kulkarni, L. Horowitz, J. Vukovich, M. Avery, W. Brune, J.E. Dibb, L. Emmons, F. Flocke, G.W. Sachse, D. Tan, R. Shetter, R.W. Talbot, D.G. Streets, G.J. Frost, and D. Blake, Improving regional ozone modeling through systematic evaluation of errors using the aircraft observations during the International consortium for Atmospheric Research on Transport and Transformation, *Journal of Geophysical Research*, 112, doi:10.1029/2006JD007762, 2007.

Methven, J., S.R. Arnold, A. Stohl, M.J. Evans, M. Avery, K. Law, A.C. Lewis, P.S. Monks, D.D. Parrish, C.E. Reeves, H. Schlager, E. Atlas, D.R. Blake, H. Coe, J. Crosier, F.M. Flocke, J.S. Holloway, J.R. Hopkins, J. McQuaid, R. Purvis, B. Rappenglück, H.B. Singh, N.M. Watson, L.K. Whalley, and P.I. Williams, Establishing Lagrangian connections between observations within air masses crossing the Atlantic during the International Consortium for Atmospheric Research on Transport and Transformation experiment, *Journal of Geophysical Research*, 111, doi:10.1029/2006JD007540, 2006.

Middlebrook, A.M., D.M. Murphy, S.-H. Lee, D.S. Thomson, K.A. Prather, R.J. Wenzel, D.-Y. Liu, D.J. Phares, K.P. Rhoads, A.S. Wexler, M.V. Johnston, J.L. Jimenez, J.T. Jayne, D.R. Worsnop, I.

Yourshaw, J.H. Seinfeld, and R.C. Flagan, A comparison of particle mass spectrometers during the 1999 Atlanta Supersite Project, *Journal of Geophysical Research*, 108, doi:10.1029/2001JD000660, 2003.

Miller, C.A., G. Hidy, J. Hales, C.E. Kolb, A.S. Werner, B. Haneke, D. Parrish, H.C. Frey, L. Rojas-Bracho, M. Deslauriers, W. Pennell, and J.D. Mobley, Air emission inventories in North America: A critical assessment, *Journal of the Air & Waste Management Association*, 56, 1115-1129, 2006.

Millet, D.B., A.H. Goldstein, R. Holzinger, B.J. Williams, J.D. Allan, J.L. Jimenez, D.R. Worsnop, J.M. Roberts, A.B. White, R.C. Hudman, I.T. Bertschi, and A. Stohl, Chemical characteristics of North American surface layer outflow: Insights from Chebogue Point, Nova Scotia, *Journal of Geophysical Research*, 111, doi:10.1029/2006JD007287, 2006.

Minschwaner, K., T. Canty, and C.R. Burnett, Hydroxyl column abundance measurements: PEPSIOS instrumentation at the Fritz Peak Observatory and data analysis techniques, *Journal of Atmospheric and Solar-Terrestrial Physics*, 65, 335-344, doi:10.1016/S1364-6826(1002)00297-00293, 2003.

Modgil, M.S., S. Kumar, S.N. Tripathi, and E.R. Lovejoy, A parameterization of ion-induced nucleation of sulphuric acid and water for atmospheric conditions, *Journal of Geophysical Research*, 110, doi:10.1029/2004JD005475, 2005.

Moise, T., R.K. Talukdar, G.J. Frost, R.W. Fox, and Y. Rudich, The reactive uptake of NO<sub>3</sub> by liquid and frozen organics, *Journal of Geophysical Research*, 107, doi:10.129/2001JD000334, 2002.

Moore, F.L., J.W. Elkins, E.A. Ray, G.S. Dutton, R.E. Dunn, D.W. Fahey, R.J. McLaughlin, T.L. Thompson, P.A. Romashkin, D.F. Hurst, and P.R. Wamsley, Balloonborne in situ gas chromatograph for measurements in the troposphere and stratosphere, *Journal of Geophysical Research*, 108, doi:10.1029/2001JD000891, 2003.

Morrison, G.C., and C.J. Howard, Selective detection of gas-phase aldehydes and ketones using protonated hydrazine, *International Journal of Mass Spectrometry* 210/211, 503-509, 2001.

Murphy, D.M., D.J. Cziczo, P.K. Hudson, and D.S. Thomson, Carbonaceous material in aerosol particles in the lower stratosphere and tropopause region, *Journal of Geophysical Research*, 112, doi:10.1029/2006JD007297, 2007.

Murphy, D.M., The design of single particle mass spectrometers, *Mass Spectrometry Reviews*, 26, 150-165, doi:10.1002/mas.20113, 2007.

Murphy, D.M., P.K. Hudson, D.J. Cziczo, S. Gallavardin, K.D. Froyd, M.V. Johnston, A.M. Middlebrook, M.S. Reinard, D.S. Thomson, T. Thornberry, and A.S. Wexler, Distribution of lead in single atmospheric particles, *Atmospheric Chemistry and Physics*, 7, 3195-3210, 2007.

Murphy, D.M., P.K. Hudson, D.S. Thomson, P.J. Sheridan, and J.C. Wilson, Observations of mercury-containing aerosols, *Environmental Science and Technology*, 40, 3163-3167, doi:10.1021/es052385x, 2006.

Murphy, D.M., D.J. Cziczo, K.D. Froyd, P.K. Hudson, B.M. Matthew, A.M. Middlebrook, R.E. Peltier, A. Sullivan, D.S. Thomson, and R.J. Weber, Single-particle mass spectrometry of tropospheric aerosol particles, *Journal of Geophysical Research*, 111, doi:10.1029/2006JD007340, 2006.

- Murphy, D.M., and T. Koop, Review of the vapour pressures of ice and supercooled water for atmospheric applications, *Quarterly Journal of the Royal Meteorological Society*, *131*, 1539-1565, doi:1510.1256/qj.1504.1594, 2005.
- Murphy, D.M., Something in the air, *Science*, *307*, 1888-1890, doi:1810.1126/science.1108160, 2005.
- Murphy, D.M., D.J. Cziczo, P.K. Hudson, M.E. Schein, and D.S. Thomson, Particle density inferred from simultaneous optical and aerodynamic diameters sorted by composition, *Journal of Aerosol Science*, *35*, 135-139, doi:110.1016/S0021-8502(1003)00386-00380, 2004.
- Murphy, D.M., D.J. Cziczo, P.K. Hudson, D.S. Thomson, J.C. Wilson, T. Kojima, and P.R. Buseck, Particle generation and resuspension in aircraft inlets when flying in clouds, *Aerosol Science and Technology*, *38*, 400-408, doi:410.1080/02786820490443094, 2004.
- Murphy, D.M., A.M. Middlebrook, and M. Warshawsky, Cluster analysis of data from the Particle Analysis by Laser Mass Spectrometry (PALMS) instrument, *Aerosol Science and Technology*, *37*, 382-391, doi:310.1080/02786820390125241, 2003.
- Murphy, D.M., Dehydration in cold clouds is enhanced by a transition from cubic to hexagonal ice, *Geophysical Research Letters*, *30*, doi:10.109/2003GL018566, 2003.
- Murphy, D.M., and D.S. Thomson, Halogen ions and NO<sup>+</sup> in the mass spectra of aerosols in the upper troposphere and lower stratosphere, *Geophysical Research Letters*, *27*, 3217-3220, 2000.
- Nastrom, G.D., and T.E. VanZandt, Seasonal variability of the observed vertical wave number spectra of wind and temperature and the effects of prewhitening, *Journal of Geophysical Research*, *106*, 14369-14375, 2001.
- Neiman, P.J., F.M. Ralph, A.B. White, D.D. Parrish, J.S. Holloway, and D.L. Bartels, A multiwinter analysis of channeled flow through a prominent gap along the northern California coast during CALJET and PACJET, *Monthly Weather Review*, *134*, doi:1810.1175/MWR3148.1811, 2006.
- Neuman, J.A., D.D. Parrish, M. Trainer, T.B. Ryerson, J.S. Holloway, J.B. Nowak, A. Swanson, F. Flocke, J.M. Roberts, S.S. Brown, H. Stark, R. Sommariva, A. Stohl, R. Peltier, R. Weber, A.G. Wollny, D.T. Sueper, G. Hübler, and F.C. Fehsenfeld, Reactive nitrogen transport and photochemistry in urban plumes over the North Atlantic Ocean, *Journal of Geophysical Research*, *111*, doi:10.1029/2005JD007010, 2006.
- Neuman, J.A., D.D. Parrish, T.B. Ryerson, C.A. Brock, C. Wiedinmyer, G.J. Frost, J.S. Holloway, and F.C. Fehsenfeld, Nitric acid loss rates measured in power plant plumes, *Journal of Geophysical Research*, *109*, doi:10.1029/2004JD005092, 2004.
- Neuman, J.A., T.B. Ryerson, L.G. Huey, R. Jakoubek, J.B. Nowak, C. Simons, and F.C. Fehsenfeld, Calibration and evaluation of nitric acid and ammonia permeation tubes by UV optical absorption, *Environmental Science and Technology*, *37*, 2975-2981, doi: 2910.1021/es026422I, 2003.
- Neuman, J.A., J.B. Nowak, C.A. Brock, M. Trainer, F.C. Fehsenfeld, J.S. Holloway, G. Hübler, P.K. Hudson, D.M. Murphy, D.K. Nicks, Jr., D. Orsini, D.D. Parrish, T.B. Ryerson, D.T. Sueper, A. Sullivan, and R. Weber, Variability in ammonium nitrate formation and nitric acid depletion with altitude and location over California, *Journal of Geophysical Research*, *108*, doi:10.1029/2003JD003616, 2003.



- Neuman, J.A., L.G. Huey, R.W. Dissly, F.C. Fehsenfeld, F. Flocke, J.C. Holecek, J.S. Holloway, G. Hübler, R. Jakoubek, D.K. Nicks, Jr., D.D. Parrish, T.B. Ryerson, D.T. Sueper, and A.J. Weinheimer, Fast-response airborne in situ measurements of HNO<sub>3</sub> during the Texas Air Quality Study, *Journal of Geophysical Research*, *107*, doi: 10.1029/2001JD001437, 2002.
- Neuman, J.A., R.S. Gao, D.W. Fahey, J.C. Holecek, B.A. Ridley, J.G. Walega, F.E. Grahek, E.C. Richard, C.T. McElroy, T.L. Thompson, J.W. Elkins, F.L. Moore, and E.A. Ray, In situ measurements of HNO<sub>3</sub>, NO<sub>y</sub>, NO, and O<sub>3</sub> in the lower stratosphere and upper troposphere, *Atmospheric Environment*, *35*, 5789-5797, 2001.
- Neuman, J.A., R.S. Gao, M.E. Schein, S.J. Ciciora, J.C. Holecek, T.L. Thompson, R.H. Winkler, R.J. McLaughlin, M.J. Northway, E.C. Richard, and D.W. Fahey, A fast-response chemical ionization mass spectrometer for in situ measurements of HNO<sub>3</sub> in the upper troposphere and lower stratosphere, *Review of Scientific Instruments*, *71*, 3886--3894, 2000.
- Newman, P.A., J.S. Daniel, D.W. Waugh, and E.R. Nash, A new formulation of equivalent effective stratospheric chlorine (EESC), *Atmospheric Chemistry and Physics*, *7*, 4537-4552, 2007.
- Newman, P.A., J.C. Wilson, M.N. Ross, C.A. Brock, P.J. Sheridan, M.R. Schoeberl, L.R. Lait, T.P. Bui, M. Loewenstein, and J.R. Podolske, Chance encounter with a stratospheric kerosene rocket plume from Russia over California, *Geophysical Research Letters*, *28*, 959-962, 2001.
- Nicks, D.K., Jr., J.S. Holloway, T.B. Ryerson, R.W. Dissly, D.D. Parrish, G.J. Frost, M. Trainer, S.G. Donnelly, S. Schauffler, E.L. Atlas, G. Hübler, D.T. Sueper, and F.C. Fehsenfeld, Fossil-fueled power plants as a source of atmospheric carbon monoxide, *Journal of Environmental Monitoring*, *5*, 35-39, doi:10.1039/b201486f, 2003.
- Niemeier, U., C. Granier, L. Kornblueh, S. Walters, and G.P. Brasseur, Global impact of road traffic on atmospheric chemical composition and on ozone climate forcing, *Journal of Geophysical Research*, *111*, doi:10.1029/2005JD006407, 2006.
- Northway, M.J., J.A. deGouw, D.W. Fahey, R.S. Gao, C. Warneke, J.M. Roberts, and F. Flocke, Evaluation of the role of heterogeneous oxidation of alkenes in the detection of atmospheric acetaldehyde, *Atmospheric Environment*, *38*, 6017-6028, doi:10.1016/j.atmosenv.2004.06.039, 2004.
- Northway, M.J., R.S. Gao, P.J. Popp, J.C. Holecek, D.W. Fahey, K.S. Carslaw, M.A. Tolbert, L.R. Lait, S. Dhaniyala, R.C. Flagan, P.O. Wennberg, M.J. Mahoney, R.L. Herman, G.C. Toon, and T.P. Bui, An analysis of large HNO<sub>3</sub>-containing particles sampled in the Arctic stratosphere during the winter of 1999/2000, *Journal of Geophysical Research*, *107*, doi:10.1029/2001JD001079, 2002.
- Northway, M.J., P.J. Popp, R.-S. Gao, D.W. Fahey, G.C. Toon, and T.P. Bui, Relating inferred HNO<sub>3</sub> flux values to the denitrification of the 1999-2000 Arctic vortex, *Geophysical Research Letters*, *29*, doi: 10.1029/2002GL015000, 2002.
- Nowak, J.B., J.A. Neuman, K. Kozai, L.G. Huey, D.J. Tanner, J.S. Holloway, T.B. Ryerson, G.J. Frost, S.A. McKeen, and F.C. Fehsenfeld, A chemical ionization mass spectrometry technique for airborne measurements of ammonia, *Journal of Geophysical Research*, *112*, doi:10.1029/2006JD007589, 2007.

- Nowak, J.B., L.G. Huey, A.G. Russell, D. Tian, J.A. Neuman, D. Orsini, S.J. Sjostedt, A.P. Sullivan, D.J. Tanner, R.J. Weber, A. Nenes, E. Edgerton, and F.C. Fehsenfeld, Analysis of urban gas phase ammonia measurements from the 2002 Atlanta Aerosol Nucleation and Real-time Characterization Experiment (ANARChE), *Journal of Geophysical Research*, *111*, doi:10.1029/2006JD007113, 2006.
- Nowak, J.B., D.D. Parrish, J.A. Neuman, J.S. Holloway, O.R. Cooper, T.B. Ryerson, D.K. Nicks, Jr., F. Flocke, J.M. Roberts, E. Atlas, J.A. deGouw, S. Donnelly, E. Dunlea, G. Hübler, L.G. Huey, S. Schauffler, D.J. Tanner, C. Warneke, and F.C. Fehsenfeld, Gas-phase chemical characteristics of Asian emission plumes observed during ITCT 2K2 over the eastern North Pacific Ocean, *Journal of Geophysical Research*, *109*, doi:10.1029/2003JD004488, 2004.
- Oltmans, S.J., H. Vömel, D.J. Hofmann, K.H. Rosenlof, and D. Kley, The increase in stratospheric water vapor from balloonborne, frostpoint hygrometer measurements at Washington, D.C., and Boulder, Colorado, *Geophysical Research Letters*, *27*, 3453-3456, 2000.
- Orlando, J.J., G.S. Tyndall, S.B. Bertman, W. Chen, and J.B. Burkholder, Rate coefficient for the reaction of OH with  $\text{CH}_2 = \text{C}(\text{CH}_3)\text{C}(\text{O})\text{OONO}_2$  (MPAN), *Atmospheric Environment*, *36*, 1895-1900, doi:10.1016/S1352-2310(1802)00090-00090, 2002.
- Orlando, J.J., and J.B. Burkholder, Identification of BrONO as the major product in the gas-phase reaction of Br with  $\text{NO}_2$ , *Journal of Physical Chemistry A*, *104*, 2048-2053, doi:10.1021/jp993713g, 2000.
- Osthoff, H.D., M.J. Pilling, A.R. Ravishankara, and S.S. Brown, Temperature dependence of the  $\text{NO}_3$  absorption cross section above 298 K and determination of the equilibrium constant for  $\text{NO}_3 + \text{NO}_2 \rightleftharpoons \text{N}_2\text{O}_5$  at atmospherically relevant conditions, *Physical Chemistry Chemical Physics*, *9*, 5785-5793, doi:10.1039/b709193a, 2007.
- Osthoff, H.D., S.S. Brown, T.B. Ryerson, T.J. Fortin, B.M. Lerner, E.J. Williams, A. Pettersson, T. Baynard, W.P. Dubé, S.J. Ciciora, and A.R. Ravishankara, Measurement of atmospheric  $\text{NO}_2$  by pulsed cavity ring-down spectroscopy *Journal of Geophysical Research*, *111*, doi:10.1029/2005JD006942, 2006.
- Osthoff, H.D., R. Sommariva, T. Baynard, A. Pettersson, E.J. Williams, B.M. Lerner, J.M. Roberts, H. Stark, P.D. Goldan, W.C. Kuster, T.S. Bates, D. Coffman, A.R. Ravishankara, and S.S. Brown, Observation of daytime  $\text{N}_2\text{O}_5$  in the marine boundary layer during New England Air Quality Study-Intercontinental Transport and Chemical Transformation 2004, *Journal of Geophysical Research*, *111*, doi:10.1029/2006JD007593, 2006.
- Owen, R.C., O.R. Cooper, A. Stohl, and R.E. Honrath, An analysis of the mechanisms of North American pollutant transport to the central North Atlantic lower free troposphere, *Journal of Geophysical Research*, *111*, doi:10.1029/2006JD007062, 2006.
- Pagowski, M., G.A. Grell, D. Devenyi, S.E. Peckham, S.A. McKeen, W. Gong, L.D. Monache, J.N. McHenry, J. McQueen, and P. Lee, Application of dynamic linear regression to improve the skill of ensemble-based deterministic ozone forecasts, *Atmospheric Environment*, *40*, 3240-3250, doi:10.1016/j.atmosenv.2006.3202.3006, 2006.
- Pagowski, M., G.A. Grell, S.A. McKeen, D. Dévényi, J.M. Wilczak, V. Bouchet, W. Gong, J. McHenry, S. Peckham, J. McQueen, R. Moffet, and Y. Tang, A simple method to improve ensemble-based

ozone forecasts, *Geophysical Research Letters*, 32, doi:10.1029/2004GL022305, 2005.

Pahlow, M., G. Feingold, A. Jefferson, E. Andrews, J.A. Ogren, J. Wang, Y.-N. Lee, R.A. Ferrare, and D.D. Turner, Comparison between lidar and nephelometer measurements of aerosol hygroscopicity at the Southern Great Plains Atmospheric Radiation Measurement site, *Journal of Geophysical Research*, 111, doi:10.1029/2004JD005646, 2006.

Pahlow, M., D. Müller, M. Tesche, H. Eichler, G. Feingold, W.L. Eberhard, and Y.-F. Cheng, Retrieval of aerosol properties from combined multiwavelength lidar and sunphotometer measurements, *Applied Optics*, 45, 7429-7442, 2006.

Pahlow, M., J. Kleissl, M.B. Parlange, J.M. Ondov, and D. Harrison, Atmospheric boundary-layer structure observed during a haze event due to forest-fire smoke, *Boundary-Layer Meteorology*, 114, 53-70, doi:10.1007/s10546-10004-16350-z, 2005.

Pan, L.L., K.P. Bowman, M. Shapiro, W.J. Randel, R.-S. Gao, T. Campos, C. Davis, S. Schauffler, B.A. Ridley, J.C. Wei, and C. Barnet, Chemical behavior of the tropopause observed during the Stratosphere-Troposphere Analyses of Regional Transport experiment, *Journal of Geophysical Research*, 112, doi:10.1029/2007JD008645, 2007.

Park, S., R. Jiménez, B.C. Daube, L. Pfister, T.J. Conway, E.W. Gottlieb, V.Y. Chow, D.J. Curran, D.M. Matross, A. Bright, E.L. Atlas, T.P. Bui, R.-S. Gao, C.H. Twohy, and S.C. Wofsy, The CO<sub>2</sub> tracer clock for the Tropical Tropopause Layer, *Atmospheric Chemistry and Physics*, 7, 3989-4000, 2007.

Parrish, D.D., A. Stohl, C. Forster, E.L. Atlas, D.R. Blake, P.D. Goldan, W.C. Kuster, and J.A. deGouw, Effects of mixing on evolution of hydrocarbon ratios in the troposphere, *Journal of Geophysical Research*, 112, doi:10.1029/2006JD007583, 2007.

Parrish, D.D., Critical evaluation of US on-road vehicle emission inventories, *Atmospheric Environment*, 40, 2288-2300, doi:10.1016/j.atmosenv.2005.2211.2033, 2006.

Parrish, D.D., E.J. Dunlea, E.L. Atlas, S. Schauffler, S. Donnelly, V. Stroud, A.H. Goldstein, D.B. Millet, M. McKay, D.A. Jaffe, H.U. Price, P.G. Hess, F. Flocke, and J.M. Roberts, Changes in the photochemical environment of the temperate North Pacific troposphere in response to increased Asian emissions, *Journal of Geophysical Research*, 109, doi:10.1029/2004JD004978, 2004.

Parrish, D.D., T.B. Ryerson, J.S. Holloway, J.A. Neuman, J.M. Roberts, J. Williams, C.A. Stroud, G.J. Frost, M. Trainer, G. Hübler, F.C. Fehsenfeld, F. Flocke, and A.J. Weinheimer, Fraction and composition of NO<sub>y</sub> transported in air masses lofted from the North American continental boundary layer, *Journal of Geophysical Research*, 109, doi:10.1029/2003JD004226, 2004.

Parrish, D.D., Y. Kondo, O.R. Cooper, C.A. Brock, D.A. Jaffe, M. Trainer, T. Ogawa, G. Hübler, and F.C. Fehsenfeld, Intercontinental Transport and Chemical Transformation 2002 (ITCT 2K2) and Pacific Exploration of Asian Continental Emission (PEACE) experiments: An overview of the 2002 winter and spring intensives, *Journal of Geophysical Research*, 109, doi:10.1029/2004JD004980, 2004.

Parrish, D.D., Y. Kondo, O.R. Cooper, C.A. Brock, D.A. Jaffe, M. Trainer, T. Ogawa, G. Hübler, and F.C. Fehsenfeld, Intercontinental transport and chemical transformation 2002 (ITCT 2K2) and Pacific Exploration of Asian Continental Emission (PEACE) experiments: An overview of the 2002

- winter and spring intensives, *Journal of Geophysical Research*, 109, doi: 10.1029/2004JD004980, 2004.
- Parrish, D.D., M. Trainer, D. Hereid, E.J. Williams, K.J. Olszyna, R.A. Harley, J.F. Meagher, and F.C. Fehsenfeld, Decadal change in carbon monoxide to nitrogen oxide ratio in U.S. vehicular emissions, *Journal of Geophysical Research*, 107, doi:10.1029/2001JD000720, 2002.
- Parrish, D.D., and F.C. Fehsenfeld, Methods for gas-phase measurements of ozone, ozone precursors and aerosol precursors, *Atmospheric Environment*, 34, 1921-1957, 2000.
- Parrish, D.D., J.S. Holloway, R. Jakoubek, M. Trainer, T.B. Ryerson, G. Hübler, F.C. Fehsenfeld, J.L. Moody, and O.R. Cooper, Mixing of anthropogenic pollution with stratospheric ozone: A case study from the North Atlantic wintertime troposphere, *Journal of Geophysical Research*, 105, 24363-24374, 2000.
- Pechtl, S., E.R. Lovejoy, J.B. Burkholder, and R. von Glasow, Modeling the possible role of iodine oxides in atmospheric new particle formation, *Atmospheric Chemistry and Physics*, 6, 505-523, 2006.
- Pechtl, S., E.R. Lovejoy, J.B. Burkholder, and R. von Glasow, Modeling the possible role of iodine oxides in atmospheric new particle formation, *Atmospheric Chemistry and Physics Discussions*, 5, 9907-9952, 2005.
- Peltier, R.E., A.P. Sullivan, R.J. Weber, C.A. Brock, A.G. Wollny, J.S. Holloway, J.A. deGouw, and C. Warneke, Fine aerosol bulk composition measured on WP-3D research aircraft in vicinity of the Northeastern United States – results from NEAQS, *Atmospheric Chemistry and Physics Discussions*, 7, 3073-3112, 2007.
- Pétron, G., C. Granier, B. Khattatov, J.-F. Lamarque, V. Yudin, J.-F. Müller, and J. Gille, Inverse modeling of carbon monoxide surface emissions using climate Monitoring and Diagnostics Laboratory network observations, *Journal of Geophysical Research*, 107, 4761, doi:4710.1029/2001JD001305, 2002.
- Pettersson, A., E.R. Lovejoy, C.A. Brock, S.S. Brown, and A.R. Ravishankara, Measurement of aerosol optical extinction at 532 nm with pulsed cavity ring down spectroscopy, *Journal of Aerosol Science*, 35, 995-1001, doi:10.1016/j.jaerosci.2004.1002.1008, 2004.
- Pfeilsticker, K., and O. Funk, Irrwege des Sonnenlichts, *Physik in unserer Zeit: Atmosphärenphysik*, 31, 152-158, 2000.
- Pfister, G.G., L.K. Emmons, P.G. Hess, R. Honrath, J.-F. Lamarque, M. Val Martin, R.C. Owen, M.A. Avery, E.V. Browell, J.S. Holloway, P. Nedelec, R. Purvis, T.B. Ryerson, G.W. Sachse, and H. Schlager, Ozone production from the 2004 North American boreal fires, *Journal of Geophysical Research*, 111, doi:10.1029/2006JD007695, 2006.
- Pfister, G., G. Pétron, L.K. Emmons, J.C. Gille, D.P. Edwards, J.-F. Lamarque, J.-L. Attie, C. Granier, and P.C. Novelli, Evaluation of CO simulation and the analysis of the CO budget for Europe, *Journal of Geophysical Research*, 109, doi:10.1029/2004JD004691, 2004.
- Pfister, L., H.B. Selkirk, E.J. Jensen, J.R. Podolske, G. Sachse, M. Avery, M.R. Schoeberl, M.J. Mahoney, and E. Richard, Processes controlling water vapor in the winter Arctic tropopause

region, *Journal of Geophysical Research*, 108, doi:10.1029/2001JD001067, 2003.

Pichel, W.G., J.H. Churnside, T.S. Veenstra, D.G. Foley, K.S. Friedman, R.E. Brainard, J.B. Nicoll, Q. Zheng, and P. Clemente-Colón, Marine debris collects within the North Pacific subtropical convergence zone, *Marine Pollution Bulletin*, 54, 1207-1211, doi:10.1016/j.marpolbul.2007.1204.1010, 2007.

Pierce, R.B., J.A. Al-Saadi, T.D. Fairlie, M. Natarajan, V.L. Harvey, W.L. Grose, J.M. Russell, III, R. Bevilacqua, S.D. Eckermann, D. Fahey, P. Popp, E. Richard, R. Stimpfle, G.C. Toon, C.R. Webster, and J. Elkins, Large-scale chemical evolution of the Arctic vortex during the 1999/2000 winter: HALOE/POAM III Lagrangian photochemical modeling for the SAGE III - Ozone Loss and Validation Experiment (SOLVE) campaign, *Journal of Geophysical Research*, 108, doi:10.1029/2001JD001063, 2003.

Pittman, J.V., E.M. Weinstock, R.J. Oglesby, D.S. Sayres, J.B. Smith, J.G. Anderson, O.R. Cooper, S.C. Wofsy, I. Xueref, C. Gerbig, B.C. Daube, E.C. Richard, B.A. Ridley, A.J. Weinheimer, M. Loewenstein, H.-J. Jost, J.P. Lopez, M.J. Mahoney, T.L. Thompson, W.W. Hargrove, and F.M. Hoffman, Transport in the subtropical lowermost stratosphere during the Cirrus Regional Study of Tropical Anvils and Cirrus Layers–Florida Area Cirrus Experiment, *Journal of Geophysical Research*, 112, doi:10.1029/2006JD007851, 2007.

Popp, P.J., T.P. Marcy, L.A. Watts, R.S. Gao, D.W. Fahey, E.M. Weinstock, J.B. Smith, R.L. Herman, R.F. Troy, C.R. Webster, L.E. Christensen, D.G. Baumgardner, C. Voigt, B. Kärcher, J.C. Wilson, M.J. Mahoney, E.J. Jensen, and T.P. Bui, Condensed-phase nitric acid in a tropical subvisible cirrus cloud, *Geophysical Research Letters*, 34, doi:10.1029/2007GL031832, 2007.

Popp, P.J., 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, H. Vömel, J.C. Wilson, A.J. Heymsfield, M.J. Mahoney, and A.M. Thompson, The observation of nitric acid-containing particles in the tropical lower stratosphere, *Atmospheric Chemistry and Physics* 6, 601-611, 2006.

Popp, P.J., R.S. Gao, T.P. Marcy, D.W. Fahey, P.K. Hudson, T.L. Thompson, B. Kärcher, B.A. Ridley, A.J. Weinheimer, D.J. Knapp, D.D. Montzka, D. Baumgardner, T.J. Garrett, E.M. Weinstock, J.B. Smith, D.S. Sayres, J.V. Pittman, S. Dhaniyala, T.P. Bui, and M.J. Mahoney, Nitric acid uptake on subtropical cirrus cloud particles, *Journal of Geophysical Research*, 109, doi:10.1029/2003JD004255, 2004.

Popp, P.J., B.A. Ridley, J.A. Neuman, L.M. Avallone, D.W. Toohey, P.F. Zittel, O. Schmid, R.L. Herman, R.S. Gao, M.J. Northway, J.C. Holecek, D.W. Fahey, T.L. Thompson, K.K. Kelly, J.G. Walega, F.E. Grahek, J.C. Wilson, M.N. Ross, and M.Y. Danilin, The emission and chemistry of reactive nitrogen species in the plume of an Athena II solid-fuel rocket motor, *Geophysical Research Letters*, 29, doi:10.1029/2002GL015197, 2002.

Popp, P.J., M.J. Northway, J.C. Holecek, R.S. Gao, D.W. Fahey, J.W. Elkins, D.F. Hurst, P.A. Romashkin, G.C. Toon, B. Sen, S.M. Schauffler, R.J. Salawitch, C.R. Webster, R.L. Herman, H. Jost, T.P. Bui, P.A. Newman, and L.R. Lait, Severe and extensive denitrification in the 1999-2000 Arctic winter stratosphere, *Geophysical Research Letters*, 28, 2875-2878, 2001.

Portmann, R.W., and S. Solomon, Indirect radiative forcing of the ozone layer during the 21st century, *Geophysical Research Letters*, 34, doi:10.1029/2006GL028252, 2007.

- Portmann, R.W., S. Solomon, R.W. Sanders, J.S. Daniel, and E.G. Dutton, Cloud modulation of zenith sky oxygen photon path lengths over Boulder, Colorado: Measurement versus model, *Journal of Geophysical Research*, *106*, 1139-1155, 2001.
- Price, H.U., D.A. Jaffe, O.R. Cooper, and P.V. Doskey, Photochemistry, ozone production, and dilution during long-range transport episodes from Eurasia to the northwest United States, *Journal of Geophysical Research*, *109*, doi:10.1029/2003JD004400, 2004.
- Proffitt, M.H., K. Aikin, A.F. Tuck, J.J. Margitan, C.R. Webster, G.C. Toon, and J.W. Elkins, Seasonally averaged ozone and nitrous oxide in the Northern Hemisphere lower stratosphere, *Journal of Geophysical Research*, *108*, doi: 10.1029/2002JD002657, 2003.
- Quinn, P.K., T.S. Bates, D. Coffman, T.B. Onasch, D. Worsnop, T. Baynard, J.A. deGouw, P.D. Goldan, W.C. Kuster, E. Williams, J.M. Roberts, B. Lerner, A. Stohl, A. Pettersson, and E.R. Lovejoy, Impacts of sources and aging on submicrometer aerosol properties in the marine boundary layer across the Gulf of Maine, *Journal of Geophysical Research*, *111*, doi:10.1029/2006JD007582, 2006.
- Rajakumar, B., J.E. Flad, T. Gierczak, A.R. Ravishankara, and J.B. Burkholder, Visible absorption spectrum of the  $\text{CH}_3\text{CO}$  radical, *Journal of Physical Chemistry A*, *111*, 8950-8958, doi:8910.1021/jp73339h, 2007.
- Rajakumar, B., R.W. Portmann, J.B. Burkholder, and A.R. Ravishankara, Rate Coefficients for the Reactions of OH with  $\text{CF}_3\text{CH}_2\text{CH}_3$  (HFC-263fb),  $\text{CF}_3\text{CHFCH}_2\text{F}$  (HFC-245eb), and  $\text{CHF}_2\text{CHFCHF}_2$  (HFC-245ea) between 238 and 375 K, *Journal of Physical Chemistry A*, *110*, 6724-6731, doi:6710.1021/jp056248y S051089-055639(056205)006248-056241, 2006.
- Rajakumar, B., J.B. Burkholder, R.W. Portmann, and A.R. Ravishankara, Rate coefficients for the OH +  $\text{CFH}_2\text{CH}_2\text{OH}$  reaction between 238 and 355 K, *Physical Chemistry Chemical Physics*, *7*, 2498-2505, doi:2410.1039/b503332b, 2005.
- Ravishankara, A.R., Chemistry-climate coupling; The importance of chemistry in climate issues (Introductory Lecture), *Faraday Discussions*, *130*, 9-26, doi:10.1039/b509603k, 2005.
- Ravishankara, A.R., Introduction: Atmospheric Chemistry-Long-Term Issues, *Chemical Reviews*, *103*, 4505-4507, 2003.
- Ravishankara, A.R., E.J. Dunlea, M.A. Blitz, T.J. Dillon, D.E. Heard, M.J. Pilling, R.S. Strekowski, J.M. Nicovich, and P.H. Wine, Redetermination of the rate coefficient for the reaction of  $\text{O}(^1\text{D})$  with  $\text{N}_2$ , *Geophysical Research Letters*, *29*, doi:10.1029/2002GL014850, 2002.
- Ray, E.A., and K.H. Rosenlof, Hydration of the upper troposphere by tropical cyclones, *Journal of Geophysical Research*, *112*, doi:10.1029/2006JD008009, 2007.
- Ray, E.A., K.H. Rosenlof, E. Richard, D. Parrish, and R. Jakoubek, Distributions of ozone in the region of the subtropical jet: An analysis of in situ aircraft measurements, *Journal of Geophysical Research*, *109*, doi:10.1029/2003JD004143, 2004.
- Ray, E.A., K.H. Rosenlof, E.C. Richard, P.K. Hudson, D.J. Cziczo, M. Loewenstein, H.-J. Jost, J. Lopez, B. Ridley, A. Weinheimer, D. Montzka, D. Knapp, S.C. Wofsy, B.C. Daube, C. Gerbig, I. Xueref, and R.L. Herman, Evidence of the effect of summertime midlatitude convection on the

subtropical lower stratosphere from CRYSTAL-FACE tracer measurements, *Journal of Geophysical Research*, *109*, doi:10.1029/2004JD004655, 2004.

Ray, E.A., F.L. Moore, J.W. Elkins, D.F. Hurst, P.A. Romashkin, G.S. Dutton, and D.W. Fahey, Descent and mixing in the 1999-2000 northern polar vortex inferred from in situ tracer measurements, *Journal of Geophysical Research*, *107*, doi:10.1029/2001JD000961, 2002.

Read, W.G., A. Lambert, J. Bacmeister, R.E. Cofield, L.E. Christensen, D.T. Cuddy, W.H. Daffer, B.J. Drouin, E. Fetzer, L. Froidevaux, R. Fuller, R. Herman, R.F. Jarnot, J.H. Jiang, Y.B. Jiang, K. Kelly, B.W. Knosp, L.J. Kovalenko, N.J. Livesey, H.-C. Liu, G.L. Manney, H.M. Pickett, H.C. Pumphrey, K.H. Rosenlof, X. Sabouchi, M.L. Santee, M.J. Schwartz, W.V. Snyder, P.C. Stek, H. Su, L.L. Takacs, R.P. Thurstans, H. Vömel, P.A. Wagner, J.W. Waters, C.R. Webster, E.M. Weinstock, and D.L. Wu, Aura Microwave Limb Sounder upper tropospheric and lower stratospheric H<sub>2</sub>O and relative humidity with respect to ice validation, *Journal of Geophysical Research*, *112*, doi:10.1029/2007JD008752, 2007.

Reid, S.J., A.F. Tuck, and G. Kiladis, Correction to "On the changing abundance of ozone minima at northern midlatitudes", *Journal of Geophysical Research*, *106*, 2975, doi:2910.1029/2000JD900534, 2001.

Reid, S.J., A.F. Tuck, and G.N. Kiladis, On the changing abundance of ozone minima at northern midlatitudes, *Journal of Geophysical Research*, *105*, 12169-12180, 2000.

Reid, G.C., Solar variability and the Earth's climate: Introduction and overview, *Space Science Reviews*, *94*, 1-11, 2000.

Revell, M.J., J.W. Kidson, and G.N. Kiladis, Interpreting low-frequency modes of Southern Hemisphere atmospheric variability as the rotational response to divergent forcing, *Monthly Weather Review*, *129*, 2416-2425, 2001.

Richard, E.C., A.F. Tuck, K.C. Aikin, K.K. Kelly, R.L. Hermann, R.F. Troy, S.J. Hovde, K.H. Rosenlof, T.L. Thompson, and E.A. Ray, High resolution airborne profiles of CH<sub>4</sub>, O<sub>3</sub> and water vapor near tropical Central America in late January to early February 2004, *Journal of Geophysical Research*, *111*, doi:10.1029/2005JD006513, 2006.

Richard, E.C., K.C. Aikin, E.A. Ray, K.H. Rosenlof, T.L. Thompson, A. Weinheimer, D. Montzka, D. Knapp, B. Ridley, and A. Gettelman, Large-scale equatorward transport of ozone in the subtropical lower stratosphere, *Journal of Geophysical Research*, *108*, doi:10.1029/2003JD003884, 2003.

Richard, E.C., K.K. Kelly, R.H. Winkler, R. Wilson, T.L. Thompson, R.J. McLaughlin, A.L. Schmeltekopf, and A.F. Tuck, A fast-response near-infrared tunable diode laser absorption spectrometer for in situ measurements of CH<sub>4</sub> in the upper troposphere and lower stratosphere, *Applied Physics B: Laser and Optics*, *75*, 183-194, 2002.

Richard, E.C., K.C. Aikin, A.E. Andrews, B.C. Daube, Jr., C. Gerbig, S.C. Wofsy, P.A. Romashkin, D.F. Hurst, E.A. Ray, F.L. Moore, J.W. Elkins, T. Deshler, and G.C. Toon, Severe chemical ozone loss inside the Arctic polar vortex during winter 1999-2000 inferred from *in situ* airborne measurements, *Geophysical Research Letters*, *28*, 2197-2200, 2001.

Richter, A., J.P. Burrows, H. Nüß, C. Granier, and U. Niemeier, Increase in tropospheric nitrogen

- dioxide over China observed from space, *Nature*, *437*, 129-132, doi:110.1038/nature04092, 2005.
- Ridley, B., E. Atlas, H. Selkirk, L. Pfister, D. Montzka, J. Walega, S. Donnelly, V. Stroud, E. Richard, K. Kelly, A. Tuck, T. Thompson, J. Reeves, D. Baumgardner, W.T. Rawlins, M. Mahoney, R. Herman, R. Friedl, F. Moore, E. Ray, and J. Elkins, Convective transport of reactive constituents to the tropical and mid-latitude tropopause region: I. Observations, *Atmospheric Environment*, *38*, 1259-1274, doi:1210.1016/j.atmosenv.2003.1211.1038, 2004.
- Riffault, V., T. Gierczak, J.B. Burkholder, and A.R. Ravishankara, Quantum yields for OH production in the photodissociation of HNO<sub>3</sub> at 248 and 308 nm and H<sub>2</sub>O<sub>2</sub> at 308 and 320 nm, *Physical Chemistry Chemical Physics*, *8*, 1079-1085, doi:1010.1039/b513760h, 2006.
- Roberts, J.M., M. Marchewka, S.B. Bertman, R. Sommariva, C. Warneke, J. deGouw, W. Kuster, P. Goldan, E. Williams, B.M. Lerner, P. Murphy, and F.C. Fehsenfeld, Measurements of PANS during the New England Air Quality Study 2002, *Journal of Geophysical Research*, *112*, doi:10.1029/2007JD008667, 2007.
- Roberts, J.M., M. Marchewka, S.B. Bertman, P. Goldan, W. Kuster, J. deGouw, C. Warneke, E. Williams, B. Lerner, P. Murphy, E. Apel, and F.C. Fehsenfeld, Analysis of the isoprene chemistry observed during the New England Air Quality Study (NEAQS) 2002 intensive experiment, *Journal of Geophysical Research*, *111*, doi:10.1029/JD007570, 2006.
- Roberts, J.M., Measurement of the Henry's law coefficient and first order loss rate of PAN in n-octanol, *Geophysical Research Letters*, *32*, doi:10.1029/2004GL022327, 2005.
- Roberts, J.M., F. Flocke, G. Chen, J. deGouw, J.S. Holloway, G. Hübler, J.A. Neuman, D.K. Nicks, Jr., J.B. Nowak, D.D. Parrish, T.B. Ryerson, D.T. Sueper, C. Warneke, and F.C. Fehsenfeld, Measurement of peroxy-carboxylic nitric anhydrides (PANs) during the ITCT 2K2 aircraft intensive experiment, *Journal of Geophysical Research*, *109*, doi:10.1029/2004JD004960, 2004.
- Roberts, J.M., B.T. Jobson, W.C. Kuster, P.D. Goldan, P.C. Murphy, E. Williams, G.J. Frost, D. Riemer, E.C. Apel, C. Stroud, C. Wiedinmyer, and F.C. Fehsenfeld, An examination of the chemistry of peroxy-carboxylic nitric anhydrides and related volatile organic compounds during Texas Air Quality Study 2000 using ground-based measurements, *Journal of Geophysical Research*, *108*, doi:10.1029/2003JD003383, 2003.
- Roberts, J.M., F. Flocke, C.A. Stroud, D. Hereid, E. Williams, F.C. Fehsenfeld, W. Brune, M. Martinez, and H. Harder, Ground-based measurements of peroxy-carboxylic nitric anhydrides (PANs) during the 1999 Southern Oxidants Study Nashville Intensive, *Journal of Geophysical Research*, *107*, doi:10.1029/2001JD000947, 2002.
- Roberts, J.M., C.A. Stroud, B.T. Jobson, M. Trainer, D. Hereid, E.J. Williams, F.C. Fehsenfeld, W.H. Brune, M. Martinez, and H. Harder, Application of a sequential reaction model to PANs and aldehyde measurements in two urban areas, *Geophysical Research Letters*, *28*, 4583-4586, 2001.
- Roberts, J.M., F. Flocke, A. Weinheimer, H. Tanimoto, B.T. Jobson, D. Riemer, E.C. Apel, E. Atlas, S.G. Donnelly, V. Stroud, K. Johnson, R. Weaver, and F.C. Fehsenfeld, Observations of APAN during TexAQS 2000, *Geophysical Research Letters*, *28*, 4195-4198, 2001.
- Romashkin, P.A., D.F. Hurst, J.W. Elkins, G.S. Dutton, D.W. Fahey, R.E. Dunn, F.L. Moore, R.C. Myers, and B.D. Hall, In situ measurements of long-lived trace gases in the lower stratosphere by



- gas chromatography, *Journal of Atmospheric and Oceanic Technology*, *18*, 1195-1204, 2001.
- Rosen, R.S., E.C. Wood, P.J. Wooldridge, J.A. Thornton, D.A. Day, W. Kuster, E.J. Williams, B.T. Jobson, and R.C. Cohen, Observations of total alkyl nitrates during Texas Air Quality Study 2000: Implications for O<sub>3</sub> and alkyl nitrate photochemistry, *Journal of Geophysical Research*, *109*, doi:10.1029/2003JD004227, 2004.
- Rosén, S., K.D. Froyd, J. Curtius, and E.R. Lovejoy, Kinetics, thermodynamics, and ab initio calculations of HS<sub>2</sub>O<sub>7</sub><sup>-</sup>(H<sub>2</sub>SO<sub>4</sub>)<sub>x</sub> (x=1-3) cluster ions, *International Journal of Mass Spectrometry*, *232*, 9-15, doi: 10.1016/j.ijms.2003.1010.1004, 2004.
- Rosenlof, K.H., How water enters the stratosphere, *Science*, *302*, 1691-1692, 2003.
- Rosenlof, K.H., Transport changes inferred from HALOE water and methane measurements, *Journal of the Meteorological Society of Japan*, *80*, 831-848, 2002.
- Rosenlof, K.H., S.J. Oltmans, D. Kley, J.M. Russell, III, E.-W. Chiou, W.P. Chu, D.G. Johnson, K.K. Kelly, H.A. Michelsen, G.E. Nedoluha, E.E. Remsberg, G.C. Toon, and M.P. McCormick, Stratospheric water vapor increases over the past half-century, *Geophysical Research Letters*, *28*, 1195-1198, 2001.
- Ross, M.N., D.W. Toohey, W.T. Rawlins, E.C. Richard, K.K. Kelly, A.F. Tuck, M.H. Proffitt, D.E. Hagen, A.R. Hopkins, P.D. Whitefield, J.R. Benbrook, and W.R. Sheldon, Observations of stratospheric ozone depletion associated with Delta II rocket emissions, *Geophysical Research Letters*, *27*, 2209-2212, 2000.
- Roundy, P.E., and G.N. Kiladis, Observed relationships between oceanic Kelvin waves and atmospheric forcing, *Journal of Climate*, *19*, 5253-5272, 2006.
- Roundy, P.E., and W.M. Frank, Applications of a multiple linear regression model to the analysis of relationships between eastward- and westward-moving intraseasonal modes, *Journal of the Atmospheric Sciences*, *61*, 3041-3048, 2004.
- Roundy, P.E., and W.M. Frank, Effects of low-frequency wave interactions on intraseasonal oscillations, *Journal of the Atmospheric Sciences*, *61*, 3025-3040, 2004.
- Ryerson, T.B., M. Trainer, W.M. Angevine, C.A. Brock, R.W. Dissly, F.C. Fehsenfeld, G.J. Frost, P.D. Goldan, J.S. Holloway, G. Hübler, R.O. Jakoubek, W.C. Kuster, J.A. Neuman, D.K. Nicks, Jr., D.D. Parrish, J.M. Roberts, D.T. Sueper, E.L. Atlas, S.G. Donnelly, F. Flocke, A. Fried, W.T. Potter, S. Schauffler, V. Stroud, A.J. Weinheimer, B.P. Wert, C. Wiedinmyer, R.J. Alvarez, R.M. Banta, L.S. Darby, and C.J. Senff, Effect of petrochemical industrial emissions of reactive alkenes and NO<sub>x</sub> on tropospheric ozone formation in Houston, Texas, *Journal of Geophysical Research*, *108*, doi:10.1029/2002JD003070, 2003.
- Ryerson, T.B., M. Trainer, J.S. Holloway, D.D. Parrish, L.G. Huey, D.T. Sueper, G.J. Frost, S.G. Donnelly, S. Schauffler, E.L. Atlas, W.C. Kuster, P.D. Goldan, G. Hübler, J.F. Meagher, and F.C. Fehsenfeld, Observations of ozone formation in power plant plumes and implications for ozone control strategies, *Science*, *292*, 719-723, 2001.
- Ryerson, T.B., E.J. Williams, and F.C. Fehsenfeld, An efficient photolysis system for fast-response NO<sub>2</sub> measurements, *Journal of Geophysical Research*, *105*, 26447-26461, 2000.

- Santee, M.L., A. Lambert, W.G. Read, N.J. Livesey, R.E. Cofield, D.T. Cuddy, W.H. Daffer, B.J. Drouin, L. Froidevaux, R.A. Fuller, R.F. Jarnot, B.W. Knosp, G.L. Manney, V.S. Perun, W.V. Snyder, P.C. Stek, R.P. Thurstans, P.A. Wagner, J.W. Waters, G. Muscari, R.L. de Zafra, J.E. Dibb, D.W. Fahey, P.J. Popp, T.P. Marcy, K.W. Jucks, G.C. Toon, R.A. Stachnik, P.F. Bernath, C.D. Boone, K.A. Walker, J. Urban, and D. Murtagh, Validation of the Aura Microwave Limb Sounder HNO<sub>3</sub> measurements, *Journal of Geophysical Research*, *112*, doi:10.1029/2007JD008721, 2007.
- Sassen, K., J.R. Campbell, J. Zhu, P. Kollias, M. Shupe, and C.R. Williams, Lidar and triple-wavelength Doppler radar measurements of the melting layer: A revised model for dark- and brightband phenomena, *Journal of Applied Meteorology*, *44*, 301-312, doi:310.1175/JAM-2197.1171, 2005.
- Schafer, R., S.K. Avery, K.S. Gage, P.E. Johnston, and D.A. Carter, Improving wind profiler measured winds using coplanar spectral averaging, *Journal of Atmospheric and Oceanic Technology*, *21*, 1671-1678, doi:1610.1175/JTECH1672.1671, 2004.
- Schafer, R., S.K. Avery, and K.S. Gage, A comparison of VHF wind profiler observations and the NCEP-NCAR reanalysis over the tropical Pacific, *Journal of Applied Meteorology*, *42*, 873-889, 2003.
- Schafer, R., S. Avery, P. May, D. Rajopadhyaya, and C. Williams, Estimation of rainfall drop size distributions from dual-frequency wind profiler spectra using deconvolution and a nonlinear least squares fitting technique, *Journal of Atmospheric and Oceanic Technology*, *19*, 864-874, 2002.
- Schafer, R., P.T. May, T.D. Keenan, K. McGuffie, W.L. Ecklund, P.E. Johnston, and K.S. Gage, Boundary layer development over a tropical island during the Maritime Continent Thunderstorm Experiment, *Journal of the Atmospheric Sciences*, *58*, 2163-2179, 2001.
- Scheeren, H.A., J. Lelieveld, G.J. Roelofs, J. Williams, H. Fischer, M. de Reus, J.A. deGouw, C. Warneke, R. Holzinger, H. Schlager, T. Klüpfel, M. Bolder, C. van der Veen, and M.G. Lawrence, The impact of monsoon outflow from India and southeast Asia in the upper troposphere over the eastern Mediterranean, *Atmospheric Chemistry and Physics*, *3*, 1589-1608, 2003.
- Schofield, R., J.S. Daniel, R.W. Portmann, H.L. Miller, S. Solomon, C.S. Eubank, M.L. Melamed, A.O. Langford, M.D. Shupe, and D.D. Turner, Retrieval of effective radius and liquid water path from ground-based instruments: A case study at Barrow, Alaska, *Journal of Geophysical Research*, *112*, doi:10.1029/2007JD008737, 2007.
- Schwarz, J.P., R.S. Gao, D.W. Fahey, D.S. Thomson, L.A. Watts, J.C. Wilson, J.M. Reeves, M. Darbeheshti, G.L. Kok, S.H. Chung, M. Schulz, J. Hendricks, A. Lauer, B. Kärcher, J.G. Slowik, K.H. Rosenlof, T.L. Thompson, A.O. Langford, M. Loewenstein, and K.C. Aikin, Single-particle measurements of midlatitude black carbon and light-scattering aerosols from the boundary layer to the lower stratosphere, *Journal of Geophysical Research*, *111*, doi:10.1029/2006JD007076, 2006.
- Seidel, D.J., R.J. Ross, J.K. Angell, and G.C. Reid, Climatological characteristics of the tropical tropopause as revealed by radiosondes, *Journal of Geophysical Research*, *106*, 7857-7878, 2001.
- Shaw, J.A., N.L. Seldomridge, D.L. Dunkle, P.W. Nugent, L.H. Spangler, J.J. Bromenshenk, C.B. Henderson, J.H. Churnside, and J.J. Wilson, Polarization lidar measurements of honey bees in flight for locating land mines, *Optics Express*, *13*, 5853-5863, 2005.

- Shetter, R.E., W. Junkermann, W.H. Swartz, G.J. Frost, J.H. Crawford, B.L. Lefer, J.D. Barrick, S.R. Hall, A. Hofzumahaus, A. Bais, J.G. Calvert, C.A. Cantrell, S. Madronich, M. Müller, A. Kraus, P.S. Monks, G.D. Edwards, R. McKenzie, P. Johnston, R. Schmitt, E. Griffioen, M. Krol, A. Kylling, R.R. Dickerson, S.A. Lloyd, T. Martin, B. Gardiner, B. Mayer, G. Pfister, E.P. Röth, P. Koepke, A. Ruggaber, H. Schwander, and M. van Weele, Photolysis frequency of NO<sub>2</sub>: Measurement and modeling during the International Photolysis Frequency Measurement and Modeling Intercomparison (IPMMI), *Journal of Geophysical Research*, *108*, 8544, doi:10.1029/2002JD002932, 2003.
- Shilling, J.E., T.J. Fortin, and M.A. Tolbert, Depositional ice nucleation on crystalline organic and inorganic solids, *Journal of Geophysical Research*, *111*, doi:10.1029/2005JD006664, 2006.
- Shine, K.P., M.S. Bourqui, P.M. de F. Forster, S.H.E. Hare, U. Langematz, P. Braesicke, V. Grewe, M. Ponater, C. Schnadt, C.A. Smith, J.D. Haigh, J. Austin, N. Butchart, D.T. Shindell, W.J. Randel, T. Nagashima, R.W. Portmann, S. Solomon, D.J. Seidel, J. Lanzante, S. Klein, V. Ramaswamy, and M.D. Schwarzkopf, A comparison of model-simulated trends in stratospheric temperatures, *Quarterly Journal of the Royal Meteorological Society*, *129*, 1565-1588, doi: 10.1029/2002JD002932, 2003.
- Sierk, B., S. Solomon, J.S. Daniel, R.W. Portmann, S.I. Gutman, A.O. Langford, C.S. Eubank, E.G. Dutton, and K.H. Holub, Field measurements of water vapor continuum absorption in the visible and near-infrared, *Journal of Geophysical Research*, *109*, doi:10.1029/2003JD003586, 2004.
- Sierk, B., S. Solomon, J.S. Daniel, R.W. Portmann, S.I. Gutman, A.O. Langford, C.S. Eubank, K.H. Holub, and S.V. Florek, Field test of spectral line intensity parameters for tropospheric water vapor, *Journal of Geophysical Research*, *108*, doi:10.1029/2002JD002985, 2003.
- Skamarock, W.C., J.G. Powers, M. Barth, J.E. Dye, T. Matejka, D. Bartels, K. Baumann, J. Stith, D.D. Parrish, and G. Hübler, Numerical simulations of the July 10 Stratospheric-Tropospheric Experiment: Radiation, Aerosols, and Ozone/Deep Convection Experiment convective system: Kinematics and transport, *Journal of Geophysical Research*, *105*, 19973-19990, 2000.
- Slowik, J.G., E.S. Cross, J.-H. Han, P. Davidovits, T.B. Onasch, J.T. Jayne, L.R. Williams, M.R. Canagaratna, D.R. Worsnop, R.K. Chakrabarty, H. Moosmüller, W.P. Arnott, J.P. Schwarz, R.-S. Gao, D.W. Fahey, G.L. Kok, and A. Petzold, An inter-comparison of instruments measuring black carbon content of soot particles, *Aerosol Science and Technology*, *41*, 295-314, doi:10.1080/02786820701197078, 2007.
- Slusher, D.L., L.G. Huey, D.J. Tanner, F.M. Flocke, and J.M. Roberts, A thermal dissociation-chemical ionization mass spectrometry (TD-CIMS) technique for the simultaneous measurement of peroxyacyl nitrates and dinitrogen pentoxide, *Journal of Geophysical Research*, *109*, doi:10.1029/2004JD004670, 2004.
- Smith, I.W.M., and A.R. Ravishankara, Role of hydrogen-bonded intermediates in the bimolecular reactions of the hydroxyl radical, *The Journal of Physical Chemistry A*, *106*, 4798-4807, doi:10.1021/jp014234w, 2002.
- Sobel, A.H., S.E. Yuter, C.S. Bretherton, and G.N. Kiladis, Large-scale meteorology and deep convection during TRMM KWAJEX, *Monthly Weather Review*, *132*, 422-444, 2004.
- Solomon, S., R.W. Portmann, and D.W.J. Thompson, Contrasts between Antarctic and Arctic ozone

depletion, *Proceedings of the National Academy of Sciences*, 104, 445-449, doi:10.1073/pnas.0604895104, 2007.

Solomon, S., J.S. Daniel, and D.L. Druckenbrod, Revolutionary Minds, *American Scientist*, 95, 430-437, 2007.

Solomon, S., R.W. Portmann, T. Sasaki, D.J. Hofmann, and D.W.J. Thompson, Four decades of ozonesonde measurements over Antarctica, *Journal of Geophysical Research*, 110, doi: 10.1029/2005JD005917, 2005.

Solomon, S., D.W.J. Thompson, R.W. Portmann, S.J. Oltmans, and A.M. Thompson, On the distribution and variability of ozone in the tropical upper troposphere: Implications for tropical deep convection and chemical-dynamical coupling, *Geophysical Research Letters*, 32, doi: 10.1029/2005GL024323, 2005.

Solomon, S., The hole truth, *Nature*, 427, 289-291, 2004.

Solomon, S., and J.S. Daniel, Lewis and Clark, Pioneering meteorological observers in the American West, *Bulletin of the American Meteorological Society*, 85, doi:10.1175/BAMS-1185-1179-1273, 2004.

Solomon, P.A., W.L. Chameides, R.J. Weber, A.M. Middlebrook, C.S. Kiang, A.G. Russell, A. Butler, B. Turpin, D. Mikel, R. Scheffe, E. Cowling, E. Edgerton, J. St. John, J. Jansen, P. McMurry, S.V. Hering, and T. Bahadori, Overview of the 1999 Atlanta Supersites Project, *Journal of Geophysical Research*, 108, doi:10.1029/2001JD001458, 2003.

Sorooshian, A., M.-L. Lu, F.J. Brechtel, H. Jonsson, G. Feingold, R.C. Flagan, and J.H. Seinfeld, On the source of organic acid aerosol layers above clouds, *Environmental Science and Technology*, 41, 4647-4654, doi:10.1021/es0630442, 2007.

Sorooshian, A., N.L. Ng, A.W.H. Chan, G. Feingold, R.C. Flagan, and J.H. Seinfeld, Particulate organic acids and overall water-soluble aerosol composition measurements from the 2006 Gulf of Mexico Atmospheric Composition and Climate Study (GoMACCS), *Journal of Geophysical Research*, 112, doi:10.1029/2007JD008537, 2007.

Sorooshian, A., V. Varutbangkul, F.J. Brechtel, B. Ervens, G. Feingold, R. Bahreini, S.M. Murphy, J.S. Holloway, E.L. Atlas, G. Buzorius, H. Jonsson, R.C. Flagan, and J.H. Seinfeld, Oxalic acid in clear and cloudy atmospheres: Analysis of data from International Consortium for Atmospheric Research on Transport and Transformation 2004, *Journal of Geophysical Research*, 111, doi:10.1029/2005JD006880, 2006.

Spichtinger, N., R. Damoah, S. Eckhardt, C. Forster, P. James, S. Beirle, T. Marbach, T. Wagner, P.C. Novelli, and A. Stohl, Boreal forest fires in 1997 and 1998: A seasonal comparison using transport model simulations and measurement data, *Atmospheric Chemistry and Physics*, 4, 1857-1868, doi:10.1175/acp/2004-1854-1857, 2004.

St.-Maurice, J.-P., R.K. Choudhary, W.L. Ecklund, and R.T. Tsunoda, Fast type-1 waves in the equatorial electrojet: Evidence for nonisothermal ion-acoustic speeds in the lower E region, *Journal of Geophysical Research*, 108, 1170, doi:10.1029/2002JD009648, 2003.

Stark, H., B.M. Lerner, R. Schmitt, R. Jakoubek, E.J. Williams, T.B. Ryerson, D.T. Sueper, D.D.

- Parrish, and F.C. Fehsenfeld, Atmospheric in situ measurement of nitrate radical (NO<sub>3</sub>) and other photolysis rates using spectroradiometry and filter radiometry, *Journal of Geophysical Research*, *112*, doi:10.1029/2006JD007578, 2007.
- Stark, H., S.S. Brown, P.D. Goldan, M. Aldener, W.C. Kuster, R. Jakoubek, F.C. Fehsenfeld, J. Meagher, T.S. Bates, and A.R. Ravishankara, Influence of nitrate radical on the oxidation of dimethyl sulfide in a polluted marine environment, *Journal of Geophysical Research*, *112*, doi:10.1029/2006JD007669, 2007.
- Steeghs, M., H.P. Bais, J. deGouw, P. Goldan, W. Kuster, M. Northway, R. Fall, and J.M. Vivanco, Proton-transfer-reaction mass spectrometry (PTR-MS) as a new tool for real time analysis of root-secreted volatile organic compounds (VOCs) in *Arabidopsis thaliana*, *Plant Physiology*, *135*, 2004.
- Stohl, A., O.R. Cooper, and P. James, A cautionary note on the use of meteorological analysis fields for quantifying atmospheric mixing, *Journal of the Atmospheric Sciences*, *61*, 1446-1453, 2004.
- Stohl, A., O.R. Cooper, R. Damoah, F.C. Fehsenfeld, C. Forster, E.-Y. Hsie, G. Hübler, D.D. Parrish, and M. Trainer, Forecasting for a Lagrangian aircraft campaign, *Atmospheric Chemistry and Physics*, *4*, 1113–1124, doi:1680-7324/acp/2004-1114-1113, 2004.
- Stohl, A., and P. James, A Lagrangian analysis of the atmospheric branch of the global water cycle: Part 1, Method description, validation, and demonstration for the August 2002 flooding event in Central Europe, *Journal of Hydrometeorology*, *5*, 656-678, 2004.
- Stohl, A., C. Forster, S. Eckhardt, N. Spichtinger, H. Huntrieser, J. Heland, H. Schlager, H. Aufmhoff, F. Arnold, and O. Cooper, A backward modeling study of intercontinental pollution transport using aircraft measurements, *Journal of Geophysical Research*, *108*, 4370, doi:4310.1029/2002JD002862, 2003.
- Stohl, A., H. Huntrieser, A. Richter, S. Beirle, O. Cooper, S. Eckhardt, C. Forster, P. James, N. Spichtinger, M. Wenig, T. Wagner, J.P. Burrows, and U. Platt, Rapid intercontinental air pollution transport associated with a meteorological bomb, *Atmospheric Chemistry and Physics*, *3*, 969-985, 2003.
- Stohl, A., M. Trainer, T.B. Ryerson, J.S. Holloway, and D.D. Parrish, Export of NO<sub>y</sub> from the North American boundary layer during 1996 and 1997 North Atlantic Regional Experiments, *Journal of Geophysical Research*, *107*, doi:10.1029/2001JD000519, 2002.
- Straub, K.H., and G.N. Kiladis, Extratropical forcing of convectively coupled Kelvin waves during austral winter, *Journal of the Atmospheric Sciences*, *60*, 526-543, 2003.
- Straub, K.H., and G.N. Kiladis, Interactions between the boreal summer intraseasonal oscillation and higher-frequency tropical wave activity, *Monthly Weather Review*, *131*, 945-960, 2003.
- Straub, K.H., and G.N. Kiladis, The observed structure of convectively coupled Kelvin waves: Comparison with simple models of coupled wave instability, *Journal of the Atmospheric Sciences*, *60*, 1655-1668, 2003.
- Straub, K.H., and G.N. Kiladis, Observations of a convectively coupled Kelvin wave in the eastern Pacific ITCZ, *Journal of the Atmospheric Sciences*, *59*, 30-53, 2002.
- Stroud, C.A., J.M. Roberts, E.J. Williams, D. Hereid, W.M. Angevine, F.C. Fehsenfeld, A. Wisthaler,

- A. Hansel, M. Martinez-Harder, H. Harder, W.H. Brune, G. Hoenninger, J. Stutz, and A.B. White, Nighttime isoprene trends at an urban forested site during the 1999 Southern Oxidant Study, *Journal of Geophysical Research*, *107*, doi: 10.1029/2001JD000959, 2002.
- Stroud, C.A., J.M. Roberts, J. Williams, P.D. Goldan, W.C. Kuster, T.B. Ryerson, D.T. Sueper, D.D. Parrish, M. Trainer, F.C. Fehsenfeld, F. Flocke, S.M. Schauffler, V.R.F. Stroud, and E. Atlas, Alkyl nitrate measurements during STERAO 1996 and NARE 1997: Intercomparison and survey of results, *Journal of Geophysical Research*, *106*, 23043-23053, 2001.
- Stroud, C.A., J.M. Roberts, P.D. Goldan, W.C. Kuster, P.C. Murphy, E.J. Williams, D. Hereid, D.D. Parrish, D.T. Sueper, M. Trainer, F.C. Fehsenfeld, E.C. Apel, D. Riemer, B. Wert, B. Henry, A. Fried, M. Martinez-Harder, H. Harder, W.H. Brune, G. Li, H. Xie, and V.L. Young, Isoprene and its oxidation products, methacrolein and methylvinyl ketone, at an urban forested site during the 1999 Southern Oxidants Study, *Journal of Geophysical Research*, *106*, 8035-8046, 2001.
- Sullivan, A.P., R.E. Peltier, C.A. Brock, J.A. deGouw, J.S. Holloway, C. Warneke, A.G. Wollny, and R.J. Weber, Airborne measurements of carbonaceous aerosol soluble in water over northeastern United States: Method development and an investigation into water-soluble organic carbon sources, *Journal of Geophysical Research*, *111*, doi:10.1029/2006JD007072, 2006.
- Sun, Y., S. Solomon, A. Dai, and R.W. Portmann, How often will it rain?, *Journal of Climate*, *20*, 4801-4818, doi:10.1175/JCLI4263.4801, 2007.
- Sun, Y., S. Solomon, A. Dai, and R.W. Portmann, How often does it rain?, *Journal of Climate*, *19*, 916-934, doi:10.1175/JCLI3672.1171, 2006.
- Swanson, A.L., B.L. Lefer, V. Stroud, and A. Elliot, Trace gas emissions through a winter snowpack in the subalpine ecosystem at Niwot Ridge, Colorado, *Geophysical Research Letters*, *32*, doi:10.1029/2004GL021809, 2005.
- Takahashi, K., T. Nakayama, Y. Matsumi, S. Solomon, T. Gejo, E. Shigemasa, and T.J. Wallington, Atmospheric lifetime of SF<sub>5</sub>CF<sub>3</sub>, *Geophysical Research Letters*, *29*, doi:10.1029/2002GL015356, 2002.
- Takegawa, N., K. Kita, Y. Kondo, Y. Matsumi, D.D. Parrish, J.S. Holloway, M. Koike, Y. Miyazaki, N. Toriyama, S. Kawakami, and T. Ogawa, Airborne vacuum ultraviolet resonance fluorescence instrument for in situ measurement of CO, *Journal of Geophysical Research*, *106*, 24237-24244, 2001.
- Talukdar, R.K., E.E. Loukhovitskaya, O.B. Popovicheva, and A.R. Ravishankara, Uptake of HNO<sub>3</sub> on hexane and aviation kerosene soot, *Journal of Physical Chemistry A*, *110*, 9643-9653, doi:10.1021/jp060556u S061089-065639(060506)000556-060551, 2006.
- Talukdar, R.K., T. Gierczak, D.C. McCabe, and A.R. Ravishankara, Reaction of hydroxyl radical with acetone. 2. Products and reaction mechanism, *The Journal of Physical Chemistry A*, *107*, 5021-5032, doi:10.1021/jp0273023, 2003.
- Talukdar, R.K., E.J. Dunlea, S.S. Brown, J.S. Daniel, and A.R. Ravishankara, Kinetics of SO<sub>2</sub> reaction with H<sub>2</sub>O and an upper limit for OH production, *The Journal of Physical Chemistry A*, *106*, 8461-8470, doi:10.1021/jp020589j, 2002.

- Talukdar, R.K., A. Mellouki, J.B. Burkholder, M.K. Gilles, G. Le Bras, and A.R. Ravishankara, Quantification of the tropospheric removal of chloral ( $\text{CCl}_3\text{CHO}$ ): Rate coefficient for the reaction with OH, UV absorption cross sections, and quantum yields, *The Journal of Physical Chemistry A*, *105*, 5188-5196, doi: 5110.1021/jp004632j, 2001.
- Tang, Y., G.R. Carmichael, N. Thongboonchoo, T. Chai, L.W. Horowitz, R.B. Pierce, J.A. Al-Saadi, G. Pfister, J.M. Vukovich, M.A. Avery, G.W. Satche, T.B. Ryerson, J.S. Holloway, E.L. Atlas, F.M. Flocke, R.J. Weber, L.G. Huey, J.E. Dibb, D.G. Streets, and W.H. Brune, Influence of lateral and top boundary conditions on regional air quality prediction: A multiscale study coupling regional and global chemical transport models, *Journal of Geophysical Research*, *112*, doi:10.1029/2006JD007515, 2007.
- Tang, Y., G.R. Carmichael, L.W. Horowitz, I. Uno, J.-H. Woo, D.G. Streets, D. Dabdub, G. Kurata, A. Sandu, J. Allan, E. Atlas, F. Flocke, L.G. Huey, R.O. Jakoubek, D.B. Millet, P.K. Quinn, J.M. Roberts, D.R. Worsnop, A. Goldstein, S. Donnelly, S. Schauffler, V. Stroud, K. Johnson, M.A. Avery, H.B. Singh, and E.C. Apel, Multiscale simulations of tropospheric chemistry in the eastern Pacific and on the U.S. West Coast during spring 2002, *Journal of Geophysical Research*, *109*, doi:10.1029/2004JD004513, 2004.
- Tanner, D., D. Helmig, J. Hueber, and P. Goldan, Gas chromatography system for the automated, unattended, and cryogen-free monitoring of C2 to C6 non-methane hydrocarbons in the remote troposphere, *Journal of Chromatography A*, *1111*, 76-88, doi:10.1016/j.chroma.2006.1001.1100, 2006.
- Tenningen, E., J.H. Churnside, A. Slotte, and J.J. Wilson, Lidar target-strength measurements on Northeast Atlantic mackerel (*Scomber scombrus*), *Journal of Marine Science*, *63*, 677-682, doi:10.1016/j.icesjms.2005.1011.1018, 2006.
- Tervahattu, H., J. Juhanaja, V. Vaida, A.F. Tuck, J.V. Niemi, K. Kupiainen, M. Kulmala, and H. Vehkamäki, Fatty acids on continental sulfate aerosol particles, *Journal of Geophysical Research*, *110*, doi:10.1029/2004JD005400, 2005.
- Tervahattu, H., K. Hartonen, V.-M. Kerminen, K. Kupiainen, P. Aarnio, T. Koskentalo, A.F. Tuck, and V. Vaida, New evidence of an organic layer on marine aerosols, *Journal of Geophysical Research*, *107*, doi: 10.1029/2000JD000282, 2002.
- Thomas, E.R., G.J. Frost, and Y. Rudich, Reactive uptake of ozone by proxies for organic aerosols: Surface-bound and gas-phase products, *Journal of Geophysical Research*, *106*, 3045-3056, 2001.
- Thompson, A.M., J.B. Stone, J.C. Witte, S.K. Miller, R.B. Pierce, R.B. Chatfield, S.J. Oltmans, O.R. Cooper, A.L. Loucks, B.F. Taubman, B.J. Johnson, E. Joseph, T.L. Kucsera, J.T. Merrill, G.A. Morris, S. Hersey, M.J. Newchurch, F.J. Schmidlin, D.W. Tarasick, V. Thouret, and J.-P. Cammas, Intercontinental Chemical Transport Experiment Ozone Sonde Network Study (IONS) 2004: 1. Summertime upper troposphere/lower stratosphere ozone over northeastern North America, *Journal of Geophysical Research*, *112*, doi:10.1029/2006JD007441, 2007.
- Thompson, D.W.J., and S. Solomon, Recent stratospheric climate trends as evidenced in radiosonde data: Global structure and tropospheric linkages, *Journal of Climate*, *18*, 4785-4795, doi:10.1175/JCL13585.13581, 2005.
- Thompson, D.W.J., M.P. Baldwin, and S. Solomon, Stratosphere-troposphere coupling in the

Southern Hemisphere, *Journal of the Atmospheric Sciences*, *62*, 708-715, doi:10.1175/JAS-3321.1171, 2005.

- Thompson, D.W.J., and S. Solomon, Interpretation of recent Southern Hemisphere climate change, *Science*, *296*, 895-899, 2002.
- Thomson, D.S., M.E. Schein, and D.M. Murphy, Particle analysis by laser mass spectrometry WB-57 instrument overview, *Aerosol Science and Technology*, *33*, 153-169, 2000.
- Thornton, B.F., D.W. Toohey, A.F. Tuck, J.W. Elkins, K.K. Kelly, S.J. Hovde, E.C. Richard, K.H. Rosenlof, T.L. Thompson, M.J. Mahoney, and J.C. Wilson, Chlorine activation near the midlatitude tropopause, *Journal of Geophysical Research*, *112*, doi:10.1029/2006JD007640, 2007.
- Thornton, J.A., P.J. Wooldridge, R.C. Cohen, E.J. Williams, D. Hereid, F.C. Fehsenfeld, J. Stutz, and B. Alicke, Comparisons of in situ and long path measurements of NO<sub>2</sub> in urban plumes, *Journal of Geophysical Research*, *108*, doi:10.1029/2003JD003559, 2003.
- Thornton, J.A., P.J. Wooldridge, R.C. Cohen, M. Martinez, H. Harder, W.H. Brune, E.J. Williams, J.M. Roberts, F.C. Fehsenfeld, S.R. Hall, R.E. Shetter, B.P. Wert, and A. Fried, Ozone production rates as a function of NO<sub>x</sub> abundances and HO<sub>x</sub> production rates in the Nashville urban plume, *Journal of Geophysical Research*, *107*, 10.1029/2001JD000932, 2002.
- Tie, X., G.P. Brasseur, C. Zhao, C. Granier, S. Massie, Y. Qin, P. Wang, G. Wang, P. Yang, and A. Richter, Chemical characterization of air pollution in Eastern China and the Eastern United States, *Atmospheric Environment*, *40*, 2607-2625. doi:10.1016/j.atmosenv.2005.2611.2059, 2006.
- Trainer, M., D.D. Parrish, P.D. Goldan, J. Roberts, and F.C. Fehsenfeld, Review of observation-based analysis of the regional factors influencing ozone concentrations, *Atmospheric Environment*, *34*, 2045-2061, 2000.
- Traub, M., H. Fischer, M. de Reus, R. Kormann, J. Heland, H. Ziereis, H. Schlager, R. Holzinger, J. Williams, C. Warneke, J.A. deGouw, and J. Lelieveld, Chemical characteristics assigned to trajectory clusters during the MINOS campaign, *Atmospheric Chemistry and Physics*, *3*, 459-468, 2003.
- Trenberth, K., J. Overpeck, and S. Solomon, Exploring drought and its implications for the future, *EOS, Transactions, American Geophysical Union*, *85*, 27-28, doi:10.1029/2004GL019837, 2004.
- Trickl, T., O.R. Cooper, H. Eisele, P. James, R. Mücke, and A. Stohl, Intercontinental transport and its influence on the ozone concentrations over central Europe: Three case studies, *Journal of Geophysical Research*, *108*, 8530, doi:10.1029/2002JD002735, 2003.
- Tsunoda, R.T., and W.L. Ecklund, East-west asymmetry in type-2 echoes and enhanced electron drift in the equatorial electrojet, *Geophysical Research Letters*, *29*, doi:10.1029/2001GL014582, 2002.
- Tsunoda, R.T., W.L. Ecklund, and P.E. Johnston, Radar measurements of electric fields in the topside of the equatorial electrojet: First results, *Geophysical Research Letters*, *27*, 2861-2864, 2000.
- Tuck, A.F., S.J. Hovde, E.C. Richard, R.-S. Gao, T.P. Bui, W.H. Swartz, and S.A. Lloyd, Molecular velocity distributions and generalized scale invariance in the turbulent atmosphere, *Faraday Discussions of the Chemical Society*, *130*, 181-193, doi:10.1039/b410551f, 2005.



- Tuck, A.F., S.J. Hovde, K.K. Kelly, S.J. Reid, E.C. Richard, E.L. Atlas, S.G. Donnelly, V.R. Stroud, D.J. Cziczo, D.M. Murphy, D.S. Thomson, J.W. Elkins, F.L. Moore, E.A. Ray, M.J. Mahoney, and R.R. Friedl, Horizontal variability 1–2 km below the tropical tropopause, *Journal of Geophysical Research*, *109*, doi:10.1029/2003JD003942, 2004.
- Tuck, A.F., S.J. Hovde, and T.P. Bui, Scale invariance in jet streams: ER-2 data around the lower-stratospheric polar night vortex, *Quarterly Journal of the Royal Meteorological Society*, *130*, 2423-2444, doi:10.1029/2003JD003942, 2004.
- Tuck, A.F., S.J. Hovde, K.K. Kelly, M.J. Mahoney, M.H. Proffitt, E.C. Richard, and T.L. Thompson, Exchange between the upper tropical troposphere and the lower stratosphere studied with aircraft observations, *Journal of Geophysical Research*, *108*, doi:10.1029/2003JD003399, 2003.
- Tuck, A.F., S.J. Hovde, R.S. Gao, and E.C. Richard, Law of mass action in the Arctic lower stratospheric polar vortex January-March 2000: ClO scaling and the calculation of ozone loss rates in a turbulent fractal medium, *Journal of Geophysical Research*, *108*, doi:10.1029/2002JD002832, 2003.
- Tuck, A.F., S.J. Hovde, E.C. Richard, D.W. Fahey, R.S. Gao, and T.P. Bui, A scaling analysis of ER-2 data in the inner Arctic vortex during January-March 2000, *Journal of Geophysical Research*, *108*, doi: 10.1029/2001JD000879, 2003.
- Tuck, A.F., The role of atmospheric aerosols in the origin of life, *Surveys in Geophysics*, *23*, 379-409, 2002.
- Tyndall, G.S., R.A. Cox, C. Granier, R. Lesclaux, G.K. Moortgat, M.J. Pilling, A.R. Ravishankara, and T.J. Wallington, Atmospheric chemistry of small organic peroxy radicals, *Journal of Geophysical Research*, *106*, 12157-12182, 2001.
- Vaida, V., J.S. Daniel, H. Kjaergaard, L.M. Goss, and A.F. Tuck, Atmospheric absorption of near infrared and visible solar radiation by the hydrogen bonded water dimer, *Quarterly Journal of the Royal Meteorological Society*, *127*, 1627-1643, 2001.
- Vaida, V., A.F. Tuck, and G.B. Ellison, Optical and chemical properties of atmospheric organic aerosols, *Physics and Chemistry of the Earth (C)*, *25*, 195-198, 2000.
- Vakhtin, A.B., D.C. McCabe, A.R. Ravishankara, and S.R. Leone, Low-temperature kinetics of the reaction of the OH radical with hydrogen peroxide, *Journal of Physical Chemistry A*, *107*, 10642-10647, doi:10.1021/jp030424q, 2003.
- van Poppel, L.H., H. Friedrich, J. Spinsby, S.H. Chung, J.H. Seinfeld, and P.R. Buseck, Electron tomography of nanoparticle clusters: Implications for atmospheric lifetimes and radiative forcing of soot, *Geophysical Research Letters*, *32*, doi:10.1029/2005GL024461, 2005.
- VanZandt, T.E., G.D. Nastrom, J. Furumoto, T. Tsuda, and W.L. Clark, A dual-beamwidth radar method for measuring atmospheric turbulent kinetic energy, *Geophysical Research Letters*, *29*, doi:10.1029/2001GL014283, 2002.
- VanZandt, T.E., A brief history of the development of wind-profiling or MST radars, *Annales Geophysicae*, *18*, 740-749, 2000.
- VanZandt, T.E., W.L. Clark, K.S. Gage, C.R. Williams, and W.L. Ecklund, A dual-wavelength radar

technique for measuring the turbulent energy dissipation rate  $\xi$ , *Geophysical Research Letters*, *27*, 2537-2540, 2000.

Velders, G.J.M., S.O. Andersen, J.S. Daniel, D.W. Fahey, and M. McFarland, The importance of the Montreal Protocol in protecting climate, *Proceedings of the National Academy of Sciences*, *104*, 4814-4819, doi:4810.1073/pnas.0610328104, 2007.

Velders, G.J.M., C. Granier, R.W. Portmann, K. Pfeilsticker, M. Wenig, T. Wagner, U. Platt, A. Richter, and J.P. Burrows, Global tropospheric NO<sub>2</sub> column distributions: Comparing three-dimensional model calculations with GOME measurements, *Journal of Geophysical Research*, *106*, 12643-12660, 2001.

Velders, G.J.M., and C. Granier, Sensitivity of wet deposition on HNO<sub>3</sub>/No<sub>x</sub> ratio in atmospheric chemistry models, *Journal of Geophysical Research*, *106*, 3125-3132, 2001.

Verlinde, J., J.Y. Harrington, G.M. McFarquhar, V.T. Yannuzzi, A. Avramov, S. Greenberg, N. Johnson, G. Zhang, M.R. Poellot, J.H. Mather, D.D. Turner, E.W. Eloranta, B.D. Zak, A.J. Prenni, J.S. Daniel, G.L. Kok, D.C. Tobin, R. Holz, K. Sassen, D. Spangenberg, P. Minnis, T.P. Tooman, M.D. Ivey, S.J. Richardson, C.P. Bahrmann, M. Shupe, P.J. DeMott, A.J. Heymsfield, and R. Schofield, The mixed-phase Arctic cloud experiment, *Bulletin of the American Meteorological Society*, *88*, 205-221, doi:210.1175/BAMS-1188-1172-1205, 2007.

Voight, C., H. Schlager, H. Ziereis, B. Kärcher, B.P. Luo, C. Schiller, M. Krämer, P.J. Popp, H. Irie, and Y. Kondo, Nitric acid in cirrus clouds, *Geophysical Research Letters*, *33*, doi:10.1029/2005GL025159, 2006.

Walsh, E.J., M.L. Banner, J.H. Churnside, J.A. Shaw, D.C. Vandemark, C.W. Wright, J.B. Jensen, and S. Lee, Visual demonstration of three-scale sea-surface roughness under light wind conditions, *IEEE Transactions on Geoscience and Remote Sensing*, *43*, 1751-1762, doi: 1710.1109/TGRS.2005.851633, 2005.

Wang, Q., M. Shao, Y. Liu, W. Kuster, P. Goldan, X. Li, Y. Liu, and S. Lu, Impact of biomass burning on urban air quality estimated by organic tracers: Guangzhou and Beijing as cases, *Atmospheric Environment*, *41*, 8380-8390, doi:8310.1016/j.atmosenv.2007.8306.8048, 2007.

Warneke, C., S.A. McKeen, J.A. deGouw, P.D. Goldan, W.C. Kuster, J.S. Holloway, E.J. Williams, B.M. Lerner, D.D. Parrish, M. Trainer, F.C. Fehsenfeld, S. Kato, E.L. Atlas, A. Baker, and D.R. Blake, Determination of urban volatile organic compound emission ratios and comparison with an emissions database, *Journal of Geophysical Research*, *112*, doi:10.1029/2006JD007930, 2007.

Warneke, C., J.A. deGouw, A. Stohl, O.R. Cooper, P.D. Goldan, W.C. Kuster, J.S. Holloway, E.J. Williams, B.M. Lerner, S.A. McKeen, M. Trainer, F.C. Fehsenfeld, E.L. Atlas, S.G. Donnelly, V. Stroud, A. Lueb, and S. Kato, Biomass burning and anthropogenic sources of CO over New England in the summer 2004, *Journal of Geophysical Research*, *111*, doi:10.1029/2005JD006878, 2006.

Warneke, C., J.A. deGouw, E.R. Lovejoy, P.C. Murphy, W.C. Kuster, and R. Fall, Development of proton transfer ion trap–mass spectrometry: On-line detection and identification of volatile organic compounds in air, *Journal of the American Society for Mass Spectrometry*, *16*, 1316-1324, doi:1310.1016/j.jasms.2005.1303.1025, 2005.

- Warneke, C., S. Kato, J.A. deGouw, P.D. Goldan, W.C. Kuster, M. Shao, E.R. Lovejoy, R. Fall, and F.C. Fehsenfeld, Online volatile organic compound measurements using a newly developed proton-transfer ion-trap mass spectrometry instrument during New England Air Quality Study—Intercontinental Transport and Chemical Transformation 2004: Performance, intercomparison, and compound identification, *Environmental Science and Technology*, *39*, 5390-5397, doi:5310.1021/es050602o, 2005.
- Warneke, C., J.A. deGouw, P.D. Goldan, W.C. Kuster, E.J. Williams, B.M. Lerner, R. Jakoubek, S.S. Brown, H. Stark, M. Aldener, A.R. Ravishankara, J.M. Roberts, M. Marchewka, S. Bertman, D.T. Sueper, S.A. McKeen, J.F. Meagher, and F.C. Fehsenfeld, Comparison of daytime and nighttime oxidation of biogenic and anthropogenic VOCs along the New England coast in summer during New England Air Quality Study 2002, *Journal of Geophysical Research*, *109*, doi:10.1029/2003JD004424, 2004.
- Warneke, C., S. Rosén, E.R. Lovejoy, J.A. deGouw, and R. Fall, Two additional advantages of proton-transfer ion trap mass spectrometry, Letter to the Editor, *Rapid Communications in Mass Spectrometry*, *18*, 133-134, 2004.
- Warneke, C., J.A. deGouw, W.C. Kuster, P.D. Goldan, and R. Fall, Validation of atmospheric VOC measurements by Proton-Transfer-Reaction Mass Spectrometry using a gas-chromatographic preseparation method, *Environmental Science and Technology*, *37*, 2494-2501, Doi: 2410.1021/es026266i, 2003.
- Warneke, C., S.L. Luxembourg, J.A. deGouw, H.J.I. Rinne, A.B. Guenther, and R. Fall, Disjunct eddy covariance measurements of oxygenated volatile organic compounds fluxes from an alfalfa field before and after cutting, *Journal of Geophysical Research*, *107*, doi: 10.1029/2001JD000594, 2002.
- Weber, R.J., A.P. Sullivan, R.E. Peltier, A. Russell, B. Yan, Y. Chen, M. Zheng, J. deGouw, C. Warneke, C. Brock, J.S. Holloway, E.L. Atlas, and E. Edgerton, A study of secondary organic aerosol formation in the anthropogenic-influenced southeastern United States, *Journal of Geophysical Research*, *112*, doi:10.1029/2007JD008408, 2007.
- Weinstock, J., G.P. Klaassen, and A.S. Medvedev, Reply to "Comments on the gravity wave theory of J. Weinstock concerning dissipation induced by nonlinear effects", *Journal of the Atmospheric Sciences*, *64*, 1027-1041, 2007.
- Wert, B.P., M. Trainer, A. Fried, T.B. Ryerson, B. Henry, W. Potter, W.M. Angevine, E. Atlas, S.G. Donnelly, F.C. Fehsenfeld, G.J. Frost, P.D. Goldan, A. Hansel, J.S. Holloway, G. Hübler, W.C. Kuster, D.K. Nicks, Jr., J.A. Neuman, D.D. Parrish, S. Schauffler, J. Stutz, D.T. Sueper, C. Wiedinmyer, and A. Wisthaler, Signatures of terminal alkene oxidation in airborne formaldehyde measurements during TexAQS 2000, *Journal of Geophysical Research*, *108*, doi:10.1029/2002JD002502, 2003.
- Wheeler, M., G.N. Kiladis, and P.J. Webster, Large-scale dynamical fields associated with convectively coupled equatorial waves, *Journal of the Atmospheric Sciences*, *57*, 613-640, 2000.
- White, A.B., L.S. Darby, C.J. Senff, C.W. King, R.M. Banta, J. Koermer, J.M. Wilczak, P.J. Neiman, W.M. Angevine, and R. Talbot, Comparing the impact of meteorological variability on surface ozone during the NEAQS (2002) and ICARTT (2004) field campaigns, *Journal of Geophysical Research*, *112*, doi:10.1029/2006JD007590, 2007.

- White, A.B., C.J. Senff, A.N. Keane, L.S. Darby, I.V. Djalalova, D.C. Ruffieux, D.E. White, B.J. Williams, and A.H. Goldstein, A wind profiler trajectory tool for air quality transport applications, *Journal of Geophysical Research*, *111*, doi:10.1029/2006JD007475, 2006.
- White, A.B., B.D. Templeman, W.M. Angevine, R.J. Zamora, C.W. King, C.A. Russell, R.M. Banta, W.A. Brewer, and K.J. Olszyna, Regional contrast in morning transitions observed during the 1999 Southern Oxidants Study Nashville/Middle Tennessee Intensive, *Journal of Geophysical Research*, *107*, 4726, doi:10.1029/2001JD002036, 2002.
- Widiyatmi, I., H. Hashiguchi, S. Fukao, M.D. Yamanaka, S.-Y. Ogino, K.S. Gage, S.W.B. Harijono, S. Diharto, and H. Djojodihardjo, Examination of 3-6 day disturbances over equatorial Indonesia based on boundary layer radar observations during 1996-1999 at Bukittinggi, Serpong and Biak, *Journal of the Meteorological Society of Japan*, *79*, 317-331, 2001.
- Wiedinmyer, C., X. Tie, A. Guenther, R. Neilson, and C. Granier, Future changes in biogenic isoprene emissions: How might they affect regional and global atmospheric chemistry?, *Earth Interactions*, *10*, 1-19, 2006.
- Wilczak, J., S. McKeen, I. Djalalova, G. Grell, S. Peckham, W. Gong, V. Bouchet, R. Moffet, J. McHenry, J. McQueen, P. Lee, Y. Tang, and G.R. Carmichael, Bias-corrected ensemble and probabilistic forecasts of surface ozone over eastern North America during the summer of 2004, *Journal of Geophysical Research*, *111*, doi:10.1029/2006JD007598, 2006.
- Williams, E.J., F.C. Fehsenfeld, B.T. Jobson, W.C. Kuster, P.D. Goldan, J. Stutz, and W.A. McClenny, Comparison of ultraviolet absorbance, chemiluminescence, and DOAS instruments for ambient ozone monitoring, *Environmental Science and Technology*, *40*, doi:10.1021/es0523542, 2006.
- Williams, C.R., K.S. Gage, W.L. Clark, and P. Kucera, Monitoring the reflectivity calibration of a scanning radar using a profiling radar and a disdrometer, *Journal of Atmospheric and Oceanic Technology*, *22*, 1004-1018, doi:10.1175/JTECH1759.1001, 2005.
- Williams, C.R., Simultaneous ambient air motion and raindrop size distributions retrieved from UHF vertical incident profiler observations, *Radio Science*, *37*, doi: 10.1029/2000RS002603, 2002.
- Williams, C.R., W.L. Ecklund, P.E. Johnston, and K.S. Gage, Cluster analysis techniques to separate air motion and hydrometeors in vertical incident profiler observations, *Journal of Atmospheric and Oceanic Technology*, *17*, 949-962, 2000.
- Williams, C.R., A. Kruger, K.S. Gage, A. Tokay, R. Cifelli, W.F. Krajewski, and C. Kummerow, Comparison of simultaneous rain drop size distributions estimated from two surface disdrometers and a UHF profiler, *Geophysical Research Letters*, *27*, 1763-1766, 2000.
- Williams, J., J.M. Roberts, S.B. Bertman, C.A. Stroud, F.C. Fehsenfeld, K. Baumann, M.P. Buhr, K. Knapp, P.C. Murphy, M. Nowick, and E.J. Williams, A method for the airborne measurement of PAN, PPN, and MPAN, *Journal of Geophysical Research*, *105*, 28943-28960, 2000.
- Wilson, J.C., B.G. Lafleur, H. Hilbert, W.R. Seebaugh, J. Fox, D.W. Gesler, C.A. Brock, B.J. Huebert, and J. Mullen, Function and performance of a low turbulence inlet for sampling supermicron particles from aircraft platforms, *Aerosol Science and Technology*, *38*, 790-802, doi:10.1080/027868290500841, 2004.

- Wise, M.E., S.D. Brooks, R.M. Garland, D.J. Cziczo, S.T. Martin, and M.A. Tolbert, Solubility and freezing effect of  $\text{Fe}^{2+}$  and  $\text{Mg}^{2+}$  in  $\text{H}_2\text{SO}_4$  solutions representative of upper tropospheric and lower stratospheric sulfate particles, *Journal of Geophysical Research*, 108, doi:10.1029/2003JD003420, 2003.
- Wolfe, D.E., W.A. Brewer, S.C. Tucker, A.B. White, D.E. White, D.C. Welsh, D. Ruffieux, C.W. Fairall, M. Ratterree, J.M. Intrieri, B.J. McCarty, and D.C. Law, Shipboard multisensor merged wind profiles from the New England Air Quality Study 2004, *Journal of Geophysical Research*, 112, doi:10.1029/2006JD007344, 2007.
- Wotawa, G., P.C. Novelli, M. Trainer, and C. Granier, Inter-annual variability of summertime CO concentrations in the Northern Hemisphere explained by boreal forest fires in North America and Russia, *Geophysical Research Letters*, 28, 4575-4578, 2001.
- Wotawa, G., and M. Trainer, The influence of Canadian forest fires on pollutant concentrations in the United States, *Science*, 288, 324-328, 2000.
- Xue, H., and G. Feingold, Large-eddy simulations of trade wind cumuli: Investigation of aerosol indirect effects, *Journal of the Atmospheric Sciences*, 63, 1605-1622, doi:10.1175/JAS3706.1601, 2006.
- Yang, Z., R.A. Washenfelder, G. Keppel-Aleks, N.Y. Krakauer, J.T. Randerson, P.P. Tans, C. Sweeney, and P.O. Wennberg, New constraints on Northern Hemisphere growing season net flux, *Geophysical Research Letters*, 34, doi:10.1029/2007GL029742, 2007.
- Yang, J., R.E. Honrath, M.C. Peterson, D.D. Parrish, and M. Warshawsky, Photostationary state deviation-estimated peroxy radicals and their implications for  $\text{HO}_x$  and ozone photochemistry at a remote northern Atlantic coastal site, *Journal of Geophysical Research*, 109, doi:10.1029/2003JD003983, 2004.
- Yin, Y., K.S. Carslaw, and G. Feingold, Vertical transport and processing of aerosols in a mixed-phase convective cloud and the feedback on cloud development, *Quarterly Journal of the Meteorological Society*, 131, 221-245, doi:10.10256/qj.10203.10186, 2005.
- Yu, H., Y.J. Kaufman, M. Chin, G. Feingold, L.A. Remer, T.L. Anderson, Y. Balkanski, N. Bellouin, O. Boucher, S. Christopher, P. DeCola, R. Kahn, D. Koch, N. Loeb, M.S. Reddy, M. Schulz, T. Tekemura, and M. Zhou, A review of measurement-based assessments of the aerosol direct radiative effect and forcing, *Atmospheric Chemistry and Physics*, 6, 613-666, 2006.
- Yu, H., Y.J. Kaufman, M. Chin, G. Feingold, L.A. Remer, T.L. Anderson, Y. Balkanski, N. Bellouin, O. Boucher, S. Christopher, P. DeCola, R. Kahn, D. Koch, N. Loeb, M.S. Reddy, M. Schulz, T. Takemura, and M. Zhou, A review of measurement-based assessment of aerosol direct radiative effect and forcing, *Atmospheric Chemistry and Physics Discussions*, 5, 7647-7768, doi:10.1680-7375/acpd/2005-7645-7647, 2005.
- Zahn, A., C.A.M. Brenninkmeijer, P.J. Crutzen, D.D. Parrish, D.T. Sueper, G. Heinrich, H. Güsten, H. Fischer, M. Hermann, and J. Heintzenberg, Electrical discharge source for tropospheric "ozone-rich transients", *Journal of Geophysical Research*, 107, doi:10.1029/2002JD002345, 2002.
- Zamora, R.J., E.G. Dutton, M. Trainer, S.A. McKeen, J.M. Wilczak, and Y.-T. Hou, The accuracy of solar irradiance calculations used in mesoscale numerical weather prediction, *Monthly Weather*

*Review*, 133, 783-792, doi:710.1175/MWR2886.1171, 2005.

- Zamora, R.J., S. Solomon, E.G. Dutton, J.W. Bao, M. Trainer, R.W. Portmann, A.B. White, D.W. Nelson, and R.T. McNider, Comparing MM5 radiative fluxes with observations gathered during the 1995 and 1999 Nashville southern oxidants studies, *Journal of Geophysical Research*, 108, doi:10.1029/2002JD002122, 2003.
- Zanis, P., T. Trickl, A. Stohl, H. Wernli, O. Cooper, C. Zerefos, H. Gaeggeler, C. Schnabel, L. Tobler, P.W. Kubik, A. Priller, H.E. Scheel, H.J. Kanter, P. Cristofanelli, C. Forster, P. James, E. Gerasopoulos, A. Delcloo, A. Papayannis, and H. Claude, Forecast, observation and modelling of a deep stratospheric intrusion event over Europe, *Atmospheric Chemistry and Physics*, 3, 763-777, 2003.
- Zhang, X., F.W. Zwiers, G.C. Hegerl, F.H. Lambert, N.P. Gillett, S. Solomon, P.A. Stott, and T. Nozawa, Detection of human influence on twentieth-century precipitation trends, *Nature*, 448, 461-465, doi:410.1038/nature06025, 2007.
- Zobrist, B., C. Marcolli, T. Koop, B.P. Luo, D.M. Murphy, U. Lohmann, A.A. Zardini, U.K. Krieger, T. Corti, D.J. Cziczo, S. Fueglistaler, P.K. Hudson, D.S. Thomson, and T. Peter, Oxalic acid as a heterogeneous ice nucleus in the upper troposphere and its indirect aerosol effect, *Atmospheric Chemistry and Physics*, 6, 3115-3129, 2006.
- Zuidema, P., B. Baker, Y. Han, J.M. Intrieri, J.R. Key, P. Lawson, S.Y. Matrosov, M. Shupe, R.S. Stone, and T. Uttal, An Arctic springtime mixed-phase cloudy boundary layer observed during SHEBA, *Journal of the Atmospheric Sciences*, 62, 160-176, doi:110.1175/JAS-3368.1171, 2005.