

Publications

- Baker, B., J-H. Bai*, C. Johnson, Z-T. Cai, Q-J. Li*, Y-F. Wang*, A. Guenther, J. Greenberg, L. Klinger*, C. Geron* and R. Rasmussen, 2005: Wet and dry season ecosystem level fluxes of isoprene and monoterpenes from a southeast Asian secondary forest and rubber tree plantation. *Atmos. Environ.*, **39**,
- Beres, J., R. Garcia, B. Boville and F. Sassi, 2005: Implementation of a gravity wave source spectrum parameterization dependent on the properties of convection in the Whole Atmosphere Community Climate Model (WACCM). *J. Geophys. Res.*, **110**, D10108, doi:10.1029/2004JD005504.
- Chandra, S.*., J. Ziemke*, X. Tie and G. Brasseur*, 2004: Elevated ozone in the troposphere over the Atlantic and Pacific oceans in the Northern Hemisphere. *Geophys. Res. Lett.*, **31**, L23102, doi:10.1029/2004GL020821.
- Chen, G.*., L. Huey, M. Trainer*, D. Nicks*, J. Corbett, T. Ryerson*, D. Parrish*, J. Neuman, J. Nowak*, D. Tanner, J. Holloway*, C. Brock*, J. Crawford*, J. Olson*, A. Sullivan, R. Weber, S. Schauffler, S. Donnelly, E. Atlas, J. Roberts*, F. Flocke, G. Hübner* and F. Fehsenfeld*, 2005: An investigation of the chemistry of ship emission plumes during ITCT 2002. *J. Geophys. Res.*, **110**, D10S90, doi:10.1029/2004JD005236.
- Del Gross, S., W. Parton, A. Mosier, E. Holland, E. Pendall, D. Schimel and D. Ojima, 2005: Modeling soil CO₂ emissions from ecosystems. *Biogeochemistry*, **73**, 71-91, doi 10.1007/s10533-004-0898-z.
- Edwards, D., L. Emmons, D. Hauglustaine*, D. Chu*, J. Gille, Y. Kaufman*, G. Petron, L. Yurganov*, L. Giglio*, M. Deeter, V. Yudin, D. Ziskin, J. Warner, J-F. Lamarque, G. Francis, S. Ho, D. Mao, J. Chen, E. Grechko* and J. Drummond, 2004: Observations of carbon monoxide and aerosols from the Terra satellite: Northern Hemisphere variability. *J. Geophys. Res.*, **109**, D24202, doi:10.1029/2004D004727.
- Emmons, L., C. Granier and G. Brasseur, 2005: Importance of chemistry for climate. In *Observed Global Climate*, ed. M Hantel, Springer, Chap. 7, Vol. **6**.
- Garrett, T., A. Heymsfield, M. McGill*, B. Ridley, D. Baumgardner, T. Bui* and C. Webster, 2004: Convective generation of cirrus near the tropopause. *J. Geophys. Res.*, **109**, D21203, doi:10.1029/2004JD004952.
- Gettelman, A., D. Kinnison, T. Dunkerton* and G. Brasseur*, 2004: Impact of monsoon circulations on the upper troposphere and lower stratosphere. *J. Geophys. Res.*, **109**, D22101, doi:10.1029/2004JD004878.
- Goering, C., T. L'Ecuyer, G. Stephens, G. Scott, J. Davis, J. Barnard* and S. Madronich, 2005: Simultaneous retrievals of column ozone and aerosol optical properties from direct and diffuse solar irradiance measurements. *J. Geophys. Res.*, **110**, D05204, doi:10.1029/2004JD005330.
- Goldman, A., A. Barbe*, V. Tyuterev*, M.-R. De Backer-Barilly*, J. Hannigan, M. Coffey, C. Rinsland* and R. Blatherwick, 2005: Identification of enhanced absorption by 16O₃ lines around 5 μm in high-resolution FTIR solar spectra. *JQSRT*, **96**, 241-250.
- Greenberg, J., A. Guenther, G. Petron, C. Wiedinmyer, O. Vega*, L. Gatti*, J. Tota* and G. Fisch*, 2004: Biogenic VOC emissions from forested Amazonian landscapes. *Global Change Biology*, **10**, 651-662.
- Gros, V.*., J. Williams*, M. Lawrence*, R. von Kuhlmann*, J. van Aardenne*, E. Atlas, A. Chuck, D. Edwards, V. Stroud and M. Krol, 2004: Tracing the origin and ages of interlaced atmospheric pollution events over the tropical Atlantic Ocean with in situ measurements, satellites, trajectories, emission inventories, and global models. *J. Geophys. Res.*, **109**, D22306, doi:10.1029/2004JD004846.
- Hanson, D., 2005: Mass accommodation of H₂SO₄ and CH₃SO₃H on water-sulfuric acid solutions from 6% to 97% RH. *J. Phys. Chem. A*, **109**, 6919-
- Hanson, D., J. Orlando, B. Noziere and E. Kosciuch, 2004: Proton transfer mass spectrometry studies of peroxy radicals. *Int. J. Mass Spectrom.*, **239**, 147-

- Holland, E., **B. Braswell, J. Sulzman** and J-F. Lamarque, 2005: Nitrogen deposition onto the United States and western Europe: Synthesis of observations and models. *Ecological Applications*, **15**, 38-57.
- Holland, E., **S. Bertman, M. Carroll**, A. Guenther, **P. Shepson, J. Sparks** and J. Lee-Taylor, 2005: U.S. nitrogen science plan focuses collaborative **Jacob, D., B. Field, Q. Li, D. Blake, J. de Gouw***, C. Warneke*, **A. Hansel, A. Wisthaler**, H. Singh* and A. Guenther, 2005: Global budget of methanol: Constraints from atmospheric observations. *J. Geophys. Res.*, **110**, D08303, doi:10.1029/2004JD005172.
- Jacquinet-Husson*, N., N. Scott*, A. Chedin*, K. Garceran*, R. Armante*, A. Chursin*, **A. Barbe, M. Birk***, L. Brown*, **C. Camy-Peyret, C. Claveau, C. Clerbaux, P. Coheur, V. Dana, L. Daumont, M. Debacker-Barilly, J. Flaud, A. Goldman, A. Hamdouni, M. Hess***, **D. Jacquemart, P. Kopke, J. Mandin**, S. Massie, S. Mikhailenko*, **V. Nemtchinov**, A. Nikitin*, D. Newnham*, **A. Perrin, V. Perevalov***, **L. Regalia-Jarlot**, A. Rublev*, F. Schreier*, I. Schult*, K. Smith*, S. Tashkun*, **J. Teffo, R. Toth***, **V. Tyuterev, J. Vander Auwera, P. Varanasi** and G. Wagner*, 2005: The 2003 edition of the **Jensen, E.*, L. Pfister*, T. Bui*, A. Weinheimer, E. Weinstock, J. Smith, J. Pittman, D. Baumgardner**, P. Lawson* and M. McGill*, 2005: Formation of a tropopause cirrus layer observed over Florida during CRYSTAL-FACE. *J. Geophys. Res.*, **110**, D03208, doi:10.1029/2004/D004671.
- Jobson, B.*, C. Berkowitz*, W. Kuster*, P. Goldan*, E. Williams*, F. Fesenfeld*, E. Apel, T. Karl, W. Lonneman* and **D. Riemer**, 2004: Hydrocarbon source signatures in Houston, Texas: Influence of the petrochemical industry. *J. Geophys. Res.*, **109**, D24305, doi:10.1029/2004JD04887.
- Karl, T. and A. Guenther, 2004: Atmospheric variability of biogenic VOCs in the surface layer measured by proton-transfer-reaction mass spectrometry. *Int. J. Mass Spectrom.*, **239**, 77-86.
- Knorr, W.*, **I. Prentice, J. House** and E. Holland, 2005: Long-term sensitivity of soil carbon turnover to warming. *Nature*, **433**, 296-301.
- Laepple, T.*, M. Schultz*, J. Lamarque, S. Madronich, R. Shetter, **B. Lefer** and **E. Atlas**, 2005: Improved albedo formulation for chemistry transport models based on satellite observations and assimilated snow data and its impact on tropospheric photochemistry. *J. Geophys. Res.*, **110**, D11308,
- Lamarque, J-F., J. Kiehl, P. Hess, W. Collins, L. Emmons, P. Ginoux*, **C. Luo** and X. Tie, 2005: Response of a coupled chemistry-climate model to changes in aerosol emissions: Global impact on the hydrological cycle and the tropospheric burdens of OH, ozone, and NOx. *Geophys. Res. Lett.*, **32**,
- Lee-Taylor, J. and **K. Redeker**, 2005: Reevaluation of global emissions from rice paddies of methyl iodide and other species. *Geophys. Res. Lett.*, **32**, L15801, doi:10.1029/2005GL022918.
- Lyjak, L. and V. Yudin, 2005: Diagnostics of the large-scale mixing properties from stratospheric analyses. *J. Geophys. Res.*, **110**, D17107,
- Matsunaga, S., S. Kato, A. Yoshino**, J. Greenberg, **Y. Kaji** and A. Guenther, 2005: Gas-aerosol partitioning of semi volatile carbonyls in polluted atmosphere in Hachioji, Tokyo. *Geophys. Res. Lett.*, **32**, L11805, doi:10.1029/2004GL021893.
- Miyazaki, Y., Y. Kondo, N. Takegawa, R. Weber, M. Koike, K. Kita, M. Fukuda, Y. Ma, A. Clarke, V. Kapustin, F. Flocke, A. Weinheimer, M. Zondlo*, F. Eisele, **D. Blake** and B. Liley*, 2005: Contribution of particulate nitrate to airborne measurements of total reactive nitrogen. *J. Geophys. Res.*,
- Müller, R., S. Tilmes, **P. Konopka, J.-U. Grooss** and H.-J. Jost*, 2005: Impact of mixing and chemical change on ozone-tracer relations in the polar vortex. *Atmos. Chem. Phys. Discuss.*, **5**, 5841-5874.
- Neuman, J.*, D. Parrish*, T. Ryerson*, C. Brock*, C. Wiedinmyer, G. Frost*, J. Holloway* and F. Fehsenfeld*, 2004: Nitric acid loss rates measured in power plant plumes. *J. Geophys. Res.*, **109**, D23304, doi:10.1029/2004JD005092.

- Nevison, C., D. Kinnison and **R. Weiss**, 2004: Stratospheric influences on the tropospheric seasonal cycles of nitrous oxide and chlorofluorocarbons. *Geophys. Res. Lett.*, **31**, L20103, doi:10.1029/2004GL020398.
- Nevison, C., R. Keeling*, R. Weiss*, **B. Popp**, **X. Jin**, P. Fraser*, L. Porter* and P. Hess, 2005: Southern ocean ventilation inferred from seasonal cycles of atmospheric N₂O and O₂/N₂ at Cape Grim, Tasmania. *Tellus*, **57B**, 218-229.
- Orlando, J., **C. Piety**, **J. Nicovich**, **M. McKee** and **P. Wine**, 2005: Rates and mechanisms for the reactions of chlorine atoms with iodoethane and 2-iodopropane. *J. Phys. Chem. A*, **109**, 6659-6675.
- Orlando, J., G. Tyndall, **E. Betterton**, J. Lowry* and S. Stegall*, 2005: Atmospheric chemistry of hydrazoic acid (HN₃): UV absorption spectrum, HO• reaction rate, and reactions of the •N₃ radical. *Environ. Sci. Technol.*, **39**, 1632-1640.
- Pan, L., W. Randel, B. Gary*, M. Mahoney* and E. Hintsa*, 2004: Definitions and sharpness of the extratropical tropopause: A trace gas perspective. *J. Geophys. Res.*, **109**, D23103, doi:10.1029/2004JD004982.
- Park, R., D. Jacob, P. Palmer, A. Clarke, R. Weber**, M. Zondlo, F. Eisele, **A. Bandy**, **D. Thornton**, G. Sachse* and **T. Bond**, 2005: Export efficiency of black carbon aerosol in continental outflow: Global implications. *J. Geophys. Res.*, **110**, D11205, doi:10.1029/2004JD005432.
- Parrish, D.*, E. Dunlea*, E. Atlas, S. Schauffler, S. Donnelly, V. Stroud, **A. Goldstein**, **D. Millet**, **M. McKay**, **D. Jaffe**, **H. Price**, P. Hess, F. Flocke and J. Roberts*, 2004: Changes in the photochemical environment of the temperate North Pacific troposphere in response to increased Asian emissions. *J. Geophys. Res.*, **109**, D23S18, doi:10.1029/2004JD004978.
- Pegoraro, E., A. Rey**, J. Greenberg, P. Harley, **J. Grace**, **Y. Malhi** and A. Guenther, 2004: Effect of drought on isoprene emission rates from leaves of *Quercus virginiana* Mill. *Atmos. Environ.*, **38**, 6149-6156.
- Petron, G., **C. Granier**, B. Khattatov, V. Yudin, J-F. Lamarque, L. Emmons, J. Gille and D. Edwards, 2004: Monthly CO surface sources inventory based on the 2000-2001 MOPITT satellite data. *Geophys. Res. Lett.*, **31**, L21107, doi:10.1029/2004GL020560.
- Pfister, G., G. Pétron, L. Emmons, J. Gille, D. Edwards, J-F. Lamarque, J-L. Attie*, C. Granier* and P. Novelli*, 2004: Evaluation of CO simulations and the analysis of the CO budget for Europe. *J. Geophys. Res.*, **109**, D19304, doi:10.1029/2004JD004691.
- Pfister, G., J. Gille, D. Ziskin, G. Francis, D. Edwards, M. Deeter and E. Abbott*, 2005: Effects of a spectral surface reflectance on measurements of backscattered solar radiation: Application to the MOPITT methane retrieval. *J. Atmos. Oceanic Technol.*, **22**, 566-574.
- Pfister, G., P. Hess, L. Emmons, J-F. Lamarque, C. Wiedinmyer, D. Edwards, G. Petron, J. Gille and G. Sachse*, 2005: Quantifying CO emissions from the 2004 Alaskan wildfires using MOPITT CO data. *Geophys. Res. Lett.*, **32**, L11809, doi:10.1029/2005GL022995.
- Quack, B.**, E. Atlas, **G. Petrick**, V. Stroud, S. Schauffler and **D. Wallace**, 2004: Oceanic bromoform sources for the tropical atmosphere. *Geophys. Res. Lett.*, **31**, L23S05, doi:10.1029/2004GL020597.
- Randel, W. and F. Wu, 2005: Kelvin wave variability near the equatorial tropopause observed in GPS radio occultation measurements. *J. Geophys. Res.*, **110**, D03102, doi:10.1029/2004JD005006.
- Randel, W., 2004: Wider connections for El Niño. *Nature*, **43**, 920-921.
- Ridley, B., **K. Pickering** and J. Dye, 2005: Comments on the parameterization of lightning-produced NO in global chemistry-transport models. *Atmos.*

- Rothman, L., D. Jacquemart, A. Barbe, D. Benner, M. Birk*, L. Brown*, M. Carleer, C. Chackerian Jr.*, K. Chance, L. Coudert, V. Dana, V. Devi, J.-M. Flaud, R. Gamache, A. Goldman, J.-M. Hartmann, K. Jucks, A. Maki*, J.-Y. Mandin, S. Massie, J. Orphal, A. Perrin, C. Rinsland*, M. Smith*, J. Tennyson, R. Tolchenov, R. Toth*, J. Vander Auwera, P. Varanasi and G. Wagner***, 2005: The HITRAN 2004 molecular spectroscopic database.
- Sassi, F., B. Boville, D. Kinnison and R. Garcia, 2005: The effects of interactive ozone chemistry on simulations of the middle atmosphere. *Geophys. Res. Lett.*, **32**, L077811, doi:10.1029/2004GL022131.
- Smith, J., K. Moore, F. Eisele, **A. Ghimire, H. Sakurai and P. McMurry**, 2005: Recent insights into the formation and chemical composition of atmospheric nanoparticles from the aerosol nucleation and realtime characterization experiment. Chap. 12 in *Nanotechnology and the Environment – Special American Chemical Society publication on Symp. Series* **890**, 102-107, B. Karn, T. Masciangioli, W. Zhang, V. Colvin and P. Alivisatos, eds.
- Stroud, C., P. Makar*, T. Karl, A. Guenther, C. Geron*, A. Turnipseed, E. Nemitz, **B. Baker**, M. Potosnak and **J. Fuentes**, 2005: Role of canopy-scale photochemistry in modifying biogenic-atmosphere exchange of reactive terpene species: Results from the CELTIC field study. *J. Geophys. Res.*, **110**,
- Tie, X., S. Madronich, S. Walters, D. Edwards, P. Ginoux*, N. Mahowald, **R. Zhang**, C. Lou* and G. Brasseur*, 2005: Assessment of the global impact of aerosols on tropospheric oxidants. *J. Geophys. Res.*, **110**, D03204, doi:10.1029/2004JD005359.
- Turquety, S., J. Hadji-Lazaro*, C. Clerbaux, D. Hauglustaine*, S. Clough*, V. Cassé*, P. Schlüssel* and G. Mégie***, 2004: Operational trace gas retrieval algorithm for the Infrared Atmospheric Sounding Interferometer. *J. Geophys. Res.*, **109**, D21301, doi:10.1029/2004JD004821.
- Wiedinmyer, C., A. Guenther, P. Harley, **N. Hewitt**, C. Geron*, **P. Artaxo**, R. Steinbrecher* and **R. Rasmussen**, 2004: Global organic emissions from vegetation. Chapter in *Emissions of Atmospheric Trace Compounds*, 115-170, C. Granier, P. Artaxo and C. Reeves, eds., Kluwer Academic Publishers, the
- Williams, J.*., **R. Holzinger**, V. Gros*, X. Xu*, E. Atlas and D. Wallace*, 2004: Measurements of organic species in air and seawater from the tropical Atlantic. *Geophys. Res. Lett.*, **31**, L23S06, doi:10.1029/2004GL020012.
- Yudin, V., G. Pétron, J-F. Lamarque, B. Khattatov, P. Hess, L. Lyjak, J. Gille, D. Edwards, M. Deeter and L. Emmons, 2004: Assimilation of the 2000-2001 CO MOPITT retrievals with optimized surface emission. *Geophys. Res. Lett.*, **31**, L20105, doi:10.1029/2004GL021037.