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### Academic Degrees

01/1997 Dr. rer nat (Ph.D.) Physics, *magna cum laude*, University of Bremen, Germany  
11/1991 Diplom Physicist, Johannes Gutenberg-University Mainz, Germany

### University Education

07/1992 – 12/1996 Graduate work at the Institute of Remote Sensing (J.P. Burrows, supervisor),  
University of Bremen, Germany  
10/1984 – 11/1991 Studies of Physics, Johannes Gutenberg University Mainz, Germany  
09/1987 – 05/1988 Visiting graduate student at the University of Washington, WA, USA

### Academic Career

05/2011 – current Research Scientist at the NASA Jet Propulsion Laboratory  
02/1998 – 05/2011 Physicist at the Harvard-Smithsonian Center for Astrophysics (CfA)  
10/1999 – 03/2001 Eco Frontier Fellow of the Japanese Ministry for the Environment at the  
National Institute for Environmental Studies (NIES), Tsukuba, Japan  
01/1997 – 02/1998 Research associate at the Institute of Remote Sensing, University of Bremen,  
Germany  
11/1991 – 03/1992 Research associate at the Institute of Theoretical Elementary Particle Physics,  
Johannes Gutenberg-University Mainz, Germany

### Awards and Fellowships

06/2016 NASA Group Achievement Award OCO-2 Chlorophyll Fluorescence Imaging  
Spectrometer (CFIS) Team  
06/2016 NASA Group Achievement Award *Carbon in Arctic Reservoirs Vulnerability  
Experiment (CARVE) Implementation Team*  
09/2014 NASA Group Achievement Award *CARVE Team*  
08/2012 JPL Bonus Team Award for outstanding contribution to the Instrument Software  
and Science Data Systems Section 388  
09/2008 NASA Group Achievement Award *Arctic Research of the Composition of the  
Troposphere from Aircraft and Satellites (ARCTAS) Team*  
05/2008 American Geophysical Union Editor's Citation for Excellence in Refereeing,  
Journal of Geophysical Research  
05/2005 NASA Group Achievement Award, *Aura Project*  
03/2005 NASA Goddard Space Flight Center Group Achievement Award, *Aura Team*  
08/2003 Smithsonian Institution *Award in official recognition of special achievement  
reflecting a high standard of accomplishment*

- 10/1999 – 03/2001 Eco Frontier Fellowship of the Japanese Ministry for the Environment for research at the National Institute for Environmental Studies, Tsukuba, Japan
- 09/1989 – 05/1988 Scholarship of the German Academic Exchange Service (DAAD) for graduate studies at the University of Washington, Seattle, WA, USA

### **Membership in Professional Societies**

- ◆ American Geophysical Union
- ◆ American Association for the Advancement of Science

### **Membership in Science and Instrument Teams, Past and Present**

- ◆ Arctic Research of the Composition of the Troposphere from Aircraft and Satellites (ARCTAS)
- ◆ Aura Science Team
- ◆ Carbon in Arctic Reservoirs Vulnerability Experiment (CARVE)
- ◆ Geostationary Coastal and Air Pollution Events (GEO-CAPE)
- ◆ Geostationary Environmental Monitoring Spectrometer (GEMS)
- ◆ Improved Limb Atmospheric Sounder (ILAS) II
- ◆ Miniature Earth Observing Satellite (MEOS)
- ◆ Northern Hemispheric Sentinel (NHemiS) for the Canadian PCW
- ◆ Orbiting Carbon Observatory 3 (OCO-3)
- ◆ Ozone Monitoring Instrument (OMI)
- ◆ Po Plain Experiment (POPLEX) Field Campaign
- ◆ Process Exploration through Measurements of Infrared and millimetre-wave Emitted Radiation (PREMIER); ESA Core Explorer Mission Proposal
- ◆ Satellite Occultation Sensors Science Team (SOSST)
- ◆ Ultraviolet Visible and near-infrared Atmospheric Sounder (UVAS)

### **Professional Activities**

- ◆ International lead for Volatile Organic Compound retrievals from GEMS
- ◆ Past Member of the Computation Facility Science Advisory Committee at the CfA
- ◆ Past Member of the SAO Council at the CfA
- ◆ Reviewed funding proposals for NASA and ESA
- ◆ Served on NASA Review Panels
- ◆ Reviewed manuscripts for various scientific journals
  - Geophysical Research Letters
  - Journal of Geophysical Research
  - Atmospheric Chemistry and Physics
  - Atmospheric Measurement Techniques
  - Journal of Applied Meteorology and Climatology
  - Journal of Selected Topics in Earth Observations and Remote Sensing
  - Physical Research Letters

## Research Activities

### OCO-3

- ◆ Development of pointing strategies for CO<sub>2</sub> observations from the International Space Station

### Geo-CAPE/PanFTS

- ◆ Sensitivity studies for UV/Visible absorbing trace gases from geo-stationary instrumentation

### GeoTASO

- ◆ Retrieval of ozone profiles and air-quality trace species from airborne UV/Visible spectrometer

### Data Analysis

- ◆ Development of a software tool for mapping of irregular polygon remote sensing data to regular grids using tessellation

### CARVE

- ◆ Development of retrieval algorithm for CO<sub>2</sub>, CH<sub>4</sub>, CO, H<sub>2</sub>O, and Chlorophyll Fluorescence from airborne Fourier Transform Spectrometer (FTS) observations
- ◆ FTS instrument calibration, characterization, and operations mode definition
- ◆ FTS Level-0 to Level-2 data processing

### OMI

- ◆ Development of a BrO cloud slicing approach for the detection of tropospheric BrO from satellite
- ◆ Development and maintenance of operational trace gas retrieval algorithms for BrO, H<sub>2</sub>CO, OClO
- ◆ Development of science algorithms for the retrieval of NO<sub>2</sub>, SO<sub>2</sub>, C<sub>2</sub>H<sub>2</sub>O<sub>2</sub>, H<sub>2</sub>O, IO, and clouds
- ◆ Development of ground-pixel corner computation algorithm
- ◆ Development of a "smoke index", combining H<sub>2</sub>CO and absorbing aerosol index observations
- ◆ Science studies related to air quality measurements
- ◆ Compilation of albedo, aerosol, and molecular profile climatologies for air mass factor calculations
- ◆ Air mass factor /averaging kernel calculations for BrO, H<sub>2</sub>CO, and C<sub>2</sub>H<sub>2</sub>O<sub>2</sub>
- ◆ Quality assurance and product support for the operational and science data products

### GOME

- ◆ Development and implementation of a semi-infinite cloud-top reflection/transmission model for the radiative transfer model GOMETRAN (Ph.D. work)
- ◆ Development and implementation of a fully Mie-scattering cloud model for GOMETRAN (Ph.D. work)
- ◆ Development of a cloud retrieval algorithm for GOME using a combination of reflectance thresholds and oxygen A band measurements for the detection of cloud fraction, cloud-top pressure, and cloud optical thickness
- ◆ Science studies related to cloud information retrieved from GOME, including their effect on trace gas retrievals
- ◆ Derivation of a global minimum-reflectance data base of GOME polarization measurements for use in cloud detection.

### SCIAMACHY, SAGE III

- ◆ Retrieval of NO<sub>2</sub> and O<sub>3</sub> vertical profiles from limb-scatter measurements
- ◆ Retrieval of NO<sub>x</sub>/NO<sub>y</sub> from SAGE III occultation and limb-scatter measurements

### ILAS/ILAS-II

- ◆ Development of a polar stratospheric cloud detection algorithm

#### **GEMS**

- ◆ International Science Team lead for VOC retrievals

#### **MEOS/PCW**

- ◆ Sensitivity studies for UV/Vis/near-IR retrievals of atmospheric trace gases, including CO<sub>2</sub> and CH<sub>4</sub>, for instrument characterization

#### **Communication Skills**

- ◆ Good listener; open-minded, respectful, and flexible; patient facilitator and mediator, focused on problem resolution; excellent communicator, both verbal and written; good public orator; confident

#### **Organizational and Managerial Skills**

- ◆ Excellent interpersonal skills and problem solving abilities; project management of research contracts (ESA, DLR, NASA); setting and adherence to project delivery deadlines; supervision of team members; strong ability to effectively communicate with different teams (e.g., scientists, engineers)

#### **Job-Related Skills and Experience**

##### **Spectral fitting**

- ◆ Created and maintains generalized non-linear least squares spectral fitting algorithms for atmospheric trace gas retrievals from the OMPS, OMI, GOME, GOME-2, and SCIAMACHY satellite sensors and the GeoTASO aircraft instrument
- ◆ Airborne FTS retrievals of near-IR greenhouse-gas constituents and chlorophyll fluorescence

##### **Radiative transfer**

- ◆ Participated in the development of finite-differencing (GOMETRAN) and discrete-ordinate (LIDORT) based radiative transfer codes
- ◆ Worked extensively with the GOMETRAN, DISORT, and LIDORT models for the computation of radiances in cloudy and non-cloudy atmospheres, for inclusion in cloud detection models and air mass factor formulations

##### **Statistical methods**

- ◆ Extensive experience with linear and non-linear least squares minimization codes
- ◆ Working knowledge of singular value decomposition and principal component analysis

##### **Weather forecasting**

- ◆ Created a port of the Weather Research&Forecasting (WRF) Model to MS Windows
- ◆ Basic familiarity with running WRF simulations

##### **Software development and data visualization**

- ◆ 24 years experience in scientific software development, including operational data processing algorithms for OMI
- ◆ Extensive experience with Fortran77/90/95 (Intel/fort, PGI/pgf95, Sun/f95, Cray/f90, GNU/g95)
- ◆ Extensive use of HDF4/5, HDF-EOS4/5, and netCDF4 libraries in operational software development
- ◆ Extensive experience with IDL, MATLAB, and gnuplot for data visualization
- ◆ Extensive experience with Unix/Linux shell-scripting (bash, ksh, sh, tcsh) and the GNU Make environment, for the management of large software projects as well as the development of automated data processing and archiving systems
- ◆ Extensive experience with Python on Linux and OS/X

- ◆ Working familiarity with C compilers (gcc, Intel/icc, PGI/pgcc, Sun/cc) and debugging software

#### **Hardware platforms**

- ◆ Intel/Linux (system administration, software development, data visualization)
- ◆ AMD/Linux Rocks cluster, Sun Solaris, IBM RISC, Cray (software development)
- ◆ Microsoft Windows PC (MS Word, PowerPoint, software porting under Cygwin)
- ◆ OS/X

#### **Relevant Web Sites**

- ◆ <https://science.jpl.nasa.gov/people/Kurosu>

#### **Language Proficiencies**

- ◆ German (mother tongue)
- ◆ English (fluent)
- ◆ Japanese (basic knowledge)
- ◆ Spanish (basic knowledge)

#### **Invited Talks**

##### **Conferences**

- ◆ Global Monitoring of Tropospheric Pollution from Geostationary Orbit, T.P. Kurosu and K. Chance, International Radiation Symposium, Foz do Iguacu, Brazil, 3-8 August 2008
- ◆ Global and Seasonal Distributions of CHOCHO and HCHO Observed by the Ozone Monitoring Instrument on EOS Aura, T.P. Kurosu, T.-M. Fu, R. Volkamer, D.B. Millet, and K. Chance, American Geophysical Union, Fall Meeting 2006, San Francisco, Abstract #A42A-01

##### **Seminars** (most on trace gas retrievals from the Ozone Monitoring Instrument)

- ◆ Karlsruhe Institute of Technology/Institute of Meteorology and Climate Research (on tessellation)
- ◆ Department of Atmospheric and Oceanic Sciences, UCLA (USA) 10/2013
- ◆ Department of Chemistry and Biochemistry, University of Colorado, Boulder, CO (USA), 02/2010
- ◆ Jet Propulsion Laboratory, Pasadena, CA (USA), 06/2007
- ◆ Department of Earth Sciences, University of Waterloo (Canada), 03/2007
- ◆ Atmospheric Physics Noble Seminar Series, University of Toronto (Canada), 03/2007
- ◆ Department of Information and Computer Sciences, Nara Women's University (Japan), 01/2007
- ◆ National Institute of Information and Communications Technology (Japan), 12/2006
- ◆ The Global Change Seminars, University of Edinburgh (U.K.), 10/2006
- ◆ Institute of Environmental Physics, University of Bremen (Germany), 06/2006
- ◆ Jet Propulsion Laboratory, Pasadena, CA (USA), 07/2005

## Scientific Publications

### Books

- ◆ Die Modellierung des Strahlungstransports in Wolken für atmosphärische Fernerkundung im ultravioletten und sichtbaren Spektralbereich, T. Kurosu, PhD Thesis (1997), Mainz Verlag Aachen, ISBN 3-89653-185-9 (in German; “*Cloud Radiative Transfer Modeling for Atmospheric Remote Sensing in the Ultraviolet and Visible Spectral Region*”)

### Papers currently under review

- ◆ OMI total bromine monoxide (OMBRO) data product: Algorithm, retrieval, and measurement comparison, R.M. Suleiman, K. Chance, X. Liu, G. Gonzalez Abad, **T.P. Kurosu**, F. Hendrik, and N. Theys, *Atmos. Meas. Tech. Discuss.*, <https://doi.org/10.5194/amt-2018-1>, 2018

### Papers in refereed journals 2010-2018

- ◆ Link between Arctic tropospheric bromine explosion and sea salt aerosols from blowing snow investigated using NASA's Aura Ozone Monitoring Instrument (OMI) BrO data and GEOS-5 model, S. Choi, J. Joiner, N. Theyus, R.J. Salawitch, P.A. Wales, T.P. Canty, K. Chance, R. Suleiman, S.P. Palm, R.I. Cullather, A.S. Darmenov, A. Da Silva, **T.P. Kurosu**, F. Hendrick, and M. Van Roozendaal, *J. Geophys. Res.*, accepted for publication, 2018
- ◆ Spatial variability in tropospheric peroxyacetyl nitrate in the tropics from infrared satellite observations in 2005 and 2006, V.H. Payne, E.V. Fischer, J.R. Worden, Z. Jiang, L. Zhu, **T.P. Kurosu**, and S.S. Kulawik, *Atmos. Chem. Phys.*, 6341–6351, 2017
- ◆ OMI air-quality monitoring of the Middle East, M. Barkley, G. Gonzalez Abad, **T.P. Kurosu**, R. Spurr, S. Torbatian, and C. Lerot, *Atmos. Chem. Phys.*, 17, 4687-4709, 2017
- ◆ Sensitivity of formaldehyde (HCHO) column measurements from a geostationary satellite to aerosol temporal variation in East Asia, H.-A. Kwon, R.J. Park, J.I. Jeong, S. Lee, G. Gonzalez Abad, **T.P. Kurosu**, P.I. Palmer, and K. Chance, *Atmos. Chem. Phys.*, 17, 4673-4686, 2017
- ◆ Development and characterisation of a state-of-the-art GOME-2 formaldehyde air-mass factor algorithm. W. Hewson, M.P. Barkley, G. Gonzalez Abad, H. Bösch, T. Kurosu, R. Spurr, and L.G. Tilstra, *Atmos. Meas. Tech.*, 8(10), 4055-4074, 2015
- ◆ Remote-sensing constraints on South America fire traits by Bayesian fusion of atmospheric and surface data. A. A. Bloom, J. Worden, J. Zhe, H. Worden, T. Kurosu, C. Frankenberg, and D. Schimel, *Geophys. Res. Lett.*, 42(4), 1268-1274, 2015
- ◆ Updated Smithsonian Astrophysical Observatory Ozone Monitoring Instrument (SAO OMI) formaldehyde retrieval. G. González Abad, X. Liu, K. Chance, H. Wang, T.P. Kurosu, and R. Suleiman, *Atmos. Meas. Tech.*, 8, 19-32, 2015
- ◆ Glyoxal retrieval from the Ozone Monitoring Instrument C. Chan Miller, G. Gonzalez Abad, H. Wang, X. Liu, **T. Kurosu**, D.J. Jacob, and K. Chance, *Atmos. Meas. Tech.*, 7, 3891-3907, 2014
- ◆ Anthropogenic emissions in Nigeria and implications for atmospheric ozone pollution: A view from space, E.A. Marais, D.J. Jacob, K. Wecht, C. Lerot, L. Zhang, K. Yu, **T.P. Kurosu**, K. Chance, and B. Sauvage, *Atmos. Env.*, 99, 32–40, 2014

- ◆ Improved model of isoprene emissions in Africa using Ozone Monitoring Instrument (OMI) satellite observations of formaldehyde: implications for oxidants and particulate matter, E.A. Marais, D.J. Jacob, A. Guenther, K. Chance, **T.P. Kurosu**, J.G. Murphy, C.E. Reeves, and H.O.T. Pye, *Atmos. Chem. Phys.*, 14, 7693-7703, 2014
- ◆ Top-down isoprene emissions over tropical South America inferred from SCIAMACHY and OMI formaldehyde columns, Barkley, Michael P. ; De Smedt, Isabelle ; Van Roozendael, Michel ; **Kurosu, Thomas P.** ; Chance, Kelly ; Arneth, Almut ; Hagberg, Daniel ; Guenther, Alex ; Paulot, Fabien ; Marais, Eloise ; Mao, Jingqiu, *J. Geophys. Res.*, 118 (12), 6849-6868, DOI: 10.1002/jgrd.50552, 2013
- ◆ Characteristics of tropospheric ozone depletion events in the Arctic spring: analysis of the ARCTAS, ARCPAC, and ARCIONS measurements and satellite BrO observations Koo, J. -H. ; Wang, Y. ; **Kurosu, T. P.** ; Chance, K. ; Rozanov, A. ; Richter, A. ; Oltmans, S. J. ; Thompson, A. M. ; Hair, J. W. ; Fenn, M. A. ; Weinheimer, A. J. ; Ryerson, T. B. ; Solberg, S. ; Huey, L. G. ; Liao, J. ; Dibb, J. E. ; Neuman, J. A. ; Nowak, J. B. ; Pierce, R. B. ; Natarajan, M. ; Al-Saadi, J., *Atmospheric Chemistry and Physics*, 12(20), 9909-9922, DOI: 10.5194/acp-12-9909-2012, 2012
- ◆ The formaldehyde budget as seen by a global-scale multi-constraint and multi-species inversion system, Fortems-Cheiney, A. ; Chevallier, F. ; Pison, I. ; Bousquet, P. ; Saunio, M. ; Szopa, S. ; Cressot, C. ; **Kurosu, T. P.** ; Chance, K. ; Fried, A., *Atmospheric Chemistry and Physics*, 12(15), 6699-6721, DOI: 10.5194/acp-12-6699-2012, 2012
- ◆ Assessing sources of uncertainty in formaldehyde air mass factors over tropical South America: Implications for top-down isoprene emission estimates, Barkley, Michael P. ; **Kurosu, Thomas P.** ; Chance, Kelly ; de Smedt, Isabelle ; van Roozendael, Michel ; Arneth, Almut ; Hagberg, Daniel ; Guenther, Alex, *Journal of Geophysical Research: Atmospheres*, 117(D13), CitelD D13304, DOI: 10.1029/2011JD016827, 2012
- ◆ Isoprene emissions in Africa inferred from OMI observations of formaldehyde columns, Marais, E. A. ; Jacob, D. J. ; **Kurosu, T. P.** ; Chance, K. ; Murphy, J. G. ; Reeves, C. ; Mills, G. ; Casadio, S. ; Millet, D. B. ; Barkley, M. P. ; Paulot, F. ; Mao, J., *Atmospheric Chemistry and Physics*, 12(14), 6219-6235, DOI: 10.5194/acp-12-6219-2012, 2012
- ◆ Characterization of soluble bromide measurements and a case study of BrO observations during ARCTAS, Liao, J. ; Huey, L. G. ; Scheuer, E. ; Dibb, J. E. ; Stickel, R. E. ; Tanner, D. J. ; Neuman, J. A. ; Nowak, J. B. ; Choi, S. ; Wang, Y. ; Salawitch, R. J. ; Canty, T. ; Chance, K. ; **Kurosu, T.** ; Suleiman, R. ; Weinheimer, A. J. ; Shetter, R. E. ; Fried, A. ; Brune, W. ; Anderson, B. ; Zhang, X. ; Chen, G. ; Crawford, J. ; Hecobian, A. ; Ingall, E. D., *Atmospheric Chemistry and Physics*, 12(3), 1327-1338, DOI: 10.5194/acp-12-1327-2012, 2012
- ◆ Analysis of satellite-derived Arctic tropospheric BrO columns in conjunction with aircraft measurements during ARCTAS and ARCPAC, Choi, S. ; Wang, Y. ; Salawitch, R. J. ; Canty, T. ; Joiner, J. ; Zeng, T. ; **Kurosu, T. P.** ; Chance, K. ; Richter, A. ; Huey, L. G. ; Liao, J. ; Neuman, J. A. ; Nowak, J. B. ; Dibb, J. E. ; Weinheimer, A. J. ; Diskin, G. ; Ryerson, T. B. ; da Silva, A. ; Curry, J. ; Kinnison, D. ; Tilmes, S. ; Levelt, P. F., *Atmospheric Chemistry and Physics*, 12(3), 1255-1285, DOI: 10.5194/acp-12-1255-2012, 2012
- ◆ Mulch-spectral sensitivity studies for the retrieval of tropospheric and lowermost tropospheric ozone from simulated clear-sky GEO-CAPE measurements, Natraj, Vijay ; Liu, Xiong ; Kulawik, Susan ; Chance, Kelly ; Chatfield, Robert ; Edwards, David P. ; Eldering, Annmarie ; Francis, Gene ; **Kurosu, Thomas** ; Pickering, Kenneth ; Spurr, Robert ; Worden, Helen, *Atmospheric Environment*, 45(39), 7151-7165, DOI: 10.1016/j.atmosenv.2011.09.014, 2011

- ◆ Retrievals of sulfur dioxide from the Global Ozone Monitoring Experiment 2 (GOME-2) using an optimal estimation approach: Algorithm and initial validation, Nowlan, C. R. ; Liu, X. ; Chance, K. ; Cai, Z. ; **Kurosu, T. P.** ; Lee, C. ; Martin, R. V., *Journal of Geophysical Research: Atmospheres*, 116(D18), CitelD D18301, DOI: 10.1029/2011JD015808, 2011
- ◆ Can a “state of the art” chemistry transport model simulate Amazonian tropospheric chemistry?, Barkley, Michael P. ; Palmer, Paul I. ; Ganzeveld, Laurens ; Arneth, Almut ; Hagberg, Daniel ; Karl, Thomas ; Guenther, Alex ; Paulot, Fabien ; Wennberg, Paul O. ; Mao, Jingqiu ; **Kurosu, Thomas P.** ; Chance, Kelly ; Müller, J. -F. ; de Smedt, Isabelle ; van Roozendael, Michel ; Chen, Dan ; Wang, Yuxuan ; Yantosca, Robert M., *Journal of Geophysical Research: Atmospheres*, 116(D16), CitelD D16302, DOI: 10.1029/2011JD015893, 2011
- ◆ The unique OMI HCHO/NO<sub>2</sub> feature during the 2008 Beijing Olympics: Implications for ozone production sensitivity, Witte, J. C. ; Duncan, B. N. ; Douglass, A. R. ; **Kurosu, T. P.** ; Chance, K. ; Retscher, C., *Atmospheric Environment*, Volume 45, Issue 18, p. 3103-3111, DOI: 10.1016/j.atmosenv.2011.03.015, 2011
- ◆ Formaldehyde columns from the Ozone Monitoring Instrument: Urban versus background levels and evaluation using aircraft data and a global model, Boeke, Nicholas L. ; Marshall, Julian D. ; Alvarez, Sergio ; Chance, Kelly V. ; Fried, Alan ; **Kurosu, Thomas P.** ; Rappenglück, Bernhard ; Richter, Dirk ; Walega, James ; Weibring, Petter ; Millet, Dylan B., *Journal of Geophysical Research: Atmospheres*, 116(D5), CitelD D05303, DOI: 10.1029/2010JD014870, 2011
- ◆ Application of satellite observations for timely updates to global anthropogenic NO<sub>x</sub> emission inventories, Lamsal, L. N. ; Martin, R. V. ; Padmanabhan, A. ; van Donkelaar, A. ; Zhang, Q. ; Sioris, C. E. ; Chance, K. ; **Kurosu, T. P.** ; Newchurch, M. J., *Geophysical Research Letters*, 38(5), CitelD L05810, DOI: 10.1029/2010GL046476, 2011
- ◆ Global satellite analysis of the relation between aerosols and short-lived trace gases, Veeffkind, J. P. ; Boersma, K. F. ; Wang, J. ; **Kurosu, T. P.** ; Krotkov, N. ; Chance, K. ; Levelt, P. F., *Atmospheric Chemistry and Physics*, 11(3), 255-1267, DOI: 10.5194/acp-11-1255-2011, 2011
- ◆ A New Interpretation of Total Column BrO during Arctic Spring, R.J. Salawitch, T. Canty, **T. Kurosu**, and 38 additional co-authors, *Frontier Article, Geophys. Res. Let* 37, doi:10.1029/2010GL043798, 2010
- ◆ Estimating European volatile organic compound emissions using satellite observations of formaldehyde from the Ozone Monitoring Instrument, G. Curci, P.I. Palmer, **T.P. Kurosu**, K. Chance, and G. Visconti, *Atmos. Chem. Phys.*, acp-2010-516, 2010
- ◆ Ozone profile retrievals from the Ozone Monitoring Instrument, X. Liu, P.K. Bhartia, K. Chance, R.J.D. Spurr, and **T.P. Kurosu**, *Atmos. Chem. Phys.* 10, 2521-2537, 2010
- ◆ Validation of Ozone Monitoring Instrument (OMI) ozone profiles and stratospheric ozone columns with Microwave Limb Sounder (MLS) measurements, X. Liu, P.K. Bhartia, K. Chance, L. Froidevaux, R.J.D. Spurr, and **T.P. Kurosu**, *Atmos. Chem. Phys. Discuss.* 9, 24,913-24,943, 2009

#### Papers in refereed journals 2000-2009

- ◆ Net ecosystem fluxes of isoprene over tropical South America inferred from Global Ozone Monitoring Experiment (GOME) observations of HCHO columns, M.P. Barkley, P.I. Palmer, U. Kuhn, J. Kesselmeier, K. Chance, **T.P. Kurosu**, R.V. Martin, D. Helmig, and A. Guenther, *J. Geophys. Res.* 113 (D20) D20304, 2008



- ◆ Spatial distribution of isoprene emissions from North America derived from formaldehyde column measurements by the OMI satellite sensor, D.B. Millet, D.J. Jacob, K.F. Boersma, T.-M. Fu, **T.P. Kurosu**, K. Chance, C.L. Heald, and A. Guenther, *J. Geophys. Res.* 113 (D2) D02307, 2008
- ◆ Impact of using different ozone cross sections on ozone profile retrievals from Global Ozone Monitoring Experiment (GOME) ultraviolet measurements, X. Liu, K. Chance, C.E. Sioris, and **T.P. Kurosu**, *Atmos. Chem. Phys.* 7, 3571-3578, 2007
- ◆ Interpreting satellite column observations of formaldehyde over tropical South America, P.I. Palmer, P.I., M.P. Barkley, **T.P. Kurosu**, A.C. Lewis, J.E. Saxton, K. Chance, L.V. Gatti, *Phil. Trans. R. Soc. A.*, 365 (1856), 2007
- ◆ First observations of iodine oxide from space, A. Saiz-Lopez, K. Chance, X. Liu, **T.P. Kurosu**, and S.P. Sander, *Geophys. Res. Lett.* 34 (12) L12812, 2007
- ◆ Improved ozone profile retrievals from GOME data with degradation correction in reflectance, X. Liu, K. Chance, and **T.P. Kurosu**, *Atmos. Chem. Phys.* 7, 1575-1583, 2007
- ◆ Intercomparison of GOME, ozonesonde, and SAGE II measurements of ozone: Demonstration of the need to homogenize available ozonesonde data sets, X. Liu, K. Chance, C.E. Sioris, **T.P. Kurosu**, and M.J. Newchurch, *J. Geophys. Res.* 111 (D14) D14305, doi:10.1029/2005JD006718, 2006
- ◆ Latitudinal and vertical distribution of bromine monoxide in the lower stratosphere from Scanning Imaging Absorption Spectrometer for Atmospheric Chartography limb scattering measurements, C.E. Sioris, L.J. Kovalenko, C.A. McLinden, R.J. Salawitch, M. van Roozendael, F. Goutail, M. Dorf, K. Pfeilsticker, K. Chance, C. von Savigny, X. Liu, **T.P. Kurosu**, J.-P. Pommereau, H. Bösch, and J. Frerick, *J. Geophys. Res.* 111 (D14), D14301, doi:10.1029/2005JD006479, 2006
- ◆ Quantifying the seasonal and interannual variability of North American isoprene emissions using satellite observations of the formaldehyde column, P.I. Palmer, D.S. Abbot, T.-M. Fu, D.J. Jacob, K. Chance, **T.P. Kurosu**, A. Guenther, C. Wiedinmyer, J.C. Stanton, M.J. Pilling, S.N. Pressley, B. Lamb, and A.L. Sumner, *J. Geophys. Res.* 111, D12315, doi:10.1029/2005JD006689, 2006.
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