CURRICULUM VITAE

Gabriele Pfister

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EDUCATION

Oct. 1988 - Apr. 1997	**Studies in Meteorology and Geophysics** Karl-Franzens University Graz, Austria
Apr. 1997	**Diploma degree** (summa cum laude) Thesis: *"Radiative Transfer through the Atmosphere in the UV"*
Apr. 1997 – Dec. 2000	**Doctoral Studies in Meteorology and Geophysics** Karl-Franzens University Graz, Austria
Dec. 2000	**Ph.D. in Meteorology and Geophysics** (summa cum laude) Thesis*:"Atmospheric Radiative Transfer in the UV: Special Emphasis on the Photolysis Frequencies J(NO_2) and J(O^1D)"*

PROFESSIONAL EXPERIENCE

February 2020-present	**Acting Director**, *Atmospheric Chemistry Observations and Modeling Laboratory, National Center for Atmospheric Research*
May 2018-present	**Deputy Director**, *Atmospheric Chemistry Observations and Modeling Laboratory, National Center for Atmospheric Research*
May 2014-present	**Scientist III**, *National Center for Atmospheric Research*
May 2010-April 2014	**Scientist II**, *National Center for Atmospheric Research*
May 2007-April 2010	**Scientist I**, *National Center for Atmospheric Research*
Feb 2006 - May 2007	**Project Scientist I**, *National Center for Atmospheric Research*
Aug 2004 – Feb 2006	**Advanced Study Program Postdoctoral Fellow**, *National Center for Atmospheric Research*
July 2003 –July 2004	**Erwin-Schrödinger Post-Doctoral Fellow (Austrian Science Fund)**, *National Center for Atmospheric Research*
May 2003 – June 2003	**Visiting Scientist**, *National Center for Atmospheric Research*
May 2002 - May 2003	**Erwin-Schrödinger Post-Doctoral Fellow (Austrian Science Fund)**, *National Center for Atmospheric Research*
July 2001 - May 2002	**Postdoctoral Researcher**, *National Institute of Water and Atmospheric Research, New Zealand*
Feb. 1996 - July 2001	**Research Assistant**, *Institute for Geophysics, Astrophysics, and Meteorology, University of Graz, Austria*

SCIENTIFIC/TECHNICAL ACCOMPLISHMENTS

- ***Atmospheric Radiative Transfer***
  - Impact of clouds and aerosols on the transfer of shortwave solar radiation through the atmosphere using models, radiation measurements (ground based and airborne) and cloud cameras.
- ***Satellite Retrievals***
  - Extraction of cloud information from AVHRR satellite observations.
  - Algorithm enhancement and analysis of capabilities and limitations in the retrieval of methane from MOPITT.
- ***Tropospheric Chemistry, Sources and Transport***
  - Studies of the intercontinental transport of pollution and the atmospheric CO budget
  - Sensitivity of biogenic emissions to landcover and their impact on atmospheric composition
  - Inverse modeling of wildfire emissions using MOPITT CO, data assimilation and global chemistry transport model simulations
  - Establishing a budget for summertime ozone over the U.S.
- ***Air Quality, Health and Climate***
  - Studying the role of intercontinental pollution transport and local and regional emissions on surface ozone over the Western U.S.
  - Impacts of wildfires on air quality and health
  - Regional climate simulations of future air quality and chemistry-climate interactions
  - Research on the meteorological and chemical drivers of summertime ozone pollution in Colorado
  - Lead for the ACOM/RAL U.S. Air Quality Forecasting System
- ***Field Campaign Lead, Support and Analysis***
  - Participation in and support for NASA field campaigns (ICARTT 2004, INTEX-B 2006, ARCTAS 2008, SEAC^{4}RS 2013, KORUS-AQ 2016, FIREX-AQ 2019) and accompanying data analysis.
  - Co-PI on the NSF/NCAR Front Range Photochemical Experiment (FRAPPÉ, Colorado, July-Aug 2014). Secured NSF and non-NSF funding for FRAPPÉ and played vital role in NASA DISCOVER-AQ to take place in Colorado at the same time. Lead organizers of Science Team activities.
- ***Model and Tool Development***
  - Co-Developer of the Model for OZone and Related chemical Tracers (MOZART-4)
  - Co-Developer for the Weather and Research Forecasting Model with Chemistry (WRF-Chem) and accompanying pre-processing tools.
  - Co-Developing and evaluating data assimilation capabilities (DART) for satellite trace gas retrievals in WRF-Chem.
  - Steering Committee Member and Co-Developer of the Multi-Scale Infrastructure for Chemistry and Aerosols (MUSICA)

COMMUNITY SERVICE

Institutional Service

- Supervision & Mentoring:

  NCAR Staff Supervisor: Stacy Walters (SE IV, 2009-09/2019), Rajesh Kumar (ASP Postdoc, 2013 – 2016), Sojin Lee (Postdoc, 2017-2018), Tim Frederick (SE IV, 2018-present), Bill Randel (March 2020-present), David Edwards (March 2020-present), Joe Zoetewey (March 2020-present).

  NCAR Postdoc and Student Mentoring: Rajesh Kumar (2009; 2013-2016), Anne Boynard (2010-2012), Ghobaniyi Bode (2012), John Wong (2012), Vijayakumar Nair (2013), Jerome Barre (2013-2014), Pavan Kulkarni (2014), Lisa Kaser (2016/2017), Sojin Lee (2016/2017), Maryam Abdioskouei (2017), Chi-Tsan Wang (2017-present), Maryam Golbazi (2019), Bo Wang (2019, 2020), Claudia Bernier (2019)

- Thesis Committees:

  M.S. Thesis Committee (Will Lassman, CSU; Defense 8 September 2016)

- Meetings & Seminars:

  NCAR/ASP Seminar Organizer (2005 – 2006)

  Early Career Scientist Assembly (ECSA) Organizing Committee for NCAR Junior Faculty Forum (2008-2010)

  ACD Representative at the NCAR Industry Summit (July 2013)

  ACD Seminar Organizer (2013 – 2015)

  Involvement in ACOM strategic planning for Blue Ribbon Panel (Jan/Feb 2017)

  Organizing Committee for NCAR/ASP 2016 Summer Colloquium: Recent Advances in Air Quality Analysis and Prediction

  Organizer of FRAPPÉ & DISCOVER-AQ Science Team Meetings, April 2014, May 2015 and May 2017, Boulder, CO.

  Organizer for WE-CAN/BBFLUX Science Team Meeting, Boulder, 23-25 April 2019

  Organizer for the MUSICA Kick-off meeting, 21-22 May 2019 in Boulder, CO

  Member of the Organizing Committee for the NCAR/ACOM "Fundamentals of Atmospheric Chemistry and Aerosol Modeling Workshop", 13-15 August 2018, Boulder CO

- Presentations:

  Presenter at Communicating Science & Information Partners Workshop, Boulder, April 2010

  Presenter at the NCAR NSF SVT (June 2016)

  Presentation at UCAR Meetings: Chuck Poplstein, Office of Congressman Cory Gardner, (2014); Pai-Yei Wung, U.S. EPA (2015); Jahint Singh, CEO SkyMet (November 2017); James R. Whetstone, NIST (July 2019);

- Other:

  ACD Internal Reviews for Publications and Proposals

  ASP Postdoctoral Fellowship Reviewer

  ACD Representative for NCAR Early Career Scientist Assembly (2007-2009)

  ACD Representative for ESSL Modeling Newsletter (2009)

  Science Theme Leader for NCAR/NESL Retreat (2012)

  ACD/ACOM Awards Committee (2012-present)

  Team Member of UCAR Strategic Plan Goal #1 (March-April 2014)

Member on NCAR Science Requirements Advisory Panel (SRAP) for NWSC-3 procurement (2018-2019)
Contributing to and overseeing ACOM Website Design and actively updating selected pages (WRF-Chem, FRAPPÉ, MUSICA, various meeting websites), ongoing
Member on Reclassification Committee for NCAR Project Scientist (Spring/Summer 2019)
Multi-faceted organizational tasks related to role as ACOM Deputy Director (2018-present) and ACOM Acting Director (March 2020 – present)
Member on the Hiring Committee for the MMM Lab Director (2019-2020)

Scientific Community Service

Professional Reviewer for peer-reviewed Journals (AGU and AMS Journals, Meteorologische Zeitschriften, Atmospheric Chemistry and Physics, ES&T)
Proposal Reviewer for Funding Agencies (NOAA, NASA, NSF, various European Agencies)
Science Advisor for the South Coast Air Quality Management Plan Scientific Technical Modeling Peer Review Group (2010-2012; 2014-2017; 2019-present)
Instructor at WRF-Chem Tutorials (Boulder 2010, 2011,2012,2017; Sao Paolo, Brazil 2012)
Scientific Contact and Developer for WRF-Chem (2009-present)
Member of the EPA Stratospheric Intrusions Working Group (2012-present)
Associate Editor for Elementa (Mar 2013 – present)
Review Editor for Frontiers (Nov 2013-present)
Member of Technical Advisory Panel for Front Range Oil & Gas Study (PI: J. Collett, CSU) (Nov 2013-2018)
Convener at AGU Fall Meeting, December 2015 (Session on "Air Quality Research: From Emissions to Impact", more than 100 submitted abstracts)
Member of the WRAP Regional Technical Operations Work Group (February 2017-present)
Training on WRF-Chem/CAM-Chem/Software-Visualization Tools/Data Assimilation at the International Workshop on Chemistry Climate Interaction [IWCCI], 12-15 March 2019, Indian Institute of Tropical Meteorology, Pune, India.
Conference Program Committee Chair for Meteorology and Climate-Modeling for Air Quality (MAC-MAQ) Conference, September 11-13, 2019, Davis, CA.
Head of the U.S. Tropospheric Emissions: Monitoring Pollution (TEMPO) satellite mission early adopter aerosol research group (since October 2019)
Selected as Member of the Tropospheric Ozone Assessment Report (TOAR-II) Steering Committee (term starting July 2022)
Member of International Steering Committee of the WMO/GAW and IGAC sponsored Monitoring, Analysis, and Prediction of Air Quality (MAP-AQ) Project (February 2020 – present)
Steering Committee member for the Workshop on Earth Systems Predictability Research and Development organized by the National Academies of Sciences, Engineering, and Medicine (May-June 2020)

Education & Outreach

Presenter at NSF Communicating Science & Information Partners Workshop (April 2010)

Presenter and Science Advisor at GO3 Ozone Summit, May 2011 (middle and high school students)
Model Support: Providing MOZART and WRF-Chem model simulations to collaborators within and outside NCAR; Support in setting up and running WRF-Chem (2006-present)
Providing MOPITT data collections for NASA Earth Observatory (2008 – 2016)
Presenter to NCAR Journalism Fellows (2007, 2009, 2010, 2012) and Scripps Fellows (2016)
Member of the NASA Air Quality Applied Sciences Team (AQAST) and supporting the needs of air quality managers and stakeholders through research (2012-2017)
Video Interview on ASD project "*Prediction of North American Air Quality"* for the Front Range Consortium for Research Computing (https://frcrc.org/sc13/videos/NCAR) (Nov 2013)
Visit with Students at Howard University as part of NCAR Diversity Proposal (Nov 2013)
Presentations to numerous organizations as part of securing funding for FRAPPÉ (e.g. U.S. EPA Region 8, Colorado Department of Public Health and Environment, Colorado Oil & Gas Association, Colorado Oil and Gas Conservation Commission, American Lung Association, Western Resource Advocates)
Presentation to Boulder Valley Rotary Club (March 2014) and Frasier Meadows Retirement Community (November 2014)
Film Project with Longmont Westview Middle School as part of the NOAA Earth Explorer Program (2015)
Instructor at Air Pollution Modeling Workshop of the Institute for Tribal Environmental Professionals, Boulder (2015)
Host for High School student Hannah Lee (2015-2017)
NCAR Earth Explorer Series, Front range air quality: Impacts on you and your Colorado playground; Presented: 7 January and 11 January 2017 (NCAR Mesa Lab); 13 June 2017 (Denver Public Library)
Co-Organizer of NCAR Air Quality Fair, 3 May 2017, NCAR Mesa Lab
Member of the NCAR Science Requirements Advisory Panel (SRAP) for the NWSC-3 procurement, 2018-2019
Role in the documentary "The Human Element" (2018, Producer James Balog)
Panelist at NCAR Screening of "The Human Element", Sep 2018, NCAR Mesa Lab
Interview for movie on Front Range Ozone put together by Arie Feltman-Frank for a Contemporary Environmental Issues class at the University of Denver (2019), (https://www.youtube.com/watch?v=x47_EuQZqro)
Host and presenter for visitors from India in the U.S. under the auspices of the Department of State's International Visitor Leadership Program (August 2019)
Speaker at Café Scientifique, Denver, 12 November 2019 (https://coloradocafesci.org/pfister-flocke)

Press releases and interviews for print and electronic media (selected contributions)

- Geophysical Research Letters selected Pfister et al. (2005) as highlight paper resulting in an NCAR press release "NCAR Analysis Shows Widespread Pollution from 2004 Wildfires", June 2006; various articles in local newspapers (Denver Post, Daily Camera, etc.) and other national media (e.g. Discovery Channel) followed.
- "Address Air Pollution at its Roots", California Forests. Winter 2006 Issue, Official Publication of the California Forestry Association

- "A closer look: Tracking nature's contribution to air pollution", NASA: Supporting Earth System Science: 2006, NASA Distributed Active Archive Centers. Online at http://nasadaacs.eos.nasa.gov/articles/2006/2006_wildfires.html
- Earth & Sky Podcast, NPR, September 2008, http://www.earthsky.org/clear-voices/52762/gabriele-pfister-on-pollution-from-high-latitude-wildfires
- NCAR Press Release: Wildfires Cause Ozone Levels to Exceed U.S. Health Standards, New Study Shows (October 2008).
- "Wildfires may impact Air Quality, damage Lungs", Discovery Channel, Aug 2009
- "Damage, pollution from wildfires could surge as western U.S. warms", Land Letter, Aug 2009
- "Calm weather causes high numbers of pollution alerts", Minnesota Public Radio, April 2010.
- Bridges Online, Office of Science and Technology, Austrian Embassy, "Introducing atmospheric scientist Gabriele Pfister: Weather, Winds, and Wildfires", July 2011.
- NCAR Press Release May 2014 on "Climate Change threatens to worsen U.S. Ozone Pollution (https://news.ucar.edu/11540/climate-change-threatens-worsen-us-ozone-pollution).
- FRAPPÉ Press Releases: July 2014 (https://news.ucar.edu/11915/scientists-launch-far-ranging-campaign-detail-front-range-air-pollution) and Nov 2017 (https://www2.ucar.edu/atmosnews/news/129774/scientists-pinpoint-sources-front-range-ozone) with a large number of radio and TV interviews, media articles and other outreach activities.

Selected recent media contributions:
Standard-Examiner (http://www.standard.net/stories/2013/06/11/utah-braces-wildfire-smoke-throughout-west); Aspen Public Radio (http://www.kajx.org/post/wildfires-contribute-more-atmospheric-warming-new-study-shows); Women's Health Magazine (http://blog.womenshealthmag.com/scoop/effects-of-exercise/), Live Interview on RadioMD (http://radiomd.com/show/staying-well/item/13557-how-pollution-affects-your-health); Live Interview on KQED Public Radio (http://www.kqed.org/a/forum/R201308260930), KQED Science (http://blogs.kqed.org/science/2013/08/26/wildfires-a-growing-air-quality-issue/), NSF Movie on "Projections of future summertime ozone over the U.S." (aired by the Weather Channel; Channel 7 News (http://www.thedenverchannel.com/weather/ozone); Channel 9 Interview (http://www.9news.com/weather/front-range-pollution-contaminating-mountains-study-shows/492189930); Daily Camera Nov 2017 (http://www.dailycamera.com/news/boulder/ci_25826985/boulder-researchers-leading-landmark-front-range-air-quality); "The air quality in India is horrendously bad right now. Here's why", Mashable Nov 2018; President Trump said the US has 'the cleanest air in the world'. Here's the reality, according to an air quality scientist, Business Insider Oct 2018; Interview with KGNU Morning Magazine (https://www.kgnu.org/morningmag/4/3/2019); Live interview on Colorado Public Radio (CPR) Colorado Matters discussing Air Quality in the Front Range, 13 May 2019 (https://www.cpr.org/news/story/the-consequences-of-calling-shooting-victims-heroes-school-safety-questions-answered); Interview on CPR Colorado Matters "When The Air Gets Dirty In Denver, Should You Head For The Hills?", 29 July 2019; Opinion Piece in the Colorado Sun, "Yes, oil and gas emissions are major contributors to local ozone production ", 15 March 2020; TV Interview on 9news Satellite shows less air pollution in Denver during Covid-19 outbreak, 30 March 2020; Interview on CBS Morning News on COVID-19 impacts on air quality and climate, 22 April 2020;

HONORS/AWARDS

August 2000	Poster Award at the International Radiation Symposium
December 2000	Alfred-Wegener Urkunde 2000 for Contributions to Physics-Show 2000 (Institute for Meteorology and Geophysics, Graz)
May 2002	Erwin-Schrödinger Fellowship (Austrian Science Fund)
July 2003	Erwin-Schrödinger Fellowship (Austrian Science Fund)
April 2005	NASA Group Achievement Award for Intercontinental Chemical Transport Experiment North America Science Team
December 2006	NCAR Scientific Achievement Award (MOPITT Team)
May 2009	NASA Group Achievement Award for the Arctic Research of the Composition of the Troposphere from Aircraft and Satellite Experiment (ARCTAS)
February 2015	NASA Group Achievement Award for the Studies of Emissions and Atmospheric Composition, Clouds and Climate Coupling by Regional Surveys (SEAC4RS)
December 2015	ACOM Special Recognition Award for Education and Outreach during FRAPPÉ
December 2016	ACOM Special Recognition Award for Pfister et al. (2014), Prediction of Future Summertime Ozone over the U.S. [16]
September 2017	NASA Group Achievement Award for KORUS-AQ
December 2017	ACOM Special Recognition Award for Scientific and Technical Achievements during FRAPPÉ
December 2019	ACOM Special Recognition Award for leading the Fundamentals in Atmospheric Chemistry and Aerosol Modeling Workshop

PROPOSALS (funded and pending; excluding Collaborator)

- Co-I on proposal to NASA ROSES, "*Chemical Forecasting and Analysis for ARCTAS*", PI: L. Emmons, NCAR/ACOM, 2008-2010 (with Cornell University)
- PI on "*Integration of Satellite Products into a Chemical Weather Forecasting System*", NASA ROSES (2011-2013) (with Harvard University)
- Co-I on proposal to NSF" *Proposal on Chemistry and Climate over Asia: Understanding the Impacts of Changing Climate and Emissions on Atmospheric Composition and Society"*, PI: Mary Barth, NCAR/ACOM, 2011-2013 (with University of Iowa)
- Co-I on proposal to NASA ROSES "*Integrating carbon monoxide and aerosol retrievals: Improving estimates of aerosol vertical distribution, carbon component & local radiative forcing*", PI: David Edwards, NCAR/ACOM, 2011-2013. (with University of Arizona)
- Co-I on proposal to NASA ROSES *"NCAR Chemical Forecasting and Analysis for SEAC4RS"*, PI: L. Emmons, NCAR/ACOM, 2012-2014 (with University of Arizona)
- PI on "*Prediction of Future North American Air Quality*", NCAR Accelerated Scientific Discovery Proposal 2012 (Sep 2012-June 2013)
- PI on NASA-AQAST Tiger Team Proposal "*Air Quality and Health Impacts of June 2012 Colorado Wildfires*" (with Emory University) (Subproject of NASA AQAST, PI: D. Jacob, Harvard University), 2012-2015

- PI on field campaign proposal to NSF for "Front Range Air Pollution and Photochemistry Éxperiment FRAPPÉ", 2014 (with UC Berkeley, CU Boulder and University of Maryland)
- Co-Investigator on proposal to Bureau of Land Management: "*Health effects from wildfire air pollution: a spatiotemporal modeling approach*" PI: Michael Jerrett, University of Berkeley, 2014-2017
- Co-I on proposal to NASA NNH13ZDA001N: "*Downwind of the Flames: Assessing and Predicting Wildfire Smoke Related Morbidity Using Satellites, In-Situ Measurements and Models*", PI: Jeffrey Pierce, Colorado State University, 2015-2018
- Co-I on proposal to NASA NNH13ZDA001N: "*Chemical Data Assimilation and Analog-Based Uncertainty Quantification to Improve Decision-Making in Public Health and Air Quality*", PI: Luca DelleMonache, NCAR/RAL, 2015-2018 (with University of Maryland and CU Boulder)
- PI on proposal to City of Fort Collins, *Monitoring network assessment for the City of Fort Collins*, 2016-2017
- PI on proposal to State of Colorado, *FRAPPE and DISCOVER-AQ Data Analysis*, 2016-2017
- Co-I on proposal to NASA: "*Global and Regional Chemical Forecasting and Analysis using CAM-chem, Data Assimilation and WRF-Chem for KORUS-AQ"*, PI: L. Emmons, NCAR/ACOM, 2015-2019
- Co-I on proposal to NASA: "*Multi-scale chemical forecasting and analysis for FIREChem"*, PI: L. Emmons, NCAR/ACOM, 2018 – 2021
- PI on proposal to NSF-GEO: "*WE-CAN & BBFLUX Science Team Workshop", 2019* (organized for NSF Supported field campaigns that were led by Colorado State University and CU Boulder)
- Co-PI on proposal *to NASA ROSES ACMAP 2018 "Quantification and attribution of past (2005-2018) air quality trends over CONUS"*, PI: R. Kumar, NCAR/RAL, 2019-2022
- Co-I on proposal to NOAA AQRF, "*A novel method for improving fine particulate matter air quality forecasts during wildfires*", PI: R. Kumar, NCAR/RAL, 2019-2022
- Co-PI on proposal to European Union: "Air Quality: *Worldwide Analysis and Forecasting of Atmospheric Composition for Health (AQ-Watch)*", PI: G. Brasseur, MPI Hamburg, Germany, 2019-2022
- PI on proposals to NSF: "A Strategy for Revitalizing Atmospheric Chemistry at NCAR", granted.
- Co-I on proposal to NASA High Mountain Asia, "*Constraining the Deposition of Light Absorbing Particles in High Mountain Asia*", PI: R. Kumar, NCAR/RAL, 2019-2022 (with University of Arizona)
- Co-I on proposal to NSF GEO, " EarthCube Data Capabilities: MELODIES for MUSICA: A modular framework to compare model results and observations of atmospheric chemistry", PI: Louisa Emmons, submitted.
- Collaborator proposal to NSF ATM on "Monitoring the Effect of Coal Power Plant Shutdown on Reactive Nitrogen Partitioning in the Columbia River Gorge", PI: Juliane Fry (Reed College), submitted.
- CO-PI on proposal to NSF Collaborative Research: GP-GO: "Enhancing Diversity in Geosciences Education using a Convergent Synergy of inclusive STEM Education, Innovative Research, and Cyberlearning", PI: (Yasin Elshorbany (University of South Florida), submitted.

PUBLICATIONS

THESIS

1. Pfister, G., 2000: Atmospheric Radiative Transfer in the UV: Special Emphasis on the Photolysis Frequencies J(NO2) and J(O1D), Ph.D. Thesis, University of Graz.
2. Pfister G., 1997: Strahlungstransfer durch die Atmosphäre im UV-Bereich (Radiative Transfer in the Atmosphere), Master Thesis, University of Graz.

PEER-REVIEWED ARTICLES – First Author
(* indicates publications from PhD research)

1. Pfister G., E. Putz, and R. Maderbacher, 1998: Analyse integrierter Strahlungsmessungen in unterschiedlichen Wellenlängenbereichen (Investigation of broadband radiation data in different wavelength regions), *Ann. d. Meteorologie,* **37**, 129-130. (*)
2. Pfister, G., D. Baumgartner, R. Maderbacher, and E. Putz, 2000: Aircraft measurements of photolysis frequencies for ozone and nitrogen dioxide under cloudy conditions, *Atmospheric Environment*, **34**, 4019-4029. (*)
3. Pfister, G., R.L. McKenzie, B. Liley, A. Thomas, C. N. Long, and B.W. Forgan, 2003: Cloud Coverage based on All-Sky Imaging and its Impact on Surface Solar Irradiance, *J. Appl. Met*., **42 (10)**, 1421-1434.
4. Pfister, G., G. Petron, L.K. Emmons, J.C. Gille, D.P. Edwards, J.-F. Lamarque, J.L. Attie, C. Granier, and P.C. Novelli, 2004: Evaluation of CO Simulations and the Analysis of the CO Budget for Europe, *J. Geophys. Res.,* **109** (D19304), doi:10.1029/2004JD004691.
5. Pfister, G., P.G. Hess, L.K. Emmons, J.-F. Lamarque, C. Wiedinmyer, D.P. Edwards, G. Petron, J.C. Gille, and G.W. Sachse, 2005: Quantifying CO emissions from the 2004 Alaskan wildfires using MOPITT CO data, *Geophys. Res. Lett.,* 32, No. **11**, L11809, 10.1029/2005GL022995.
6. Pfister, G., J.C. Gille, D. Ziskin, G. Francis, D.P. Edwards, M.N. Deeter, and E. Abbott, 2005: Effects of a Spectral Surface Reflectance on Measurements of Back-Scattered Solar Radiation: Application to the MOPITT Methane Retrieval, *J. Atmos. Oceanic Techn*., **22** (5), 566-574.
7. Pfister, G., L.K. Emmons, P.G. Hess, R.E. Honrath, J.F. Lamarque, M. ValMartin, R.C. Owen, M. Avery, E. Browell, J. Holloway, P. Nedelec, R. Purvis, T. Ryerson, G. Sachse, and H. Schlager, 2006: Ozone Production from the 2004 North American Boreal Fires", *J. Geophys. Res*., **111,** D24S07, doi:10.1029/2006JD007695.
8. Pfister, G., C. Wiedinmyer, and L.K. Emmons, 2008: Impacts of the fall 2007 California wildfires on surface ozone: Integrating local observations with global model simulations, *Geophys. Res. Letters*, **35**, L19814, doi:10.1029/2008GL034747
9. Pfister, G., A.M. Thompson, L.K. Emmons, P.G. Hess, J.-F. Lamarque, and Y.E. Yorks, 2008: Analysis of the Summer 2004 Ozone Budget over the U.S. using IONS observations and MOZART-4 simulations, J. *Geophys. Res*., **113**, D23306, doi:10.1029/2008JD010190.
10. Pfister, G., L.K. Emmons, P.G. Hess, J.-F. Lamarque, S. Walters, A. Guenther, P.I. Palmer, and P. Lawrence, 2008: Contribution of isoprene to chemical budgets: A model tracer study with the NCAR CTM MOZART-4, *J. Geophys. Res*., **113**, D05308, doi:10.1029/2007JD008948

11. Pfister, G., P. G. Hess, L.K. Emmons, P. J. Rasch, and F. V. Vitt, 2008: Impact of the summer 2004 Alaska fires on top of the atmosphere clear-sky radiation fluxes, *J. Geophys. Res.*, **113**, D02204, doi:10.1029/2007JD008797.
12. Pfister, G., L.K. Emmons, D.P. Edwards, A. Arellano, G. Sachse, and T. Campos, 2010: Variability of springtime transpacific pollution transport during 2000-2006: the INTEX-B mission in the context to previous years, *Atmos. Chem. Phys.*, **10**, 1345-1359.
13. Pfister, G., J. Avise, C. Wiedinmyer, D. P. Edwards, L. K. Emmons, G. D. Diskin, J. Podolske, and A. Wisthaler, 2011: CO source contribution analysis for California during ARCTAS-CARB, *Atmos. Chem. Phys.*, **11**, 7515-7532, doi:10.5194/acp-11-7515-2011.
14. Pfister, G., D. D. Parrish, H. Worden, L. K. Emmons, D. P. Edwards, C. Wiedinmyer, G. S. Diskin, G. Huey, S. J. Oltmans, V. Thouret, A. Weinheimer, and A. Wisthaler, 2011: Characterizing summertime chemical boundary conditions for airmasses entering the US West Coast, *Atmos. Chem. Phys.*, **11,** 1769-1790, 2011
15. Pfister, G., S. Walters, L.K. Emmons, and D.P. Edwards, 2013: Quantifying the contribution of inflow on surface ozone over California, *J. Geophys. Res.,* **118**, doi:10.1002/2013JD020336.
16. Pfister, G., S. Walters, J.-F. Lamarque, J. Fast, M. Barth, J. Done, G. Holland, and C. Bruyere, 2014: Prediction of Future Summertime Ozone over the U.S., *J. Geophys. Res.,* **119**, 5559–5582, *doi:*10.1002/2013JD020932.
17. Pfister G. G. et al., 2017: Using observations and source specific model tracers to characterize pollutant transport during FRAPPÉ and DISCOVER-AQ, *J. Geophys. Res.*, **122**, https://doi.org/10.1002/2017JD027257
18. Pfister, G.G., C-T Wang, M. Barth, F. Flocke, W. Vizuete, S. Walters, 2019: Chemical Characteristics and Ozone Production in the Northern Colorado Front Range, *J. Geophys. Res.*, **124**. https://doiorg.cuucar.idm.oclc.org/10.1029/2019JD030544

PEER-REVIEWED ARTICLES – Co-Author
(* indicates publications from PhD research)

19. Putz E., **G. Pfister**, D. Baumgartner, R. Maderbacher, and G. Folberth, 1998: Flugzeugmessungen der Photolysefrequenzen J(NO_2) und J(O^1D) (Airborne measurements of the photolysis frequencies J(NO_2) and J(O^1D)), *Ann. d. Meteorologie* **37**, 131-132. (*)
20. Folberth G., **G. Pfister**, E. Putz, L. Weissflog, and N.P. Elansky, 1999: Modeling airborne TCA production through photochemical methyl chloroform decomposition in the lower troposphere, Symposium on Atmospheric Reactive Substances (ARS) 1999. (*)
21. Nölle, A., **G. Pfister**, G. Seckmeyer, H. Wilhelms, M.L. Richards, and G.K. Hartmann, 2000: DUST: An interactive Data Visualization Tool for Selected Atmospheric Data, *Phys. Chem. Earth* (A), **25** (8), 635-638. (*)
22. Van Weele M., T. J. Martin, M. Blumthaler, C. Brogniez, P. N. den Outer, O. Engelsen, J. Lenoble, **G. Pfister**, A. Ruggaber, B. Walravens, P. Weihs, H. Dieter, B.G. Gardiner, D. Gillotay, A. Kylling, B. Mayer, G. Seckmeyer, and W. Wauben, 2000: From Model Intercomparison towards Benchmark UV Spectra for six real Atmospheric Cases, *J. Geophys. Res.* , **105**, D4, 4915-4925. (*)
23. Bais A.F., S. Madronich, J. Crawford, S. Hall, B. Mayer, M. van Weele, J. Lenoble, J. Calvert, C. Cantrell, R. Shetter, A. Hofzumahaus, P. Koepke, P. Monks, G. Frost, R. McKenzie, N. Krotkov, A. Kylling, S. Lloyd, W. Swartz, **G. Pfister**, T. Martin, P Roeth, E.

Griffioen, A. Ruggaber, M. Krol, A. Kraus, G. Edwards, M. Mueller, B. Lefer, P. Johnston, H. Schwander, D. Flittner, B. G. Gardiner, J. Barrick, and R. Schmitt, 2003: International Photolysis Frequency Measurement and Model Intercomparison: Spectral Solar Flux Measurements and Modeling, *J. Geophys. Res.*, **108** (D16), 8543. (*)

24. Shetter. R.E., W. Junkermann, W.H. Schwartz, 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. Mueller, 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. Roeth, P. Koepke, A. Ruggaber, H. Schwander, and M. vanWheele, 2003: Photolysis Frequency of NO_2: Measurement and Modeling during the International Photolysis Frequency Measurement and Modeling Intercomparison (IPMMI), *J. Geophys. Res.*, **108** (D16). (*)
25. Folberth, G.A., **G. Pfister**, D.J. Baumgartner, E. Putz, L. Weissflog, and N.P. Elansky, 2003: The Annual Course of TCA formation in the Lower Troposphere: A Modeling Study, Environmental Pollution, **124** (3), 389-405.
26. Nichol, S., **G. Pfister**, G.E. Bodeker, R.L. McKenzie, S.W. Wood, and G. Bernhard, 2003: Moderation of Cloud Reduction of UV in the Antarctic Due to High Surface Albedo, *J. Appl. Met.*, **42** (8), 1174-1183.
27. Hofzumahaus, A., B.L. Lefer, P.S. Monks, S.R. Hall, A.Kylling, B. Mayer, R.E. Shetter, W. Junkerman, B. Bohn, A. Bais, J.G. Calvert, C.A. Cantrell, S. Madronich, G.D. Edwards, A. Kraus, M. Mueller, R. Schmitt, P. Johnston, R. McKenzie, G.J. Frost, E. Griffioen, M. Krol, T. Martin, **G. Pfister**, E.P. Roeth, A. Ruggaber, W.W. Swartz, and M. VanWeele, 2004: Photolysis of O_3 to $O(^1D)$: Measurements and Modeling during the International Photolysis Frequency Measurement and Modeling Intercomparison 1998, *J. Geophys. Res.*, **109**, D8, DOI:10.1029/2003JD004333.
28. Randerson, J.T., H. Liu, M.G. Flanner, S.D. Chambers, Y. Yin, P.G. Hess, **G. Pfister**, M.C. Mack, K.K. Treseder, L.R. Welp, F.S. Chapin, J.W. Harden, M.L. Goulden, E. Lyons, J.C. Neff, E.A.G. Schuur, and C.S. Zender, 2006: The impact of boreal forest fire on global warming, *Science*, 14: **1045**, doi: 10.1126/science.314.5802.1045.
29. ValMartin, M., R.E. Honrath, R.C. Owen, **G. Pfister**, P. Fialho, and F. Barata, 2006: Significant Enhancements of Nitrogen Oxides, Black Carbon and Ozone in the North Atlantic Lower Free Troposphere Resulting from North American Boreal Wildfires, *J. Geophys. Res.*, **111**, D23S60, doi:10.1029/2006JD007530.
30. Lapina, K., R. E. Honrath, R. C. Owen, M. Val Martin, and **G. Pfister**, 2006: Evidence of significant large-scale impacts of boreal fires on ozone levels in the midlatitude Northern Hemisphere free troposphere, *Geophys. Res. Lett.,* **33**, L10815, doi:10.1029/2006GL025878.
31. Tang, Y., G. Carmichael, N. Thongboonchoo, T. Chai, L. Horowitz, R.B. Pierce, J. Al-Saadi, **G. Pfister**, J. Vukovich, M. Avery, G. Sachse, T. Ryerson, J. Holloway, E. Atlas, F. Flocke, R. Weber, L.G. Huey, J. Dibb, D. Streets, and W. Brune, 2007: The Influence of Lateral and Top Boundary Conditions on Regional Air Quality Prediction: a Multi-Scale Study Coupling Regional and Global Chemical Transport Models, *J. Geophys. Res.,* **112**, D10S18, doi:10.1029/2006JD007515.
32. Emmons, L.K., **G. Pfister**, D.P. Edwards, J.C. Gille, G. Sachse, D. Blake, S. Wofsy, C. Gerbig, D. Matross, and P. Nedelec, 2007: MOPITT Validation exercises during Summer 2004 fields campaigns over North America, *J. Geophys. Res.,* **112**, D12S02, doi:10.1029/2006JD007833.

33. Arellano, A.F.,Jr., K. Raeder, J.L. Anderson, P.G. Hess, L.K. Emmons, D.P. Edwards, **G. Pfister**, T.L. Campos, and G.W. Sachse, 2007: Evaluating model performance of an ensemble-based chemical data assimilation system during INTEX-B field mission, *Atmos. Chem. Phys.,* **7**, 5695-5710.
34. Bousserez, N., J.L. Attié, V.H. Peuch, M. Michou, **G. Pfister**, D. Edwards, L. Emmons, C. Mari, B. Barret, S.R. Arnold, A. Heckel, A. Richter, H. Schlager, A. Lewis, M. Avery, M., G. Sachse, E.V. Browell, and J.W. Hair, 2007: Evaluation of the MOCAGE chemistry transport model during the ICARTT/ITOP experiment, *J. Geophys. Res.*, **112**, D10S42, doi:10.1029/2006JD007595.
35. Dunlea, E. J., P.F. DeCarlo, A. Aiken, J.R. Kimmel, R.E. Peltier, R.J. Weber, J. Tomlinson, D.R. Collins, Y. Shinozuka, C.S. McNaughton, S.G. Howell, A.D. Clarke, L.K. Emmons, E.C. Apel, **G. Pfister**, A. van Donkelaar, R.V. Martin, D. Millet, C.L. Heald, and J.L. Jimenez, 2009: Evolution of Asian aerosols during transpacific transport in INTEX-B, *Atmos. Chem. Phys.*, **9**, 7257-7287.
36. Adhikary, B., R. Carmichael, S. Kulkarni, C. Wei, Y. Tang, A. D'Allura, M. Mena-Carrasco, D. G. Streets, Q. Zhang, R. B. Pierce, J. A. Al-Saadi, L. K. Emmons, **G. Pfister**, M. A. Avery, J. D. Barrick, D. R. Blake, W. H. Brune, R. C. Cohen, J. E. Dibb, A. Fried, B. G. Heikes, L. G. Huey, D. W. O'Sullivan, G. W. Sachse, R. E. Shetter, H. B. Singh, T. L. Campos, C. A. Cantrell, F. M. Flocke, E. J. Dunlea, J. L. Jimenez, A. J. Weinheimer, J. D. Crounse, P. O. Wennberg, J. J. Schauer, E. A. Stone, D. A. Jaffe, and D. R. Reidmiller, 2010: A regional scale modeling analysis of aerosol and trace gas distributions over the eastern Pacific during the INTEX-B field campaign, *Atmos. Chem. Phys.*, **10**, 1-25.
37. Emmons, L.K., S. Walters, P. Hess, J-F Lamarque, **G. Pfister**, D. Fillmore, C. Granier, A. Guenther, D. Kinnison, T Laepple, J. Orlando, X. Tie, G. Tyndall, C. Wiedinmyer, S. Baughcum, and S. Kloster, 2010: Description and evaluation of the Model for Ozone and Related chemical Tracers, version 4 (MOZART-4). *Geosci. Model Devel.*, **3**, 43-67.
38. Barth, M., J. Lee, A. Hodzic, **G. Pfister**, W. Skamarock, J. Worden, J. Wong, and D. Noone, 2012: Thunderstorms and upper troposphere chemistry during the early stages of the 2006 North American Monsoon, *Atmospheric Chemistry and Physics*, **12**(22), 11003-11026, doi:10.5194/acp-12-11003-2012.
39. Emmons, L., P. Hess, J. Lamarque, and **G. Pfister**, 2012: Tagged ozone mechanism for MOZART-4, CAM-chem and other chemical transport models, *Geoscientific Model Development,* **5**(6), 1531-1542, doi:10.5194/gmd-5-1531-2012.
40. Ghude, S. D., **G. Pfister**, C. Jena, R.J. van der A, L. K. Emmons, and R. Kumar, 2012: Satellite constraints of nitrogen oxide (NOx) emissions from India based on OMI observations and WRF-Chem simulations, *Geophys. Res. Lett.*, **40**, doi: 10.1029/2012GL053926.
41. Ghude, S. D., S. H. Kulkarni, C. K. Jena, **G. Pfister**, G. Beig, S. S. Fadnavis, and R. J. van der A, 2012: Application of satellite observations for identifying regions of dominant NO_x sources over the Indian Subcontinent, *J. Geophys. Res.,* doi:10.1029/2012JD017811.
42. Worden, H., Y. Cheng, **G. Pfister**, G. Carmichael, Q. Zhang, D. Streets, M. Deeter, D. Edwards, J. Gille, and J. Worden, 2012: Satellite-based estimates of reduced CO and CO2 emissions due to traffic restrictions during the 2008 Beijing Olympics, *Geophys. Res. Letters*, **39**, doi:10.1029/2012GL052395.
43. Kumar, R., M. Naja, **G. Pfister**, M.C. Barth, C. Wiedinmyer, and G.P. Brasseur, 2012a: Simulations over South Asia using the Weather Research and Forecasting model with

Chemistry (WRF-Chem): chemistry evaluation and initial results, *Geosci. Model Dev.*, **5**, 619-648, doi:10.5194/gmd-5-619-2012.

44. Kumar, R., M. Naja, **G. Pfister**, M. Barth, C. Wiedinmyer, and G. Brasseur, 2012b: Simulations over South Asia using the Weather Research and Forecasting model with Chemistry (WRF-Chem): chemistry evaluation and initial results, *Geosci. Model Dev.*, **5**(3), 619-648, doi:10.5194/gmd-5-619-2012.
45. Hodnebrog, O., Solberg, F. Stordal, T.M. Svendby, D. Simpson, M. Gauss, A. Hilboll, **G. Pfister**, S. Turquety, A. Richter, J.P. Burrows, and H.A.C. Denier van der Gon, 2012: Impact of forest fires, biogenic emissions and high temperatures on the elevated Eastern Mediterranean ozone levels during the hot summer of 2007, *Atmos. Chem. Phys.,* **12**(18), 8727-8750, doi:10.5194/acp-12-8727-2012.
46. Kumar, R., M. Naja, M., **G. Pfister**, M.C. Barth, and G.P. Brasseur, 2012c: Simulations over South Asia using the Weather Research and Forecasting model with Chemistry (WRF-Chem): set-up and meteorological evaluation, *Geosci. Model Dev.*, **5**, 321-343, doi:10.5194/gmd-5-321-2012.
47. Boynard, A., **G. Pfister**, and D. P. Edwards, 2012: Boundary layer versus free tropospheric CO budget and variability over the United States during summertime, *J. Geophys. Res.*, **117**, D04306, doi:10.1029/2011JD016416.
48. Dipu, S., Thara V. Prabha, G. Pandithurai, J. Dudhia, **G. Pfister**, K. Rajesh, and B.N. Goswami, 2013: Impact of elevated aerosol layer on the cloud macrophysical properties prior to monsoon onset, *Atmospheric Environment*, **70**, 454-467.
49. Thomas, J. L., J.-C. Raut, K.S. Law, L. Marelle, G. Ancellet, F. Ravetta, J.D. Fast, **G. Pfister**, L.K. Emmons, G.S. Diskin, A. Weinheimer, A. Roiger, A., and H. Schlager, 2013: Pollution transport from North America to Greenland during summer 2008, *Atmos. Chem. Phys.*, **13**, 3825-3848, doi:10.5194/acp-13-3825-2013.
50. Worden, H., M. Deeter, C. Frankenberg, M. George, F. Nichitiu, J. Worden, I. Aben, K. Bowman, C. Clerbaux, P. Coheur, A. de Laat, R. Detweiler, J. Drummond, D. Edwards, J. Gille, D. Hurtmans, M. Luo, S. Martínez-Alonso, S. Massie, **G. Pfister**, and J. Warner, 2013: Decadal record of satellite carbon monoxide observations, *Atmos. Chem. Phys.*, **13**(2), 837-850, doi:10.5194/acp-13-837-2013.
51. Kumar, R., M. Naja, **G. Pfister**, M. C. Barth, and G. P. Brasseur, 2013a: Source attribution of carbon monoxide in India and surrounding regions during wintertime, *J. Geophys. Res.*, **118**, doi:10.1002/jgrd.50134.
52. Jaffe, D.A., N. Widger, N. Downey, **G. Pfister**, A. Boynard, and S. B. Reid, 2013: Impact of Wildfires on Ozone Eceptional Events in the Western U.S., *Environ. Sci. Technol.*, 10.1021/es402164f.
53. Kumar, R., M.C. Barth, **G. Pfister**, M. Naja, and G.P. Brasseur, 2013b: WRF-Chem simulations of a typical pre-monsoon dust storm in northern India: influences on aerosol optical properties and radiation budget, *Atmos. Chem. Phys.*,**14**, 2431-2446, 2014.
54. Streets, D.G., T. Canty, G. R. Carmichael, B. de Foy, R. R. Dickerson, B. N. Duncan, D. P. Edwards, J. A. Haynes, D. K. Henze, M. R. Houyoux, D. J. Jacob, N. A. Krotkov, L. N. Lamsal, Y. Liu, Z. Lu, R. V. Martin, G. G. Pfister, R. W. Pinder, R. J. Salawitch, K. J. Wecht, 2013: Emissions estimation from satellite retrievals: A review of current capability, *Atmospheric Environment*, **77**, 1011-1042, ISSN 1352-2310, http://dx.doi.org/10.1016/j.atmosenv.2013.05.051.

55. Lapina, K., D. Henze, J. Milford, M. Huang, M. Lin, A. Fiore, G. Carmichael, **G. Pfister**, K. Bowman, 2014: Assessment of source contributions to seasonal vegetative exposure to ozone in the U.S., *J. Geophys. Res.*, **119**, doi:10.1002/2013JD020905.
56. Kumar, R., Barth, M. C., Madronich, S., Naja, M., Carmichael, G. R., **Pfister**, G. G., Knote, C., Brasseur, G. P., Ojha, N., and Sarangi, T., 2014a: Effects of dust aerosols on tropospheric chemistry during a typical pre-monsoon season dust storm in northern India, *Atmos. Chem. Phys.*, **14,** 6813-6834, doi:10.5194/acp-14-6813-2014.
57. Ghude, S. D., C. Jena, D. M. Chate, G. Beig, G. G. **Pfister**, R. Kumar, V. Ramanathan, 2014: Reductions in India's crop yield due to ozone, *Geophys. Res. Lett.,* **41**, *doi:*10.1002/2014GL060930.
58. Safieddine, S., Boynard, A., Coheur, P.-F., Hurtmans, D., **Pfister**, G., Quennehen, B., Thomas, J. L., Raut, J.-C., Law, K. S., Klimont, Z., Hadji-Lazaro, J., George, M., and Clerbaux, C., 2014: Summertime tropospheric ozone assessment over the Mediterranean region using the thermal infrared IASI/MetOp sounder and the WRF-Chem model, *Atmos. Chem. Phys.*, **14**, 10119-10131, doi:10.5194/acp-14-10119-2014.
59. Duncan, B. N., Prados, A. I., Lamsal, L. N., Liu, Y., Streets, D. G., Gupta, P., Hilsenrath, E., Kahn, R. A., Nielsen, J. E., Beyersdorf, A. J., Burton, S. P., Fiore, A. M., Fishman, J., Henze, D. K., Hostetler, C. A., Krotkov, N. A., Lee, P., Lin, M., Pawson, S., **Pfister**, G., Pickering, K. E., Pierce, R. B., Yoshida, Y., and Ziemba, L. D., 2014: Satellite data of atmospheric pollution for U.S. air quality applications: Examples of applications, summary of data end-user resources, answers to FAQs, and common mistakes to avoid, *Atmos. Environ.*, **94**, 647–662, doi:10.1016/j.atmosenv.2014.05.061.
60. Kumar, R., Barth, M. C., Pfister, G. G., Naja, M., and Brasseur, G. P., 2014b: WRF-Chem simulations of a typical pre-monsoon dust storm in northern India: influences on aerosol optical properties and radiation budget, Atmos. Chem. Phys., **14**, 2431-2446, doi:10.5194/acp-14-2431-2014.
61. Jena, C., S.D. Ghude, G. **Pfister**, D.M. Chate, R. Kumar, G. Beig, D.E. Surendran, S. Fadnavis, D.M. Lai, 2015a: Influence of springtime biomass burning in South Asia on regional ozone (O_3): A model based case study. *Atmospheric Environment*, **100**, 37-47, DOI: 10.1016/j.atmosenv.2014.10.027.
62. Reid, C.E., M. Jerrett, M.L. Petersen, G. G. **Pfister**, P. E. Morefield, I.B. Tager, S. M. Raffuse, and J.R Balmes, 2015: Spatiotemporal Prediction of Fine Particulate Matter During the 2008 Northern California Wildfires Using Machine Learning, *Environmental Science & Technology*, DOI: 10.1021/es505846r
63. Alexeeff, S. E., **Pfister**, G. G. and Nychka, D., 2015: A Bayesian model for quantifying the change in mortality associated with future ozone exposures under climate change. *Biometrics*. doi: 10.1111/biom.12383
64. Helmig, D., M. Muñoz, J. Hueber, C. Mazzoleni, L. Mazzoleni, R.C. Owen, M. Val-Martin, P. Fialho, C. Plass-Duelmer, P. I. Palmer, A.C. Lewis and G. **Pfister**, 2015: Climatology and Atmospheric Chemistry of the Non-Methane Hydrocarbons Ethane and Propane over the North Atlantic, *Elem. Sci. Anth.* **3**: 000054. doi: 10.12952/journal.elementa.000054.
65. Kumar, R., Barth, M. C., Nair, V. S., **Pfister**, G. G., Babu, S. S., Satheesh, S. K., Moorthy, K. K., and Carmichael, G. R., 2015a: Sources of black carbon aerosols in South Asia and surrounding regions during the Integrated Campaign for Aerosols, Gases and Radiation Budget (ICARB), Atmos. Chem. Phys., **15**, 5415-5428, doi:10.5194/acp-15-5415-2015.

66. Jena, C., S. D. Ghude, G. Beig, D.M. Chate, R. Kumar, G.G. **Pfister**, D.M. Lal, D. E. Surendran, S. Fadnavis, R.J. van der A, 2015b: Inter-comparison of different NOX emission inventories and associated variation in simulated surface ozone in Indian region, Atmospheric Environment, Volume **117**, September 2015, Pages 61-73, ISSN 1352-2310, doi:10.1016/j.atmosenv.2015.06.057.
67. Kumar, R., M. C. Barth, G. G. **Pfister**, V. S. Nair, S. D. Ghude, and N. Ojha, 2015b: What controls the seasonal cycle of black carbon aerosols in India?. *J. Geophys. Res. Atmos.*, **120**, 7788–7812. doi: 10.1002/2015JD023298.
68. Surendran, D.E., S. D. Ghude, G. Beig, L.K. Emmons, C. Jena, R. Kumar, G.G. **Pfister**, D.M. Chate, 2015: Air quality simulation over South Asia using Hemispheric Transport of Air Pollution version-2 (HTAP-v2) emission inventory and Model for Ozone and Related chemical Tracers (MOZART-4), Atmospheric Environment, Volume **122,** Pages 357-372,doi:10.1016/j.atmosenv.2015.08.023.
69. Reddy P. and G. **Pfister**, 2016: July maximum surface ozone, meteorological variables, and satellite nitrogen dioxide in Colorado, Utah, and other western U.S. states", *J. Geophys. Res.,* **121**, 2434–2456, doi:10.1002/2015JD023840.
70. Ghude, S. D., D. M. Chate, C. Jena, G. Beig, R. Kumar, M. C. Barth, G. G. **Pfister**, S. Fadnavis, and P. Pithani, 2016: Premature mortality in India due to $PM_{2.5}$ and ozone exposure, *Geophys. Res. Lett.*, **43,** doi:10.1002/2016GL068949.
71. Zhao, C. M. Huang, J. D. Fast, L. K. Berg, Y. Qian, A. Guenther, D. Gu, M. Shrivastava, Y. Liu, S. Walters, G. **Pfister**, J. Jin, J. E. Shilling, and C. Warneke, 2016: Sensitivity of biogenic volatile organic compounds (BVOCs) to land surface parameterizations and vegetation distributions in California, *Geosci. Model Dev.*, **9,** 1959-1976, doi:10.5194/gmd-9-1959-2016
72. Breanna L. A., G. **Pfister**, H. Hua, H. Xuefei, Y. Liu and M.J. Strickland, 2016: The association of wildfire smoke with respiratory and cardiovascular emergency department visits in Colorado in 2012: A case crossover study, *Environmental Health*, DOI: 10.1186/s12940-016-0146-8.
73. Mizzi, A. P., Arellano Jr., A. F., Edwards, D. P., Anderson, J. L., and **Pfister**, G. G., 2016: Assimilating compact phase space retrievals of atmospheric composition with WRF-Chem/DART: a regional chemical transport/ensemble Kalman filter data assimilation system, *Geosci. Model Dev.*, **9**, 965-978, doi:10.5194/gmd-9-965-2016.
74. Kaser, L., E.G. Patton, G. G. **Pfister**, A. J. Weinheimer, D. D. Montzka, F. Flocke, A.M. Thompson, R. M. Stauffer, H. Halliday, 2016: The Effect of Entrainment through Atmospheric Boundary Layer Growth on Observed and Modeled Surface Ozone in the Colorado Front Range, J. *Geophys. Res.*, DOI:10.1002/2016JD026245.
75. Vu, K. T., Dingle, J. H., Bahreini, R., Reddy, P. J., Campos, T. L., Diskin, G. S., Fried, A., Herndon, S. C., Hornbrook, R. S., Huey, G., Kaser, L., Montzka, D. D., Nowak, J. B., Richter, D., Roscioli, J. R., Shertz, S., Stell, M., Tanner, D., Tyndall, G., Walega, J., Weibring, P., Weinheimer, A. J., **Pfister**, G., and Flocke, F., 2016: Impacts of the Denver Cyclone on Regional Air Quality and Aerosol Formation in the Colorado Front Range during FRAPPÉ 2014, *Atmos. Chem. Phys.*, **16**, 12039-12058, doi:10.5194/acp-16-12039-2016.
76. Kille, N., Baidar, S., Handley, P., Ortega, I., Sinreich, R., Cooper, O. R., Hase, F., Hannigan, J. W., **Pfister**, G., and Volkamer, R., 2017: The CU mobile Solar Occultation Flux instrument: structure functions and emission rates of NH_3, NO_2 and C_2H_6, *Atmos. Meas. Tech.*, **10**, 373-392, doi:10.5194/amt-10-373-2017.

77. Lassman, W., B. Ford, R. W. Gan, G. **Pfister**, S. Magzamen, E. V. Fischer, and J. R. Pierce, 2017: Spatial and temporal estimates of population exposure to wildfire smoke during the Washington state 2012 wildfire season using blended model, satellite, and in situ data, *GeoHealth*, **1**, 106–121, doi:10.1002/2017GH000049.
78. Ford, B., Burke, M., Lassman, W., **Pfister**, G., and Pierce, J. R., 2017: Status update: is smoke on your mind? Using social media to assess smoke exposure, *Atmos. Chem. Phys.,* **17**, 7541-7554, https://doi.org/10.5194/acp-17-7541-2017.
79. Zaragoza, J., Callahan, S., McDuffie, E. E., Kirkland, J., Brophy, P., Durrett, L. Fischer, E. V., Zhou, Y., Sive, B., Flocke, F., **Pfister**, G., Knote, C., Tevlin, A., Murphy, J.,, 2017: Observations of acyl peroxy nitrates during the Front Range Air Pollution and Photochemistry Éxperiment (FRAPPÉ), J. *Geophys. Res.* , **122**, https://doi.org/10.1002/2017JD027337
80. Fix, M., D. Cooley, A. Hodzic, E. Gilleland, B.T. Russell, W.C. Porter, **G.G. Pfister**, 2018: Observed and predicted sensitivities of extreme surface ozone to meteorological drivers in three US cities, *Atm. Environ.*, **176**, 292-300, https://doi.org/10.1016/j.atmosenv.2017.12.036.
81. Kumar, R., Barth, M. C., **Pfister**, G. G., DelleMonache, L., Lamarque, J. F., Archer-Nicholls, S., Walters, S., 2018: How will air quality change in South Asia by 2050? *J. Geophys. Res,* **123**, https://doi.org/10.1002/2017JD027357
82. Abdi-Oskouei, M., **Pfister**, G., Flocke, F., Sobhani, N., Saide, P., Fried, A., Richter, D., Weibring, P., Walega, J., and Carmichael, G., 2018: Impacts of physical parameterization on prediction of ethane concentrations for oil and gas emissions in WRF-Chem, *Atmos. Chem. Phys.*, 18, 16863-16883, https://doi.org/10.5194/acp-18-16863-2018.
83. Tang, W., Emmons, L. K., Arellano, A. F., Gaubert, B., Knote, C., Tilmes, S., Buchholz, R. R., **Pfister**, G. G., Diskin, G. S., Blake, D. R., Blake, N. J., Meinardi, S., DiGangi, J P., Choi, Y., Woo,J., He, C., Schroeder, J. R., Suh, I., Lee, H., Jo, H., Kanaya, Y., Jung, J., Lee, Y., and Kim, D.: 2019: Source contributions to carbon monoxide concentrations during KORUS-AQ based on CAM-chem model applications. *Journal of Geophysical Research: Atmospheres*, 124, 2796– 2822. https://doi.org/10.1029/2018JD029151.
84. Kumar, R., Delle Monache, L., Bresch, J., Saide, P. E., Tang, Y., Liu, Z., da Silva, A. M., Alessandrini, S., **Pfister**, G., Edwards, D., Lee, P., Djalalova, I., 2019: Toward improving short-term predictions of fine particulate matter over the United States via assimilation of satellite aerosol optical depth retrievals. *Journal of Geophysical Research: Atmospheres*, **124**, https://doi.org/10.1029/2018JD029009.
85. Reid, C., M. Jerrett, E. Considine, G. Watson, D. Telesca, G. **Pfister**, 2019: Associations between ozone and fine particulate matter with respiratory health during a wildfire, *Environment International*, Volume 12, 2019, 291-298, https://doi.org/10.1016/j.envint.2019.04.033.
86. Watson, G.L., D. Telesca, C.E. Reid, G. **Pfister**, M. Jerrett, 2019: Machine learning models accurately predict ozone exposure during wildfire events, *Environmental Pollution*, Volume **254**, Part A, https://doi.org/10.1016/j.envpol.2019.06.088.
87. Chen, X., Millet, D. B., Singh, H. B., Wisthaler, A., Apel, E. C., Atlas, E. L., Blake, D. R., Bourgeois, I., Brown, S. S., Crounse, J. D., de Gouw, J. A., Flocke, F. M., Fried, A., Heikes, B. G., Hornbrook, R. S., Mikoviny, T., Min, K.-E., Müller, M., Neuman, J. A., O'Sullivan, D. W., Peischl, J., **Pfister**, G. G., Richter, D., Roberts, J. M., Ryerson, T. B., Shertz, S. R., Thompson, C. R., Treadaway, V., Veres, P. R., Walega, J., Warneke, C., Washenfelder, R.

A., Weibring, P., and Yuan, B., 2019: On the sources and sinks of atmospheric VOCs: an integrated analysis of recent aircraft campaigns over North America, *Atmos. Chem. Phys.*, **19**, 9097-9123, https://doi.org/10.5194/acp-19-9097-2019.

88. Gan, R., J. Liu, B. Ford, K. O'Dell, A. Vaidyanathan, A. Wilson, J. Volckens, G. **Pfister**, J.R. Pierce, S. Magzamen, 2019: The association between wildfire smoke exposure and asthma-specific medical care utilization in Oregon during the 2013 wildfire season, *Journal of Exposure Science And Environmental Epidemiology*, to be published.
89. Karumuri, R.K., Ghude, S., Jena, C., Kulkarni, R., **Pfister, G.** Pithani, P., Debnath, S., Kumar, R., Badimella, U., Kulkarni, S., Vander, R., Mahajan, A., 2019: What is driving the diurnal variation in tropospheric NO2 columns over a cluster of high emission thermal power plants in India?, *Atmospheric Environment*, https://doi.org/10.1016/j.aeaoa.2019.100058.
90. Neyestani, S.E., S. Walters, G. **Pfister**, G. J. Kooperman, R. Saleh, 2019: Public Health and Climate Implications of aerosol emissions associated with Shifting to Gasoline Direct-Injection (GDI) Technologies in Light-duty Vehicles in the United States, *Environmental Science and Technology*, Environ Sci Technol. 2020 Jan 21;54(2):687-696. doi: 10.1021/acs.est.9b04115.
91. Flocke, F., G. **Pfister**, J. Crawford, K. Pickering, G. Pierce, D. Bon, P. Reddy, 2019: Air Quality in the Northern Colorado Front Range Metro Area: The Front Range Air Pollution and Photochemistry Éxperiment (FRAPPÉ), *Journal of Geophysical Research: Atmospheres, 125, e2019JD031197. https://doi.org/10.1029/2019JD031197*
92. Choi, S., L. Lamsal, M. Follette-Cook, M., J. Joiner, N.A. Krotkov, W. H. Swartz, K. E. Pickering, C.P. Loughner, W. Appel, G. **Pfister,** P.E. Saide, R. C. Cohen, A. J. Weinheimer, J. R. Herman, 2020: Assessment of NO_2 observations during DISCOVER-AQ and KORUS-AQ field campaigns, *Atmos. Meas. Tech.*, 13, 2523–2546, https://doi.org/10.5194/amt-13-2523-2020.
93. Saide, P.E., M. Gao, Z. Lu, D. G. Streets, Jung-Hun Woo, A. Beyersdorf, K. L. Thornhill, Jo. W. Hair, A. R. Nehrir, J. L. Jimenez, B. A. Nault, P. Campuzano-Jost, J. Dibb, E. Heim, K. Lamb, J. Schwarz, A. Perring, J. Kim, M. Choi, B. Holben, G. **Pfister**, A. Hodzic, G. R Carmichael, L. Emmons, J. H. Crawford, 2019: Understanding and improving model representation of aerosol optical properties for a Chinese haze event measured by KORUS-AQ, *Atmospheric Chemistry and Physics,* accepted.
94. Pfister, G., Eastham S., Barth, M., D. Jacob, L.K. Emmons et al.: A MUlti-Scale Infrastructure for Chemistry and Aerosols – MUSICA. *Bulletin of the American Meteorological Society*, in review.

ARTICLES to be submitted

95. Reid, C. E., E.M. Considine, G.L. Watson, D. Telesca, G. Pfister, M. Jerrett: Effect modification of the association between wildfire smoke and respiratory health by area-level measures of socio-economic status and race/ethnicity, to be submitted to *Environmental Science & Technology*.

BOOK CHAPTERS

Richard Loft, Aaron Andersen, Frank Bryan, John M. Dennis, Tom Engel, Pam Gillman, David Hart, Irfan Elahi, Siddhartha Ghosh, Rory Kelly, Anke Kamrath, **Gabriele Pfister**, Matthias Rempel, Justin Small, William Skamarock, Michael Wiltberger, Bryan Shader, Po Chen, and

Ben Cash: "Yellowstone: A Dedicated Resource for Earth System Science" in "Contemporary High Performance Computing: From Petascale Toward Exascale", Volume Two. CRC Computational Science Series, Chapman and Hall/CRC, 2015.

Kumar, Rajesh; C. Barth, Mary; Delle Monache, Luca; Ghude, Sachin; **Pfister, Gabriele**; Naja, Manish; Brasseur, Guy. (2017). An Overview of Air Quality Modeling Activities in South Asia. 27-47. 10.1007/978-3-319-59489-7_2.

NON-REFEREED PUBLICATIONS

1. **Pfister** G., E. Putz, G. Bernhard, G. Seckmeyer, B. Mayer, 1997: Comparison of high resolution spectral UV-measurements with DISORT model results using different extraterrestrial spectra, Proceedings of IRS'96, Univ. of Alaska, Fairbanks
2. **Pfister**, G., D. Baumgartner, R. Maderbacher, G. Folberth, D.F. Vogl, E. Putz, 2001: Determination of Photolysis Frequencies for O_3 and NO_2 by means of spectral actinic flux measurements, in Proceedings of the International Radiation Symposium IRS 2000, St. Petersburg, Russia, A. Deepak Publishing.
3. **Pfister**, G., R.L. McKenzie, B. Liley, A. Thomas, M.J. Uddstrom, A. Heidinger, 2002: Cloud Climatology for New Zealand and Implications for Radiation Fields, in Proceedings to UV Radiation and its Effects, Christchurch, NZ, March 2002.
4. **Pfister** G., F. F. Flocke, S. Lee, J. Schroeder: "Process - Based and Regional Source Impact Analysis for FRAPPÉ and DISCOVER - AQ 2014", Report to the Colorado Department of Public Health and Environment, July 2017. (https://www.colorado.gov/airquality/tech_doc_repository.aspx/)
5. K. Chance, X. Liu, C. Chan Miller, G.González Abad, G. Huang, C. Nowlan, A. Souri, R. Suleiman, K. Sun, H. Wang, L. Zhu, P. Zoogman, J. Al-Saadi, J.-C. Antuña-Marrero, J. Carr, R. Chatfield, M. Chin, R. Cohen, D. Edwards, J. Fishman, D. Flittner, J. Geddes, M. Grutter, J.R. Herman, D.J. Jacob, S. Janz J. Joiner, J. Kim, N.A. Krotkov, B. Lefer, R.V. Martin, O.L. Mayol-Bracero, A. Naeger, M. Newchurch, G.G. **Pfister**, K. Pickering, R.B. Pierce, C. Rivera Cárdenas, A. Saiz-Lopez, W. Simpson, E. Spinei, R.J.D. Spurr, J.J. Szykman, O. Torres, and J. Wang: TEMPO Green Paper: Chemistry, physics, and meteorology experiments with the Tropospheric Emissions: Monitoring of Pollution instrument, Proc. SPIE, Vol. 11151, Sensors, Systems, and Next-Generation Satellites XXIII.

ORAL PRESENTATIONS (First Author Contributions)

- **{Invited:** Seminar Speaker at the 2019/2020 NOAA/Geophysical Fluid Dynamics Laboratory (GFDL) Seminar Series (seminar date 30 April 2020)}
- NCAR ACOM Seminar Series, "FRAPPÉ - Air Quality Research as a Key to Addressing Societal Needs", 22 January 2020, Boulder, CO.
- **Invited**: AGU Fall Meeting, *On the Robustness of Air Quality Prediction Performance Assessment*, 11 December 2019, San Francisco, CA.
- **Invited:** International Workshop on Chemistry Climate Interaction [IWCCI], *Challenges of modelling Atmospheric Chemistry in the context of using observations to assess model representations of meteorology and chemistry*, 12-15 March 2019, Indian Institute of Tropical Meteorology, Pune, India.

- 9th International Workshop on Air Quality Forecasting Research (IWAQFR), *Evaluation of AQ models: what we miss with limited information*, 7-9 November 2018, Boulder, CO
- KORUS-AQ Science Team Meeting, *WRF Tracers to inform about the influence of point and area sources*, 28-30 August 2018, UC Irvine, CA.
- **Invited:** Fundamentals of Atmospheric Chemistry and Aerosol Modeling Workshop, *Model Evaluation,* 13-15 August 2019, NCAR/ACOM, Boulder CO.
- **Invited:** Workshop on the Integration of GEOS-Chem into NCAR models, *WRF Overview,* 30 July 2019, NCAR/ACOM, Boulder, CO.
- **Invited:** World Resources Institute AQ Learning Day, *Source attribution - how can we know more about what's causing pollution?*, 2-4 June 2018, San Francisco, CA.
- **Invited:** Regional Air Quality Council (RAQ) Board Meeting, *Transport and Chemistry Modeling in the Colorado North Front Range Based on FRAPPEE and DISCOVER-AQ 2014*, 6 April 2018, Denver, CO
- **Invited:** City of Fort Collins Board Meeting, *Monitoring Network Assessment for the City of Fort Collins*, 15 November 2017, Fort Collins, CO
- **Invited**: Regional Air Quality Council (RAQ) Ozone Modeling Forum, *FRAPPÉ and DISCOVER-AQ 2014 Regional Source Impact Analysis*, 2 November 2017, Denver CO.
- **Invited:** 2017 MAC-MAQ Conference, Meteorology And Climate – Modeling for Air Quality, *"Transport and Chemistry Modeling in the Colorado Northern Front Range Metropolitan Area"* 13-15 September 2017, UC Davis, CA.
- **Invited:** 2017 Western Modeling Workshop, "*Source Contributions to Surface Ozone in the Colorado Front Range during FRAPPÉ*", 6-8 September 2017, NCAR Center Green, Boulder CO
- FRAPPÉ and DISCOVER-AQ Science Team Meeting, "*Using Observations and source specific model tracers to characterize Transport Patterns during FRAPPÉ and DISCOVER-AQ"*, 2-3 May 2017, NCAR Center Green, Boulder, CO.
- **Invited:** NOAA ESRL Seminar**,** *Air Quality in the Northern Colorado Front Range: Results from FRAPPÉ and DISCOVER-AQ Campaigns*, 29 March 2017
- **Invited:** CSU ATS Colloquium, 16 September 2016, Fort Collins, CO, *"The Air You Breathe: An Overview and Early Results from the Front Range Air Pollution and Photochemistry Experiment (FRAPPE)"*
- Regional Air Quality Council Meeting, 4 May 2016, Denver CO, "*Updates on FRAPPÉ"*
- **Invited**: AMS 96th Annual Meeting, Jan 2016, New Orleans, LA, *"A detailed look at oil and gas impacts on air quality in the Colorado Northern Front Range"*
- AQAST 9 Meeting, Saint Louis University, June 2015, "*A first look at results from FRAPPÉ and DISCOVER 2014-AQ*"
- **Invited**: Transboundary Ozone Pollution Conference organized by San Joaquin Valley APCD, Yosemite, March/April 2015 (oral presentations and session leader)
- FRAPPÉ Science Team Meeting, May 2015 at NCAR (Organizer and Presenter)
- **Invited**: Western Air Quality Modeling Workshop, Boulder, CO, May 2015: *"2014 DISCOVER-AQ and FRAPPE field campaigns - Science Team report"*

- Air Quality Applied Sciences Team (AQAST) Meeting, University of Atlanta, December 2014, "*Colorado summertime ozone: field campaigns, modeling and data analysis to support decision makers*"
- ACD Seminar, NCAR, March 2014: *"Current and Future Summertime Ozone Pollution over the U.S.: Emissions, Transport and Chemistry"*
- **Invited**: Seminar at Howard University, November 2013, Washington D.C.: "*Prediction of North American Air Quality"*
- **Invited**: Air Quality and Oil & Gas Development in the Rocky Mountain Region Workshop, October 2013, Boulder CO: "*FRAPPÉ: The Front Range Air Pollution and Photochemistry Éxperiment"*
- **Invited**: 2013 Western Air Quality Modeling Workshop, July 2013, Boulder, CO: *"Modeling Ozone Exceptional Events: California, 2008 & Colorado/Wyoming, 2012"*
- WRF User's Workshop, Boulder, CO, June 2013: "*Prediction of North American Air Quality*"
- Air Quality Applied Sciences Team (AQAST) Meeting, University of Maryland, June 2013, "*Impacts of Wildfires on the Air Quality in the Colorado Front Range in Summer 2012*"
- NCAR Science Discovery Day, March 2013, Boulder, CO: "*Seasonal Prediction of Air Quality*"
- NCAR/CISL Seminar, March 2013, Boulder, CO: "*Prediction of North American air quality"*
- **Invited**: CU Seminar, March 2013, Boulder, CO: "*Wildfires and their Impacts on AQ*"
- **Invited**: WESTAR Wildfire and Ozone Exceptional Events Meeting, Sacramento, CA, March 2013, "*Modeling Ozone Exceptional Events: California, 2008 & Colorado/Wyoming, 2012*"
- Chemistry-Climate Working Group Meeting, NCAR, Feb 2013: "*Prediction of Future North American Air Quality"*
- Air Quality Applied Sciences Team (AQAST) Meeting, Sacramento, December 2012: "*Air Quality and Health Impacts from the Colorado Wildfires in June 2012*"
- AGU Fall Meeting December 2012: "*Air Quality and Health Impacts from the Colorado Wildfires in June 2012"*
- IGARSS, Munich, July 2012: "*Incorporating Satellite Trace Gas Retrievals in Air Quality Simulations"*
- WRF User's Workshop, Boulder, June 2012: "*Tracers for CO and ozone in WRF-Chem - interpretation of pollution sources and chemical and transport processes*"
- Air Quality Applied Sciences Team (AQAST) Meeting, U. Wisconsin, June 2012: "*NCAR/ACD Updates to AQAST Activities"*
- Air Quality Applied Sciences Team (AQAST) Meeting, Research Triangle Park, Nov. 2011: "*Global chemical transport modeling in support of the Denver SIP modeling*"
- **Invited**: University of Edinburgh, Scotland; Global Change Seminar, October 2011: "*Linking the Scales: Chemical Weather and Air Quality"*
- NCAR/ACD Seminar Talk, Boulder, CO, July 2011: "*Linking the Scales: Chemical Weather and Air Quality"*
- WRF User's Workshop, Boulder, CO June 2011*:"A New Precipitation Scavenging Scheme for WRF-Chem"*

- National Air Quality Conference, San Diego, CA, March 2011*:" Airmass Characteristics of Surface Air Quality over California"*
- AGU Fall Meeting 2010, San Franciso, CA, USA, December 2010: "*Airmass Characteristics of Surface Air Quality over California"*
- **Invited:** Seminar at the Michigan Technical University, Houghton, MI, USA, November 2010: *"Linking the Scales: Chemical Weather and Air Quality"*
- EGU General Assembly 2010, 3-7 May 2010, Vienna, Austria: "*Surface Ozone over California: The Influence of Pollution Inflow*"
- AGU 2009 Fall Meeting, San Francisco, CA, December 2009: "*Summertime Ozone over California: A Model-Measurement Analysis across Scales*"
- ARCTAS California Workshop, UC Davis, CA, June 2009: "*Analysis of ARCTAS CARB data using the regional WRF-Chem and global MOZART models*"
- 2009 National Air Quality Conferences, Dallas, TX, March 2009: "*Impacts of the Fall 2007 California Wildfires on Surface Ozone: Integrating Local Observations with Global Model Simulations*"
- European Geophysical Society General Assembly, Vienna, Austria, April 2008*: "Analysis of the Summer 2004 Ozone Budget over the U.S. using IONS-04 Observations and MOZART-4*"
- AGU Fall Meeting 2007, San Franciso, CA, USA, December 2007: "*Transpacific Transport of Pollution and its Impact on Atmospheric Composition over North America*"
- 12th Annual CCSM Workshop, Breckenridge, CO, USA, June 2007: "*Radiative Forcing of the 2004 Alaska Fires*'
- IONS Workshop, Penn State University, PA, USA, March 2007: "*The Ozone Budget over NA during INTEX-A: Analysis using IONS Observations and MOZART-4*"
- NCAR/UCAR Junior Faculty Forum, Boulder, CO, USA, August 2006: *"Remote Sensing Techniques in Air Quality Monitoring*"
- NCAR/ESSL Advisory Panel Meeting, NCAR, Boulder, CO, August 2006: *"Isoprene emissions and chemistry in MOZART-4 and its impacts on atmospheric key species"*
- ASP Research Review, NCAR, Boulder, CO, USA, April 2006
- European Geophysical Society General Assembly, Vienna, Austria, April 2006: "*Quantifying CO Emissions over South America"*
- **Invited:** Seminar at the Michigan Technical University, Houghton, MI, USA, October 2005.:*"Effects of North American Boreal Fires on Tropospheric Composition and Chemistry in Nearby and Remote Regions"*
- European Geophysical Society General Assembly, Vienna, Austria, April 2005: "*Analysis of the Wildfires in Alaska and Canada in Summer 2004: Source Estimate and the Impact on Air Chemistry and Composition"*
- NOAA – WS-P3 Workshop, Boulder, CO, USA, April 2005: "*CO Emission Estimate of the Alaskan Wildfires in 2004 Using Data Assimilation and Inverse Modeling of MOPITT Data in MOZART"*
- Research Report of the Atmospheric Chemistry Division, NCAR, Boulder, CO, USA, March 2005

- **Invited:** Atmospheric Geophysical Union, 2004 Joint Assembly, Montreal, Canada, May 2004: "*Simulating CO Concentrations over Europe: Evaluation and Budget Study"*
- Geophysical Seminar, Institute for Geophysics, Astrophysics, and Meteorology, University of Graz, Austria, December 2003: "*The MOPITT Project"*
- UV Radiation and its Effects, Christchurch, New Zealand, March 2002: *"Cloud Climatology for NZ and implications for radiation fields"*
- Communicating Meteorology, Meteorological Society Symposium, Wellington, New Zealand, November 2001:*"Cloud Coverage based on All-Sky Imaging and its Impact on Surface Solar Irradiance"*
- **Invited:** Seminar at the Institute for Meteorology, University of Hanover, Germany, June 2001: "*Aerosole und ihr Einfluss auf den UV-Strahlungstransfer: Theoretische Studien und erste Ergebnisse von Messungen an einer alpinen Station"*
  (Aerosols and their Impact on the Radiative Transfer in the UV: Theoretical Studies and Preliminary Results from Observations at an Alpine Site)
- Seminar Series of the Institute for Geophysics, Astrophysics, and Meteorology, Graz, Austria, June 2000: "*Experimentelle und Theoretische Methoden zur Bestimmung der Photolysefrequenzen J(O1D) und J(NO2)" (Experimental and Theoretical Methods for Determining Photolysis Frequencies J(O1D) and J(NO2))*
- Assembly of the European Geophysical Society, STAAARTE Workshop, Nice, France, April 2000:"*Vertical Distribution of Photolysis Frequencies for Ozone and Nitrogen Dioxide under Clear and Cloudy Conditions"*
- Assembly of the European Geophysical Society, Nice, France, April 1998: "*Measurement and Modeling of the Photolysis Frequencies J(O1D) and J(NO2)"*