Curriculum Vitae

**Daniel A. Jaffe**

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**Education**

Ph.D. Chemistry, June 1987, University of Washington; graduate work in inorganic, analytical and atmospheric chemistry, atmospheric sciences, environmental sciences and policy.

M.S. Chemistry, December 1983, University of Washington

B.S. Chemistry, February 1979, Massachusetts Institute of Technology

**Professional Experience**

Professor and Chair, School of STEM, Physical Sciences Division, University of Washington Bothell, Sept 1997-present. (Chair from 2013-2022).

Professor, Atmospheric Sciences, University of Washington Seattle, Sept 2010-present.

Professor of Chemistry--University of Alaska Fairbanks, Department of Chemistry/Geophysical Institute, Sept. 1987 – Sept.1997

Teaching Assistant/Instructor, University of Washington, September 1982 – March 1987.

Teacher, North Andover High School, North Andover, MA, September 1979 - June 1981.

Editor-In-Chief, Aerosol and Air Quality Research, December 2015-present.

**Research**

The main themes of my research are on global and regional air pollution and long range transport of pollution (especially ozone, nitrogen oxides, CO, aerosols, and mercury). I am also interested in science and environmental education.

**Honors and awards**

Elected to the Washington State Academy of Sciences (July 2021). Selected for National Academy of Sciences panel on "The Significance of International Transport of Air Pollutants" BASC-U-07-01-A, National Academy of Sciences/National Research Council. June 2008. Chapter lead for chapters on ozone and mercury for UNEP-HTAP 2007 report. Named the Fulbright Distinguished Chair in Environmental Sciences at Parthenope University of Naples for 2014. First UW-Bothell Distinguished Research, Scholarship, and Creative Activity Award (DRSCA) given in 2014. Selected as scientific expert/advisor for EPA Clean Air Science Advisory Committee (CASAC) in 2020.

**Synergistic activities:**

* **Lead and contributing author for numerous reviews and assessments on ozone, mercury and smoke impacts on U.S. air quality.**
* **Participant and chapter lead for National Academy of Sciences study on global air pollution.**
* **Development of new analytical methods to measure atmospheric Hg(II) compounds.**
* **Development of new metrics to quantify smoke impacts on air quality in the western U.S.**
* **Development of new methods to quantify ozone impacts from wildfires in the western U.S.**
* **Elected to the Washington State Academy of Sciences in 2021.**

**Key Discoveries and accomplishments**

* **Over 200 scientific papers and reports; h-index of 72 (Google scholar).**
* **Principal investigator on more than 31 projects (total >$9 million) with funding from NSF, EPA, NOAA, NASA, USGS and industry and NGOs.**
* **Lead and contributing author for numerous reviews and assessments on ozone, mercury and smoke impacts on U.S. air quality.**
* **Discovery of transport of Asian air pollution to North America.**
* **Establishment and long-term operation of the Mt. Bachelor Observatory, the only long-term high elevation atmospheric chemistry research site on the west coast of the U.S.**
* **Participant and chapter lead for National Academy of Sciences study on global air pollution.**
* **Development of new analytical methods to measure atmospheric Hg(II) compounds.**
* **Identification of a significant under-estimate of mercury emissions from Asia.**
* **Development of new metrics to quantify smoke impacts on air quality in the western U.S.**
* **Development of new methods to quantify ozone impacts from wildfires in the western U.S.**

**Peer-Reviewed Publications**

1. Jin, L., Permar, W., Selimovic, V., Ketcherside, D., Yokelson, R. J., Hornbrook, R. S., Apel, E. C., Ku, I.-T., Collett Jr., J. L., Sullivan, A. P., Jaffe, D. A., Pierce, J. R., Fried, A., Coggon, M. M., Gkatzelis, G. I., Warneke, C., Fischer, E. V., and Hu, L.: Constraining emissions of volatile organic compounds from western US wildfires with WE-CAN and FIREX-AQ airborne observations, Atmos. Chem. Phys., 23, 5969–5991, https://doi.org/10.5194/acp-23-5969-2023, 2023.
2. Chang, K.-L., Cooper, O. R., Rodriguez,G., Iraci, L. T., Yates, E. L., Johnson,M. S.,Jaffe, D.A. et al. Diverging ozone trends above western North America: Boundary layer decreases versus free tropospheric increases. *Journal of Geophysical Research: Atmospheres*, *128*, e2022JD038090. <https://doi.org/10.1029/2022JD038090>, 2023.
3. Jaffe, D., Miller, C., Thompson, K., Nelson, M., Finley, B., Ouimette, J., and Andrews, E.: An evaluation of the U.S. EPA’s correction equation for Purple Air Sensor data in smoke, dust and wintertime urban pollution events, Atmos. Meas. Tech. 16, 1311–1322, <https://doi.org/10.5194/amt-16-1311-2023>, 2023.
4. May, N. W., Bernays, N., Farley, R., Zhang, Q., and Jaffe, D. A.: Intensive aerosol properties of boreal and regional biomass burning aerosol at Mt. Bachelor Observatory: larger and black carbon (BC)-dominant particles transported from Siberian wildfires, Atmos. Chem. Phys., 23, 2747–2764, <https://doi.org/10.5194/acp-23-2747-2023>, 2023.
5. Marsavin A., van Gageldonk R., Bernays N., May N.M., Jaffe D.A., and Fry J.L. Optical properties of biomass burning aerosol during the 2021 Oregon fire season: comparison between wild and prescribed fires. Environ. Sci.: Atmos. <http://dx.doi.org/10.1039/D2EA00118G>, 2023.
6. Warneke, C., Schwarz, J. P., Dibb, J., Kalashnikova, O., Frost, G., Al-Saad, J., Jaffe D.A. et al. Fire influence on regional to global environments and air quality (FIREX-AQ). Journal of Geophysical Research: Atmospheres, 128, e2022JD037758. <https://doi.org/10.1029/2022JD037758>, 2023.
7. Ninneman M, Petropavlovskikh I, Effertz P, Chand D, Jaffe D. Investigation of the Parameters Influencing Baseline Ozone in the Western United States: A Statistical Modeling Approach. Atmosphere. 13(11):1883. <https://doi.org/10.3390/atmos13111883>, 2022.
8. Sedlacek A.J. Lewis E.R., Onasch T.B., Zuidema P., Redemann J., Jaffe D, and Kleinman L.I. Using the Black Carbon Particle Mixing State to Characterize the Lifecycle of Biomass Burning Aerosols. Environmental Science & Technology, 56 (20), 14315-14325 DOI: 10.1021/acs.est.2c03851, 2022.
9. Jaffe, D. A., Schnieder, B., and Inouye, D.: Technical note: Use of PM2.5 to CO ratio as an indicator of wildfire smoke in urban areas, Atmos. Chem. Phys., 22, 12695–12704, https://doi.org/10.5194/acp-22-12695-2022, 2022.
10. Jaffe, D. A., Ninneman, M., & Chan, H. C. NOx and O3 trends at U.S. non-attainment areas for 1995–2020: Influence of COVID-19 reductions and wildland fires on policy-relevant concentrations. Journal of Geophysical Research: Atmospheres, 127, e2021JD036385. <https://doi.org/10.1029/2021JD036385>, 2022.
11. Bernays, N., Jaffe, D. A., Petropavlovskikh, I., and Effertz, P.: Comment on “Comparison of ozone measurement methods in biomass burning smoke: an evaluation under field and laboratory conditions” by Long et al., Atmos. Meas. Tech., 15, 3189–3192, https://doi.org/10.5194/amt-15-3189-2022, 2022.
12. Farley R., Bernays N., Jaffe D.A., Ketcherside D., Hu L,. Zhou S., Collier S and Zhang Q. Persistent Influence of Wildfire Emissions in the Western United States and Characteristics of Aged Biomass Burning Organic Aerosols under Clean Air Conditions. Environ. Sci. Technol. 56, 6, 3645–3657, <https://doi.org/10.1021/acs.est.1c07301>, 2022.
13. Lee H-J, Chang L-S, Jaffe DA, Bak J, Liu X, Abad GG, Jo H-Y, Jo Y-J, Lee J-B, Yang G-H, Kim J-M, Kim C-H. Satellite-Based Diagnosis and Numerical Verification of Ozone Formation Regimes over Nine Megacities in East Asia. Remote Sensing. 2022; 14(5):1285. <https://doi.org/10.3390/rs14051285>, 2022.
14. Ninneman M and Jaffe D. The impact of wildfire smoke on ozone production in an urban area: Insights from field observations and photochemical box modeling. Atmos.Envir. 267 118764. <https://doi.org/10.1016/j.atmosenv.2021.118764>, 2021.
15. Ninneman M, Jaffe D. Observed Relationship between Ozone and Temperature for Urban Nonattainment Areas in the United States. Atmosphere. 12(10):1235. <https://doi.org/10.3390/atmos12101235>, 2021.
16. May, N.W., Dixon, C., Jaffe, D.A. Impact of Wildfire Smoke Events on Indoor Air Quality and Evaluation of a Low-cost Filtration Method. Aerosol Air Qual. Res. 21, 210046. <https://doi.org/10.4209/aaqr.210046>, 2021.
17. Lee, H.-J.; Chang, L.-S.; Jaffe, D.A.; Bak, J.; Liu, X.; Abad, G.G.; Jo, H.-Y.; Jo, Y.-J.; Lee, J.-B.; Kim, C.-H. Ozone Continues to Increase in East Asia Despite Decreasing NO2: Causes and Abatements. Remote Sens. 13, 2177. <https://doi.org/10.3390/rs13112177>, 2021.
18. Flynn M.T., Mattson E.J., Jaffe D.A., and Gratz L.E. Spatial patterns in summertime surface ozone in the southern Front Range of the Rocky Mountains, USA. Elementa: Science of the Anthropocene. 9 (1): 00104. <https://doi.org/10.1525/elementa.2020.00104>, 2021.
19. Hu C., Kang P., Jaffe D.A. Li C., Zhang X., Wu K., and Zhou M. Understanding the impact of meteorology on ozone in 334 cities of China. Atmos. Envir., 248, 118221, <https://doi.org/10.1016/j.atmosenv.2021.118221>, 2021.
20. Jaffe D.A., Fiore A.M. and Keating, T.J. Importance of Background O3 for Air Quality Management. EM. November 2020.
21. Altshuler S.L., Zhang Q., Kleinman M.T., Garcia-Menendez, F. Jr., Moore C.T., Hough M.L, Stevenson E.D., Chow J.C., Jaffe D.A. and Watson J.G. Critical Review Discussion: Wildfire and prescribed burning impacts on air quality in the United States, Journal of the Air & Waste Management Association, DOI: [10.1080/10962247.2020.1813217](https://doi.org/10.1080/10962247.2020.1813217), 2020.
22. Kurz A.Y., Blum J.D., Gratz L.E., and Jaffe D.A. Contrasting Controls on the Diel Isotopic Variation of Hg- at Two High Elevation Sites in the Western United States. Environ. Sci. Technol. 54 (17), 10502-10513, doi: 10.1021/acs.est.0c01918, 2020.
23. Zeng, Y., Jaffe, D.A., Qiao, X., Miao, Y. and Tang, Y. Prediction of Potential High PM2.5 Concentrations in Chengdu, China. Aerosol Air Qual. Res., <https://doi.org/10.4209/aaqr.2019.11.0586>, 2020.
24. Hopke P. K. and Jaffe D.A. Letter to the Editor: Ending the Use of Obsolete Data Analysis Methods. Aerosol and Air Quality Research, 20: 688–689, doi: 10.4209/aaqr.2020.01.0001. 2020.
25. Jaffe D.A., O’Neill S.M., Larkin N.K., Holder A.L, Peterson D.L., Halofsky J.E. and Rappold A.G. Wildfire and prescribed burning impacts on air quality in the United States, J. Air and Waste Mgt. Assn., DOI: [10.1080/10962247.2020.1749731](https://doi-org.offcampus.lib.washington.edu/10.1080/10962247.2020.1749731), 2020.
26. Chandra, P.B. McClure. C.M., Mulligan,J. and Jaffe D.A., Analysis of ambient VOCs using thermal desorption gas chromatography to identify smoke influence in urban areas. Atmosphere 11(3), 276; <https://doi.org/10.3390/atmos11030276>, 2020.
27. Casazza M., Lega M., Jannelli E., Minutillo M., Jaffe D., Severino V. and Ulgiati S. 3D monitoring and modelling of air quality for sustainable urban port planning: Review and perspectives. J. Cleaner Production 231, 1342-1352, <https://doi.org/10.1016/j.jclepro.2019.05.257>, 2019.
28. Buysse C.E. Kaulfus A. Nair U. and Jaffe D.A. Relationships between particulate matter, ozone, and nitrogen oxides during urban smoke events in the western US. Environ. Sci. Technol., DOI: 10.1021/acs.est.9b05241, 2019.
29. Laing J.R., Jaffe D.A. and Sedlacek A.J.III. Comparison of Filter-based Absorption Measurements of Biomass Burning Aerosol and Background Aerosol at the Mt. Bachelor Observatory. Aer. Air Qual. Res, DOI: 10.4209/aaqr.2019.06.0298, 2019.
30. Laing J.R. and Jaffe D.A. [Wildfires Are Causing Extreme PM Concentrations in the Western United States](http://pubs.awma.org/flip/EM-June-2019/jaffe.pdf). EM- The Magazine for Environmental Managers , A&WMA , June 2019
31. Zhou, S., Collier, S., Jaffe, D. A., and Zhang, Q.: Free tropospheric aerosols at the Mt. Bachelor Observatory: more oxidized and higher sulfate content compared to boundary layer aerosols, Atmos. Chem. Phys., 19, 1571-1585, https://doi.org/10.5194/acp-19-1571-2019, 2019.
32. Chatterjee, A., Devara, P.C., Balasubramanian, R. and Jaffe, D.A. (2019). Aerosol Climate Change Connection (AC3) Special Issue: An Overview. Aerosol Air Qual. Res. 19: 1-4. https://doi.org/10.4209/aaqr.2018.11.0435.
33. Guo, J. J., Fiore, A. M., Murray, L. T., Jaffe, D. A., Schnell, J. L., Moore, C. T., and Milly, G. P.: Average versus high surface ozone levels over the continental USA: model bias, background influences, and interannual variability, Atmos. Chem. Phys., 18, 12123-12140, https://doi.org/10.5194/acp-18-12123-2018, 2018.
34. Jaffe DA, Cooper OR, Fiore AM, Henderson BH, Tonneson GS, Russell AG, Henze DK, Langford AO, Lin M and Moore T. Scientific assessment of background ozone over the U.S.: Implications for air quality management. Elem Sci Anth. 2018;6(1):56. doi:<http://doi.org/10.1525/elementa.309>, 2018.
35. McClure C.D. and Jaffe D.A. US particulate matter air quality improves except in wildfire-prone areas. Proc.Natl.Acad.Sci., DOI: 10.1073/pnas.1804353115, 2018.
36. McClure C.D. and Jaffe D.A. Investigation of High Ozone Events due to Wildfire Smoke in an Urban Area.  Atmos. Envir. <https://doi.org/10.1016/j.atmosenv.2018.09.021>, 2018.
37. Schuerger, A.C., Smith, D.J., Griffin, D.W. et al. Science questions and knowledge gaps to study microbial transport and survival in Asian and African dust plumes reaching North America. Aerobiologia (2018) 34: 425. <https://doi.org/10.1007/s10453-018-9541-7>.
38. Fiore, A. M., Fischer, E. V., Milly, G. P., Pandey Deolal, S., Wild, O., Jaffe, D. A., et al. Peroxy acetyl nitrate (PAN) measurements at northern midlatitude mountain sites in April: a constraint on continental source–receptor relationships, Atmos. Chem. Phys., 18, 15345-15361, https://doi.org/10.5194/acp-18-15345-2018, 2018.
39. Carlton A.G. Synthesis of the Southeast Atmosphere Studies: Investigating Fundamental Atmospheric Chemistry Questions. Bull. Amer. Met. Soc., <https://doi.org/10.1175/BAMS-D-16-0048.1>, March 2018.
40. Gaudel A, Cooper OR, Ancellet G, Barret B, Boynard A, Burrows JP, et al. Tropospheric Ozone Assessment Report: Present-day distribution and trends of tropospheric ozone relevant to climate and global atmospheric chemistry model evaluation. Elem Sci Anth 6, DOI: <http://doi.org/10.1525/elementa.291>, 2018.
41. Zhang L., Jaffe D.A., Gao X., and McClure C.D. A quantification method for peroxyacetyl nitrate (PAN) using gas chromatography (GC) with a non-radioactive pulsed discharge detector (PDD). Atmospheric Environment 179, 23–30, <https://doi.org/10.1016/j.atmosenv.2018.02.008>. 2018.
42. Gong X., Hong S. Jaffe D.A. Ozone in China: Spatial distribution and leading meteorological factors controlling O3 in 16 Chinese cities. Aer. Air Qual. Res, DOI: [10.4209/aaqr.2017.10.0368](https://doi.org/10.4209/aaqr.2017.10.0368), 2018.
43. Baylon, P., Jaffe, D. A., Hall, S. R., Ullmann, K., Alvarado, M. J., & Lefer, B. L.  Impact of biomass burning plumes on photolysis rates and ozone formation at the Mount Bachelor Observatory. Journal of Geophysical Research: Atmospheres,  123. <https://doi.org/10.1002/2017JD027341>, 2018.
44. [Kaulfus, A.S., Nair, U., **Jaffe, D.A.,** Christopher, S.A., and Goodrick, S.. Biomass burning smoke climatology of the United States: Implications for particulate matter air quality, Environmental Science & Technology 50, 11731-11741, doi: 10.1021/acs.est.7b03292, 2017.](https://drive.google.com/a/uw.edu/file/d/0B1RuuILdAjVzTlpfSEE3dXRCR0E/view?usp=sharing)
45. Gong X., Kaulfus A., Nair U. and Jaffe D.A. Quantifying O3 impacts in urban areas due to wildfires using a Generalized Additive Model. Envir. Sci. Tech. DOI: 10.1021/acs.est.7b03130, 2017.
46. Baylon P., Jaffe D.A. de Gouw J. and Warneke C., Influence of Long-Range Transport of Siberian Biomass Burning at the Mt. Bachelor Observatory During the Spring of 2015. Aer. Air Qual. Res. DOI: [10.4209/aaqr.2017.06.0213](https://doi.org/10.4209/aaqr.2017.06.0213), 2017.
47. [Gao H. and Jaffe D.A., Comparison of ultraviolet absorbance and NO-chemiluminescence for ozone measurement in wildfire plumes at the Mount Bachelor Observatory.](https://drive.google.com/a/uw.edu/file/d/0Bxu55FndR2IQQ04tN1hiaGJWM3c/view?usp=sharing)Atmospheric Environment 166, 224–233, doi: 10.1016/j.atmosenv.2017.07.007, 2017.
48. Laing J.R., Jaffe D.A., Slavens A.P., Li W., and Wang W. Can ΔPM2.5/ΔCO and ΔNOy/ΔCO Enhancement Ratios Be Used to Characterize the Influence of Wildfire Smoke in Urban Areas? Aerosol and Air Quality Research, Vol 16, 3075-3087, doi:10.4209/aaqr.2017.02.0069, 2017.
49. Zhang L and Jaffe D.A. Trends and sources of ozone and sub-micron aerosols at the Mt. Bachelor Observatory (MBO) during 2004-2015. Atmospheric Environment 165 (2017) 143-154, doi: j.atmosenv.2017.06.042, 2017.
50. Jaffe, D. A., and L. Zhang. Meteorological anomalies lead to elevated O3 in the western U.S. in June 2015, Geophys. Res. Lett., 44, doi:10.1002/2016GL072010, 2017.
51. Schultz, MG, et al. Tropospheric Ozone Assessment Report: Database and metrics data of global surface ozone observations. Elem Sci Anth, 5: 58, DOI: <https://doi.org/10.1525/elementa.244>, 2017.
52. Teakles, A. D., So, R., Ainslie, B., Nissen, R., Schiller, C., Vingarzan, R., McKendry, I., Macdonald, A. M., Jaffe, D. A., Bertram, A. K., Strawbridge, K. B., Leaitch, W. R., Hanna, S., Toom, D., Baik, J., and Huang, L.: Impacts of the July 2012 Siberian fire plume on air quality in the Pacific Northwest, Atmos. Chem. Phys., 17, 2593-2611, doi:10.5194/acp-17-2593-2017, 2017.
53. Zhou, S., Collier, S., Jaffe, D. A., Briggs, N. L., Hee, J., Sedlacek III, A. J., Kleinman, L., Onasch, T. B., and Zhang, Q.: Regional influence of wildfires on aerosol chemistry in the western US and insights into atmospheric aging of biomass burning organic aerosol, Atmos. Chem. Phys., 17, 2477-2493, doi:10.5194/acp-17-2477-2017, 2017.
54. Bieser, J., Slemr, F., Ambrose, J., Brenninkmeijer, C., Brooks, S., Dastoor, A., DeSimone, F., Ebinghaus, R., Gencarelli, C. N., Geyer, B., Gratz, L. E., Hedgecock, I. M., Jaffe, D., Kelley, P., Lin, C.-J., Jaegle, L., Matthias, V., Ryjkov, A., Selin, N. E., Song, S., Travnikov, O., Weigelt, A., Luke, W., Ren, X., Zahn, A., Yang, X., Zhu, Y., and Pirrone, N.: Multi-model study of mercury dispersion in the atmosphere: vertical and interhemispheric distribution of mercury species, Atmos. Chem. Phys., 17, 6925-6955, https://doi.org/10.5194/acp-17-6925-2017, 2017.
55. Sunderland E.M. et al., Benefits of Regulating Hazardous Air Pollutants from Coal and Oil Fired Utilities in the United States. Envir. Sci.Tech. 50, 2117-2020, DOI: 10.1021/acs.est.6b00239, 2016.
56. [Laing, J.R., Jaffe, D.A., and Hee, J.R., 2016. Physical and optical properties of aged biomass burning aerosol from wildfires in Siberia and the Western USA at the Mt. Bachelor Observatory.*Atmospheric Chemistry and Physics* 16, 15185–15197, doi: 10.5194/acp-16-15185-2016.](http://www.atmos.washington.edu/jaffegroup/uploads/Laing_Phys%20and%20optical%20properties%20of%20aged%20BB%20aerosol%20from%20wildfires%20in%20Siberian%20and%20WUS%20at%20MBO_2016.pdf)
57. [Lu, X., Zhang, L., Yue, X., Zhang, J., Jaffe, D., Stohl, A., Zhao, Y., and Shao, J., 2016. Wildfire influences on the variability and trend of summer surface ozone in the mountainous western United States. *Atmospheric Chemistry and Physics* 16, 14687–14702, doi: 10.5194/acp-16-14687-2016.](http://www.atmos.washington.edu/jaffegroup/uploads/Lu_Wildfire%20influences%20on%20the%20variability%20and%20trend%20of%20summer%20O3%20in%20western%20US_2016.pdf)
58. Gratz, L., et al. Airborne Observations of Mercury Emissions from the Chicago/Gary Urban/Industrial Area during the 2013 NOMADSS Campaign. Atmos. Env., 145, 415–423, doi: 10.1016/j.atmosenv.2016.09.051, 2016.
59. Collier et al. Regional Influence of Aerosol Emissions from Wildfires Driven by Combustion Efficiency: Insights from the BBOP Campaign. Environ. Sci. Technol., 50, 8613−8622, doi: 10.1021/acs.est.6b01617, 2016.
60. Cohen M. et al. Modeling the global atmospheric transport and deposition of mercury to the Great Lakes. Elementa: Science of the Anthropocene , 4:000118, doi: 10.12952/journal.elementa.000118. elementascience.org, 2016.
61. Briggs N.L., Jaffe D.A., Gao H., Hee J.R., Baylon P.M., Zhang Q.Z., Zhou S., Collier S.C., Sampson, P.D., and Cary R.A. Particulate Matter, Ozone, and Nitrogen Species in Aged Wildfire Plumes Observed at the Mount Bachelor Observatory. Aerosol and Air Quality Research, Vol 16, 3075-3087, doi: 10.4209/aaqr.2016.03.0120, 2016.
62. Sakamoto, K. M., Laing, J. R., Stevens, R. G., Jaffe, D. A., and Pierce, J. R.: The evolution of biomass-burning aerosol size distributions due to coagulation: dependence on fire and meteorological details and parameterization, Atmos. Chem. Phys., 16, 7709-7724, doi:10.5194/acp-16-7709-2016, 2016.
63. Gaston C.J., Lopez-Hilfiker F.D., Whybrew L.E., Hadley O., McNair F., Gao H., Jaffe D.A and Thornton J.A., Online molecular characterization of fine particulate matter in Port Angeles, WA: Evidence for a major impact from residential wood smoke, Atmos. Envir. 138, 99-107, http://dx.doi.org/10.1016/j.atmosenv.2016.05.013, 2016.
64. Jones, C. P., Lyman, S. N., Jaffe, D. A., Allen, T., and O'Neil, T. L.: Detection and quantification of gas-phase oxidized mercury compounds by GC/MS, Atmos. Meas. Tech., 9, 2195-2205, doi:10.5194/amt-9-2195-2016, 2016.
65. Klein AM, Bohannan BJM, Jaffe DA, Levin DA and Green JL. Molecular Evidence for Metabolically Active Bacteria in the Atmosphere. Front. Microbiol. 7:772. doi: 10.3389/fmicb.2016.00772, 2016.
66. Song, S., Selin, N.E., Gratz, L.E., Ambrose, J.L., Jaffe, D.A., Shah, V., Jaeglé, L., Giang, A., Yuan, B., Kaser, L., Apel, E.C., Hornbrook, R.S., Blake, N.J., Weinheimer, A.J., Mauldin, R.L., III, Cantrell, C.A., Castro, M.S., Conley, G., Holsen, T.M., Luke, W.T., and Talbot, R. Constraints from observations and modeling on atmosphere–surface exchange of mercury in Eastern North America, Elementa 4, doi: 10.12952/journal.elementa.000100, 2016.
67. Wai Ka-Ming; Wu S., Li X. Jaffe D.A. and Perry K.D. Global atmospheric transport and source-receptor relationships for arsenic. Envir. Sci Tech, doi: 10.1021/acs.est.5b05549, 2016.
68. Baylon P. M., Jaffe D.A. Pierce R.B. and Gustin M.S. Interannual variability in baseline ozone and its relationship to surface ozone in the western U.S. Envir Sci. Tech., doi: 10.1021/acs.est.6b00219, 2016.
69. Hallar A.G. Andrew E., Bukowiecki N. Jaffe D.A. and Lin N-H. Overview of the Special Issue “Selected Papers from the 2nd Atmospheric Chemistry and Physics at Mountain Sites Symposium. Aer. Air Quality Res. doi: 10.4209/aaqr.2016.02.0077, 2016.
70. Shah, V., et al., Origin of oxidized mercury in the summertime free troposphere over the southeastern US, Atmos. Chem. Phys., 16, 1511-1530, doi:10.5194/acp-16-1511-2016, 2016.
71. [McClure, C.D., Jaffe, D.A., and Gao, H., Carbon dioxide in the free troposphere and boundary layer at the Mt. Bachelor Observatory. Aerosol and Air Quality Research 16, 717–728, doi: 10.4209/aaqr.2015.05.0323](http://www.atmos.washington.edu/jaffegroup/uploads/McClure_AAQR_%20Carbon_dioxide%20in%20the%20FT%20and%20BL%20at%20MBO_2016.pdf), 2016.
72. Gratz, L. E., et al., Oxidation of mercury by bromine in the subtropical Pacific free troposphere, Geophys. Res. Lett., 42, oi:10.1002/2015GL066645, 2015.
73. Ambrose J.L., Gratz L.E., Jaffe D.A., Campos T., Flocke F., Knapp D, Stechman D, Stell M., Weinheimer A., Cantrell C., and Mauldin R. Mercury Emission Ratios from Coal-Fired Power Plants in the Southeastern United States during NOMADSS Envir. Sci. Tech. 49 (17), 10389-10397, DOI: 10.1021/acs.est.5b01755, 2015.
74. Song, S., Selin, N. E., Soerensen, A. L., Angot, H., Artz, R., Brooks, S., Brunke, E.-G., Conley, G., Dommergue, A., Ebinghaus, R., Holsen, T. M., Jaffe, D. A., Kang, S., Kelley, P., Luke, W. T., Magand, O., Marumoto, K., Pfaffhuber, K. A., Ren, X., Sheu, G.-R., Slemr, F., Warneke, T., Weigelt, A., Weiss-Penzias, P., Wip, D. C., and Zhang, Q.: Top-down constraints on atmospheric mercury emissions and implications for global biogeochemical cycling, Atmos. Chem. Phys., 15, 7103-7125, doi:10.5194/acp-15-7103-2015, 2015.
75. Gustin, M.S., R. Fine, M. Miller, D. Jaffe and J. Burley, The Nevada Rural Ozone Initiative (NVROI): Insights to understanding air pollution in complex terrain, Sci Total Environ, <http://dx.doi.org/10.1016/j.scitotenv.2015.03.046>, 2015.
76. Jaffe D., Putz J.,Hof G., Hof G., Hee J., Lommers-Johnson D., Gabela F., FryJ., AyresB., Kelp M., and Minsk M. Diesel Particulate Matter and Coal Dust from Trains in the Columbia River Gorge, Washington State, USA. Atmos. Poll. Res. <http://dx.doi.org/10.1016/j.apr.2015.04.004>, 2015.
77. Qiao X., Jaffe D., Tang Y., Bresnahan M., Song J. Evaluation of air quality in Chengdu, Sichuan Basin, China: are China's air quality standards sufficient yet? Environmental Monitoring and Assessment, doi:10.1007/s10661-015-4500-z, 2015.
78. Fine R., Miller M.B., Burley J,. Jaffe D.A. Pierce R.B., Lin M., and Gustin M.S. MDA8 O3 values at rural surface sites in Nevada, USA: Results from two years of the Nevada Rural Ozone Initiative (NVROI). Sci Total Environ. doi: 10.1016/j.scitotenv.2015.03.046, 2015.
79. Qiao X., Xiao W., Jaffe D., Harsha S.K., Ying Q. and Tang Ya. Atmospheric wet deposition of sulfur and nitrogen in Jiuzhaigou National Nature Reserve, Sichuan Province, China. Sci. Total Envir., [doi:10.1016/j.scitotenv.2014.12.028](http://dx.doi.org/10.1016/j.scitotenv.2014.12.028), 2015.
80. Weiss-Penzias, P., Amos, H. M., Selin, N. E., Gustin, M. S., Jaffe, D. A., Obrist, D., Sheu, G.-R., and Giang, A.: Use of a global model to understand speciated atmospheric mercury observations at five high-elevation sites, Atmos. Chem. Phys., 15, 1161-1173, doi:10.5194/acp-15-1161-2015, 2015.
81. [Baylon, P., Jaffe, D.A., Wigder, N.L., Gao, H., and Hee, J. Ozone enhancement in western US wildfire plumes at the Mt. Bachelor Observatory: The role of NOx.  Atmos. Envir., doi: 10.1016/j.atmosenv.2014.09.013](http://www.sciencedirect.com/science/article/pii/S1352231014007067), 2015.
82. Gratz, L.E., Jaffe D.A. and Hee J.R., Causes of increasing ozone and decreasing carbon monoxide in springtime at the Mt. Bachelor Observatory from 2004 to 2013, Atmos.Envir., 109, <http://dx.doi.org/10.1016/j.atmosenv.2014.05.076>, 2015.
83. Herron-Thorpe, F. L., Mount, G. H., Emmons, L. K., Lamb, B. K., Jaffe, D. A., Wigder, N. L., Chung, S. H., Zhang, R., Woelfle, M. D., and Vaughan, J. K.: Air quality simulations of wildfires in the Pacific Northwest evaluated with surface and satellite observations during the summers of 2007 and 2008, Atmos. Chem. Phys., 14, 12533-12551, doi:10.5194/acp-14-12533-2014, 2014.
84. McClure C.D. Jaffe D.A. and Edgerton E. S. Evaluation of the KCl Denuder Method for Gaseous Oxidized Mercury using HgBr2 at an In-Service AMNet Site, Environ. Sci. Technol., 2014, 48 (19), pp 11437–11444, doi: 10.1021/es502545k, 2014.
85. Timonen, H., Jaffe, D. A., Wigder, N., Hee, J., Gao, H., Pitzman, L. and Cary, R. A., Sources of carbonaceous aerosol in the free troposphere, Atmos. Environ., 92, 146-153, doi:10.1016/j.atmosenv.2014.04.014, 2014.
86. Jaffe, D.A., Hof G., Malashanka S., Putz J., Thayer J., Fry J.L., Ayres B., and Pierce J.R. Diesel Particulate Matter Emission Factors and Air Quality Implications from In-Service Rail in Washington State, USA.  Atmos. Poll. Res. 5, 344‐351, doi:10.5094/APR.2014.040, 2014.
87. Jaffe, D.A., Wigder N.,Downey N., Pfister G., Boynard A. and Reid S.B. Impact of Wildfires on Ozone Exceptional Events in the Western U.S. Envir. Sci. Technol., 47 (19), pp 11065–11072, DOI: 10.1021/es402164f, 2013.
88. Timonen H.,Wigder N., and Jaffe D. Influence of background particulate matter (PM) on urban air quality in the Pacific Northwest. J. Envir Mngmt 129 (2013) 333e340, 2013.
89. Wigder, N. L., D. Jaffe and Saketa F., Ozone and Particulate Matter Enhancements from Regional Wildfires Observed at Mount Bachelor during 2004-2011, Atmos. Envir., 75, 24-31, 2013.
90. Timonen, H., Ambrose, J. L., and Jaffe, D. A.: Oxidation of elemental Hg in anthropogenic and marine airmasses, Atmos. Chem. Phys., 13, 2827-2836, doi:10.5194/acp-13-2827-2013, 2013.
91. Ambrose J. L., Lyman S.N., Huang J., Gustin M.S. and Jaffe D.A. Fast Time Resolution Oxidized Mercury Measurements during the Reno Atmospheric Mercury Inter-comparison Experiment (RAMIX), Envir. Sci. Tech. DOI: 10.1021/es303916v, 2013.
92. Finley B.D., Jaffe D.A., Call K., Lyman S., Gusin M., Peterson C., Miller M. and Lyman S.N. Development, testing, and deployment of an air sampling manifold for spiking elemental and oxidized mercury during the Reno Atmospheric Mercury Intercomparison Experiment (RAMIX)", Envir. Sci. Tech. DOI: 10.1021/es304185a, 2013.
93. Gustin M.S, Huang J., Miller M.B., Peterson C., Jaffe D.A. Ambrose J., Finley B.D., Lyman S.N., Call K., Talbot R., Feddersen D,. Mao H., and Lindberg S.E. Do We Understand What the Mercury Speciation Instruments Are Actually Measuring? Results of RAMIX, Envir. Sci. Tech. DOI: 10.1021/es3039104, 2013.
94. Huang, M., Carmichael, G. R., Chai, T., Pierce, R. B., Oltmans, S. J., Jaffe, D. A., Bowman, K. W., Kaduwela, A., Cai, C., Spak, S. N., Weinheimer, A. J., Huey, L. G., and Diskin, G. S.: Impacts of transported background pollutants on summertime western US air quality: model evaluation, sensitivity analysis and data assimilation, Atmos. Chem. Phys., 13, 359-391, doi:10.5194/acp-13-359-2013, 2013.
95. Wigder, N. L., D. Jaffe, F. L. Herron-Thorpe, and J. K. Vaughan. Influence of Daily Variations in Baseline Ozone on Urban Air Quality in the United States Pacific Northwest J. Geophys. Res., doi:10.1029/2012JD018738, 2013.
96. Qiao X., Tang Y., Jaffe D., Chen P., Xiao W. and Deng G. Surface Ozone in Jiuzhaigou National Park, Eastern Rim of the Qinghai-Tibet Plateau, China. J. Mt. Sci. 9: 687–696, DOI: 10.1007/s11629-012-2449-8, 2012.
97. Smith, D.J., Timonen H.J., Jaffe, D.A., Griffin, D.W., Birmele, M.N., Perry K., Ward P., and Roberts, M.S. Intercontinental Dispersal of Bacteria and Archaea in Transpacific Winds. Appl. Environ. Microbio. doi:10.1128/AEM.03029-12, 2012.
98. Smith, D.J., Jaffe, D.A., Birmele, M.N., Griffin, D.W., Schuerger, A.C., Hee, J., Roberts, M.S. Free tropospheric transport of microorganisms from Asia to North America.  Microbial Ecology 64(4):973-985, DOI 10.1007/s00248-012-0088-9, 2012.
99. Jaffe, D.A. and Wigder, N.L., Ozone production from wildfires: A critical review. Atmos, Envir., doi:10.1016/j.atmosenv.2011.11.063, 2012.
100. Lyman S.N. and Jaffe D.A. Formation and fate of oxidized mercury in the upper troposphere and lower stratosphere. Nature Geosciences, DOI: 10.1038/NGEO1353, 2011.
101. McDonald-Buller E.C. Allen D.T., Brown N., Jacob D.J., Jaffe D., Kolb C.E., Lefohn A.S., Oltmans S., Parrish D.D., Yarwood G., and Zhang L. [Establishing Policy Relevant Background (PRB) Ozone Concentrations in the United States](http://pubs.acs.org/doi/abs/10.1021/es2022818). Envir.Sci. Tech. DOI: 10.1021/es2022818, 2011.
102. Andrews E. et al. Climatology of aerosol radiative properties in the free troposphere. Atmospheric Research, [doi:10.1016/j.atmosres.2011.08.017](http://dx.doi.org/10.1016/j.atmosres.2011.08.017), 2011.
103. Fischer E.V., K. D. Perry, and D. A. Jaffe. Optical and chemical properties of aerosols transported to Mount Bachelor during spring 2010, J. Geophys. Res., 116, D18202, doi:10.1029/2011JD015932, 2011.
104. Smith D.J., Griffin D.W., and Jaffe D.A. The high life: Transport of microbes in the atmosphere. EOS, Transactions American Geophysical Union, 92 NO. 30, P. 249-250, doi:10.1029/2011EO300001, 2011.
105. Ambrose, J.L., Reidmiller D.R. and Jaffe D.A., Causes of high O3 in the lower free troposphere over the Pacific Northwest as observed at the Mt. Bachelor Observatory, Atmospheric Environment. doi:10.1016/j.atmosenv.2011.06.056, 2011.
106. Leon J.D., Jaffe D.A., Kaspar J., Knecht A., Miller M.L., Robertson R.G.H. and Schubert A.G. Arrival time and magnitude of airborne fission products from the Fukushima, Japan, reactor incident as measured in Seattle, WA, USA. J.Envir. Radioactivity. doi:10.1016/j.jenvrad.2011.06.005, 2011.
107. Fischer, E. V., Jaffe, D. A., and Weatherhead, E. C.: Free tropospheric peroxyacetyl nitrate (PAN) and ozone at Mount Bachelor: potential causes of variability and timescale for trend detection, Atmos. Chem. Phys., 11, 5641-5654, doi:10.5194/acp-11-5641-2011, 2011.
108. Fiore, A. M., Levy II, H., and Jaffe, D. A.: North American isoprene influence on intercontinental ozone pollution, Atmos. Chem. Phys., 11, 1697-1710, doi:10.5194/acp-11-1697-2011, 2011.
109. McKendry, I., Strawbridge, K., Karumudi, M. L., O'Neill, N., Macdonald, A. M., Leaitch, R., Jaffe, D., Cottle, P., Sharma, S., Sheridan, P., and Ogren, J.: Californian forest fire plumes over Southwestern British Columbia: lidar, sunphotometry, and mountaintop chemistry observations, Atmos. Chem. Phys., 11, 465-477, doi:10.5194/acp-11-465-2011, 2011.
110. Jaffe D.A. Relationship between Surface and Free Tropospheric Ozone in the Western U.S. Environ. Sci. Technol., 45, 432–438 DOI: 10.1021/es1028102, 2011.
111. Lyman, S. N., Jaffe, D. A., and Gustin, M. S.: Release of mercury halides from KCl denuders in the presence of ozone, Atmos. Chem. Phys., 10, 8197-8204, doi:10.5194/acp-10-8197-2010, 2010.
112. Fischer, E. V., D. A. Jaffe, N. A. Marley, J. S. Gaffney, and A.Marchany-Rivera. Optical properties of aged Asian aerosols observed over the U.S. Pacific Northwest, J. Geophys. Res., 115, D20209, doi:10.1029/2010JD013943, 2010.
113. Hageman, K. J.; Hafner, W. D.; Campbell, D. H.; Jaffe, D. A.; Landers, D. H.; Simonich, S. L., Variability in Pesticide Deposition and Source Contributions to Snowpack in Western U.S. National Parks. Envir. Sci. & Tech. 44, 4452-4458, 2010.
114. Gustin M. and Jaffe D. Reducing the Uncertainty in Measurement and Understanding of Mercury in the Atmosphere. Envir. Sci.Tech. 44, 2222-2227, 2010.
115. Reidmiller, D. R., Jaffe, D. A., Fischer, E. V., and Finley, B.: Nitrogen oxides in the boundary layer and free troposphere at the Mt. Bachelor Observatory, Atmos. Chem. Phys., 10, 6043-6062, doi:10.5194/acp-10-6043-2010, 2010.
116. Cooper O.R., et al. [Increasing springtime ozone mixing ratios in the free troposphere over western North America](http://www.nature.com.offcampus.lib.washington.edu/nature/journal/v463/n7279/full/nature08708.html). Nature 463, 344-348 doi:10.1038/nature08708, 2010.
117. Adhikary, B. et al. 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, 2091-2115, 2010.
118. Landers D.H. et al. The Western Airborne Contaminant Assessment Project (WACAP): An Interdisciplinary Evaluation of the Impacts of Airborne Contaminants in Western U.S. National Parks. Envir. Sci. Tech. 44, 855-859, 2010. (Cited by EPA for an EPA-STAR award).
119. Fischer, E.V., D.A. Jaffe, D.R. Reidmiller, and L. Jaeglé. Meteorological Controls on Observed Peroxyacetyl Nitrate (PAN) at Mount Bachelor during the spring of 2008, J. Geophys. Res., doi:10.1029/20092009JD012776, 2009.
120. Finley B. Swartzendruber P. and Jaffe D. Particulate mercury emissions in regional wildfire plumes observed at the Mount Bachelor Observatory. Atmos. Environ. 43, 6074-6083, doi:10.1016/j.atmosenv.2009.08.046, 2009.
121. Casper S.A., J. J. West, A.M. Fiore, D. A. Jaffe et al. Intercontinental Impacts of Ozone Pollution on Human Mortality. Environ. Sci. Technol. 43, 6482–6487, DOI: 10.1021/es900518z, 2009.
122. Swartzendruber P.C., D.A. Jaffe and B. Finley Development and first results of an aircraft based, high time resolution technique for gaseous elemental and reactive (oxidized) gaseous mercury. Environ. Sci. Technol. 43 (19), 7484–7489 DOI: 10.1021/es901390t, 2009.
123. Jaffe D.A. and Reidmiller D.R. Now you see it, now you don’t: Impact of temporary closures of a coal-fired power plant on air quality in the Columbia River Gorge National Scenic Area. Atmos. Chem. Phys., 9, 7997-8005, 2009.
124. Holmes C.D., D. J. Jacob, R.P. Mason and D. A. Jaffe [Sources and deposition of reactive gaseous mercury in the marine atmosphere](http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B6VH3-4VK02P3-1&_user=582538&_coverDate=05%2F31%2F2009&_alid=934535454&_rdoc=1&_fmt=high&_orig=search&_cdi=6055&_sort=d&_docanchor=&view=c&_ct=1&_acct=C000029718&_version=1&_urlVersion=0&_userid=582538&md5=b93e7653fb6e1a2904e623145edad63c), Atmos.Environ. 43, 2278-2285, [doi:10.1016/j.atmosenv.2009.01.051](http://dx.doi.org/10.1016/j.atmosenv.2009.01.051), 2009.
125. Zhang, L., D. J. Jacob, M. Kopacz, D. K. Henze, K. Singh, and D. A. Jaffe. Intercontinental source attribution of ozone pollution at western U.S. sites using an adjoint method, Geophys. Res. Lett., 36, L11810, doi:10.1029/2009GL037950, 2009.
126. Swartzendruber, P., D.A. Jaffe, B. Finley, Improved fluorescence peak integration in the Tekran 2537 for applications with sub-optimal sample loadings, Atmos. Environ. 43, 3648-3651, [doi:10.1016/j.atmosenv.2009.02.063](http://dx.doi.org/10.1016/j.atmosenv.2009.02.063), 2009.
127. Reidmiller, D. R., Fiore, A. M., Jaffe, D. A., Bergmann, D., Cuvelier, C., Dentener, F. J., Duncan, B. N., Folberth, G., Gauss, M., Gong, S., Hess, P., Jonson, J. E., Keating, T., Lupu, A., Marmer, E., Park, R., Schultz, M. G., Shindell, D. T., Szopa, S., Vivanco, M. G., Wild, O., and Zuber, A.: The influence of foreign vs. North American emissions on surface ozone in the US, Atmos. Chem. Phys., 9, 5027-5042, 2009.
128. Fischer, E. V., N. C. Hsu, D. A. Jaffe, M.-J. Jeong, and S. L. Gong. A decade of dust: Asian dust and springtime aerosol load in the U.S. Pacific northwest, Geophys. Res. Lett., 36, L03821, doi:10.1029/2008GL036467, 2009.
129. Reidmiller, D. R., D. A. Jaffe, D. Chand, P. Swartzendruber, S. Strode, G. M. Wolfe and J. A. Thornton. Interannual variability of long-range transport as seen at the Mt. Bachelor Observatory. Atmos. Chem. Phys., 9, 557 – 572, 2009.
130. Zhang L., D. J. Jacob, K. F. Boersma, D. A. Jaffe, J. R. Olson, K. W. Bowman, J. R. Worden, A. M. Thompson, M. A. Avery, R. C. Cohen, J. E. Dibb, F. M. Flock, H. E. Fuelberg, L. G. Huey, W. W. McMillan, H. B. Singh, and A. J. Weinheimer. Transpacific transport of ozone pollution and the effect of recent Asian emission increases on air quality in North America: an integrated analysis using satellite, aircraft, ozonesonde, and surface observations. Atmos. Chem. Phys., 8, 6117-6136, <https://doi.org/10.5194/acp-8-6117-2008>, 2008.
131. Chand D., Jaffe D., Prestbo E., Swartzendruber P.C., Hafner W., Weiss-Penzias P., Kato S., Takami A., Hatakeyama S., and Kajii Y. Reactive and particulate mercury in the marine boundary layer. Atmos.Envir. 42, Issue 34, 7988-7996, [doi:10.1016/j.atmosenv.2008.06.048](http://dx.doi.org/10.1016/j.atmosenv.2008.06.048). 2008.
132. Jaffe D. and Strode S. Sources, Fate and Transport of Atmospheric Mercury from Asia. Environ. Chem. 5, 121, doi:10.1071/EN08010, 2008.
133. Strode S., Jaeglé L., Jaffe D., Swartzendruber P., Selin N., Holmes C. and Yantosca R. Trans-Pacific Transport of Mercury. J.Geophys. Res. doi:10.1029/2007JD009428, 2008.
134. Jaffe D.A., Hafner W., Chand D., Westerling A., Spracklen D. Influence of Fires on O3 Concentrations in the Western U.S. Envir.Sci.Tech. 42 (16) pp 5885 - 5891; doi:[10.1021/es800084k](http://dx.doi.org/10.1021%2Fes800084k), 2008.
135. Jaffe D.A., Hafner W., Chand D., Westerling A., Spracklen D. Inter-annual Variations in PM2.5 due to Wildfires in the Western United States. Envir.Sci.Tech. 42 (8), 2812–2818, 2008. DOI: 10.1021/es702755v, 2008.
136. Swartzendruber, P.C., D. Chand, D. A. Jaffe, J. Smith, D. Reidmiller, L. Gratz, J. Keeler, S. Strode, L. Jaeglé, R. Talbot (2008), The vertical distribution of mercury, CO, ozone, and aerosol scattering coefficient in the Pacific Northwest during the spring 2006 INTEX-B campaign, J. Geophys. Res., 113, D10305, doi:10.1029/2007JD009579, 2008.
137. Zhao, T. L., Gong, S. L., Zhang, X. Y., and Jaffe, D. A.: Asian dust storm influence on North American ambient PM levels: observational evidence and controlling factors, Atmos. Chem. Phys., 8, 2717-2728, 2008.
138. Suthawaree J., Kato S., Takami A., Hatakeyama S., Kadena H., Togushi M., Tomoyose N., Yogi K., Jaffe D., Swartzendruber P., Prestbo E., and Kajii Y. Influence from long-range transport of Asian outflow on O3, CO and VOC concentrations during an intensive measurement campaign at Cape Hedo, Okinawa, in spring 2004. J. Jpn Soc. Atmos.Environ. 42 (6), 350-361, 2007.
139. Wolfe, G. M., Thornton, J. A., McNeill, V. F., Jaffe, D. A., Reidmiller, D., Chand, D., Smith, J., Swartzendruber, P., Flocke, F., and Zheng, W.: Influence of trans-Pacific pollution transport on acyl peroxy nitrate abundances and speciation at Mount Bachelor Observatory during INTEX-B, Atmos. Chem. Phys., 7, 5309-5325, 2007.
140. Spracklen D. V., J. A. Logan, L. J. Mickley, R. J. Park, R. Yevich, A. L. Westerling, D. A. Jaffe, Wildfires drive interannual variability of organic carbon aerosol in the western U.S. in summer, Geophys. Res. Lett., 34, L16816, doi:10.1029/2007GL030037, 2007.
141. Primbs T., S. L. Simonich, D. Schmedding, G. Wilson, D. Jaffe,A. Takami, S. Kato, S. Hatakeyama, and Y. Kajii. Atmospheric Outflow of Anthropogenic Semi-Volatile Organic Compounds from East Asia in Spring 2004. Environ. Sci. Technol., 41, 10, 3551 - 3558, doi: 10.1021/es062256w, 2007.
142. Hafner W.D., Solorzano N.N. and Jaffe D.A. Analysis of Rainfall and Fine Aerosol Data Using Clustered Trajectory Analysis for National Park Sites in the Western U.S. Atmos. Environ. 41, 3071-3081, doi:10.1016/j.atmosenv.2006.11.049, 2007.
143. Jaffe D. and Ray, J. Increase in Surface Ozone at Rural Sites in the Western U.S. Atmos. Environ., doi: 10.1016/j.atmosenv.2007.02.034, 2007.
144. Weiss-Penzias P., D. A. Jaffe, P. Swartzendruber, W. Hafner, D. Chand, and E. Prestbo. Quantifying Asian and biomass burning sources of mercury using the Hg/CO ratio in pollution plumes observed at the Mount Bachelor Observatory. Atmos. Envir., 41, doi:10.1016/j.atmosenv.2007.01.058, 2007.
145. Selin, N. E., D. J. Jacob, R. J. Park, R. M. Yantosca, S. Strode, L. Jaeglé, and D. Jaffe, Chemical cycling and deposition of atmospheric mercury: Global constraints from observations, J. Geophys. Res. 112(D2), D02308, doi: 10.1029/2006/JD007450, 2007.
146. Swartzendruber P. C., D. A. Jaffe, E. M. Prestbo, P. Weiss-Penzias, N. E. Selin, R. Park, D. Jacob, S. Strode, L. and Jaeglé. Observations of Reactive Gaseous Mercury in the Free-Troposphere at the Mt. Bachelor Observatory. J. Geophys. Res. 111(D24), D24301, doi: 10.1029/2006JD007415, 2006.
147. Weiss-Penzias, P., D. A. Jaffe, P. Swartzendruber, J. B. Dennison, D. Chand, W. Hafner, and E. Prestbo. Observations of Asian air pollution in the free troposphere at Mount Bachelor Observatory during the spring of 2004, J. Geophys. Res. 111(D10), D10304, doi: 10.1029/2005JD006522, 2006.
148. Keating T., J. West and D. Jaffe. Air Quality Impacts of Intercontinental Transport. EM The Magazine for Environmental Managers, AWMA, pgs 28-30, October 2005.
149. Jaffe D. A., E. Prestbo, P. Swartzendruber, P. Weiss-Penzias, S. Kato, A. Takami, S. Hatakeyama and Y. Kajii. Export of Atmospheric Mercury from Asia. Atmos. Environ. 39, 3029-3038, 2005.
150. Bertschi, I. B. and D. A. Jaffe. Long-range transport of ozone, carbon monoxide and aerosols to the NE Pacific troposphere during the summer of 2003: Observations of smoke plumes from Asian Boreal fires. J. Geophys. Res. 110, D05303, doi: 10.1029/2004JD005135, 2005.
151. Jaffe D., S. Tamura, and J. Harris. Seasonal cycle, composition and sources of background fine particles along the west coast of the U.S. Atmos. Environ. 39, 297-306, 2005.
152. Parrish D. 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. 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, 2004.
153. Parrish D. D., Y. Kondo, O. Cooper, C. Brock, D. Jaffe, M. Trainer, G. Hübler and F. C. Fehsenfeld. Intercontinental Transport and Chemical Transformation 2002 (ITCT-2K2) and Pacific Exploration of Asian Continental Emission (PEACE) experiments: An Overview of the 2002 winter and spring intensives. J. Geophys. Res. 109, D23S01, doi: 10.1029/2004JD004980, 2004.
154. Jaffe, D., I. Bertschi, L. Jaeglé, P. Novelli, J. S. Reid, H. Tanimoto, R. Vingarzan, and D. L. Westphal. Long-range transport of Siberian biomass burning emissions and impact on surface ozone in western North America. Geophys. Res. Lett. 31, L16106, doi: 10.1029/2004GL020093, 2004.
155. Killin, R. K., S. L. Simonich, D. A. Jaffe, C. L. DeForest, and G. R. Wilson. Transpacific and regional atmospheric transport of anthropogenic semivolatile organic compounds to Cheeka Peak Observatory during the spring of 2002. J. Geophys. Res. 109, D23S15, doi: 10.1029/2003JD004386, 2004.
156. Weiss-Penzias, P., D. A. Jaffe, L. Jaeglé, and Q. Liang. Influence of long-range-transported pollution on the annual and diurnal cycles of carbon monoxide and ozone at Cheeka Peak Observatory. J. Geophys. Res. 109, D23S14, doi: 10.1029/2004JD004505, 2004.
157. Liang, Q., L. Jaeglé, D. A. Jaffe, P. Weiss-Penzias, A. Heckman, and J. A. Snow. Long-range transport of Asian pollution to the northeast Pacific: Seasonal variations and transport pathways of carbon monoxide. J. Geophys. Res. 109, D23S07, doi: 10.1029/2003JD004402, 2004.
158. Bertschi, I. B., D. A. Jaffe, L. Jaeglé, H. U. Price, and J. B. Dennison. PHOBEA/ITCT 2002 airborne observations of trans-Pacific transport of ozone, CO, VOCs and aerosols to the northeast Pacific: Impacts of Asian anthropogenic and Siberian Boreal fire emissions. J. Geophys. Res. 109(D23), D23S12, doi: 10.1029/2003JD004328, 2004.
159. Price, H. U., D. A. Jaffe, O. R. Cooper, and P. V. Doskey. Photochemistry, ozone production, and dilution during long-range transport episodes from Eurasia to the northwest United States. J. Geophys. Res. 109, D23S13, doi: 10.1029/2003JD004400, 2004.
160. Holzer, M., I. G. McKendry, and D. A. Jaffe. Springtime Trans-Pacific atmospheric transport from East Asia: A transit-time-PDF approach. J. Geophys. Res. 108(D22), 4708, doi: 10.1029/2003JD003558, 2003.
161. Jaffe, D. A., M. Landis, P. Weiss-Penzias, and E. Prestbo. Comment on “Mercury concentrations in coastal California precipitation: Evidence of local and trans-Pacific fluxes of mercury to North America” by Steding and Flegal (2002). J. Geophys. Res. 108(D17), 4553, doi: 10.1029/2003JD003504, 2003.
162. Jaffe, D., J. Snow, O. and Cooper. The April 2001 Asian dust events: Transport and impact on surface aerosol concentrations in the United States. EOS Transactions 84 (46), 501-504, 2003.
163. Jaeglé, L., D. A. Jaffe, H. U. Price, P. Weiss-Penzias, P. I. Palmer, M. J. Evans, D. J. Jacob, and I. Bey. Sources and budgets for CO and O3 in the Northeast Pacific during the spring of 2001: Results from the PHOBEA-II Experiment. J. Geophys. Res. 108(D20), 8802, doi: 10.1029/2002JD003121, 2003.
164. Weiss-Penzias, P., D. A. Jaffe, A. McClintick, E. M. Prestbo, and M. S. Landis. Gaseous Elemental Mercury in the Marine Boundary Layer: Evidence for Rapid Removal in Anthropogenic Pollution. Environ. Sci. Technol. 37(17), 3755 -3763, 2003.
165. Snow, J. A., J. B. Dennison, D. A. Jaffe, H. U. Price, J. K. Vaughan, and B. Lamb. Aircraft and surface observations of air quality in Puget Sound and a comparison to a regional model. Atmos. Environ. 37, 4019-4032, 2003.
166. Jaffe, D. A., D. Parrish, A. Goldstein, H. Price, and J. Harris. Increasing background ozone during spring on the west coast of North America. Geophys. Res. Lett. 30(12), 1613, doi: 10.1029/2003GL017024, 2003.
167. Price, H. U., D. A. Jaffe, P. V. Doskey, I. McKendry, and T. L. Anderson. Vertical profiles of O3, aerosols, CO and NMHCs in the Northeast Pacific during the Trace-P and ACE-Asia experiments. J. Geophys. Res. 108(D20), 8799, doi: 10.1029/2002JD002930, 2003.
168. Fenn, M. E., R. Haebuer, G. S. Tonnesen, J. S. Baron, S. Grossman-Clarke, D. Hope, D. A. Jaffe, S. Copeland, L. Geiser, H. M. Rueth, and J. O. Sickman. Nitrogen Emissions, Deposition and Monitoring in the Western United States. BioScience 53, 391–403, 2003.
169. Gong, S. L., X. Y. Zhang, T. L. Zhao, I. G. McKendry, D. A. Jaffe, and N. M. Lu. Characterization of soil dust aerosol in China and its transport/distribution during 2001 ACE-Asia. 2. Model Simulation and Validation. J. Geophys. Res. 108, doi: 10.1029/2002JD002633, 2003.
170. Jaffe, D., I. McKendry, T. Anderson, and H. Price. Six “new” episodes of trans-Pacific transport of air pollutants. Atmos. Environ. 37, 391-404, 2003.
171. Baklanov, A., A. Mahura, D. Jaffe, L. Thaning, R. Bergman, and R. Andres. Atmospheric Transport Patterns and Possible Consequences for the European North after a Nuclear Accident. J. Environ. Rad. 60, 23-48, 2002.
172. Kotchenruther, R. A., D. A. Jaffe, and L. Jaeglé. Ozone Photochemistry and the Role of PAN in the Springtime Northeastern Pacific Troposphere: Results from the PHOBEA Campaign. J. Geophys. Res. 106, 28731-28741, 2001.
173. Husar, R. B., et al. (28 coauthors, including D. A. Jaffe). The Asian Dust Events of April 1998. J. Geophys. Res. 106, 18317-18330, 2001.
174. Kotchenruther, R. A., D. A. Jaffe, H. J. Beine, T. Anderson, J. W. Bottenheim, J. M. Harris, D. Blake, and R. Schmitt. Observations of Ozone and Related Species in the Northeast Pacific during the PHOBEA Campaigns: 2. Airborne observations. J. Geophys. Res. 106, 7463-7483, 2001 (Corrected Table 1 published in Vol. 106 (D17), p.20507).
175. Jaffe, D. A., T. Anderson, D. Covert, B. Trost, J. Danielson, W. Simpson, D. Blake, J. Harris, and D. Streets. Observations of Ozone and Related Species in the Northeast Pacific during the PHOBEA Campaigns: 1. Ground based observations at Cheeka Peak. J. Geophys. Res. 106, 7449-7461, 2001.
176. Jaffe, D. A. and L. Chavasse. Comparing the CO content of cigarette smoke and auto exhaust using gas chromatography. J. College Sci. Teaching, pgs.172-176, Dec. 1999.
177. Mahura, A. G., D. A. Jaffe, R. J. Andres, and J. T. Merrill. Atmospheric transport pathways from the Bilibino nuclear power plant to Alaska. Atmos. Environ. 33, 5115-5122, 1999.
178. Lloyd, S. et al. Total Ozone Observations and Trend at Fairbanks during POLARIS. J. Geophys. Res. 104, 26767-26778, 1999.
179. Berntsen, T. K., S. Karlsdottir, and D. A. Jaffe. Influence of Asian emissions on the composition of air reaching the Northwestern United States. Geophys. Res. Lett. 26, 2171-2174, 1999.
180. Anderson, T. L., D. S. Covert, J. D. Wheeler, J. M. Harris, K. D. Perry, B. E. Trost, D. A. Jaffe, and J. A. Ogren. Aerosol backscatter fraction and single scattering albedo: Measured values and uncertainties at a coastal station in the Pacific NW. J. Geophys. Res. 104, 26793-26807, 1999.
181. Jaffe, D. A., T. Anderson, D. Covert, R. Kotchenruther, B. Trost, J. Danielson, W. Simpson, T. Berntsen, S. Karlsdottir, D. Blake, J. Harris, G. Carmichael, and I. Uno. Transport of Asian Air Pollution to North America. Geophys .Res. Lett. 26, 711-714, 1999.
182. Baklanov, A., A. G. Mahura, D. Jaffe, L. Thaning, R. Bergman, R. Andres, and J. Merrill. Atmospheric Transport Pathways and Possible Consequences after a Nuclear Accident in Northwest Russia. 11th World Clean Air Congress. Volume 2, E6, 1-6, 1998.
183. Yurganov, L. N., D. A. Jaffe, E. Pullman, and P. C. Novelli. Total column and surface densities of atmospheric carbon monoxide in Alaska, 1995. J. Geophys. Res.103, 19337-19347, 1998.
184. Jaffe, D. A., L. N. Yurganov, E. Pullman, J. Reuter, A. Mahura, and P. C. Novelli. Measurements of CO and O3 at Shemya, Alaska. J. Geophys. Res. 103, 1493-1502, 1998.
185. Jaffe, D. A., A. Mahura, J. Kelley, J. Atkins, P. C. Novelli, and J. Merrill. Impact of Asian Emissions on the Remote North Pacific Atmosphere: Interpretation of CO Data from Shemya, Guam, Midway and Mauna Loa. J. Geophys. Res. 102, 28627-28636, 1997.
186. Beine, H., D. A. Jaffe, F. Stordal, M. Engardt, S. Solberg, N. Schmidbauer, and K. Holmén. NOx during ozone depletion events in the Arctic troposphere at Ny-Ålesund, Svalbard. Tellus 49, 556 - 565, 1997.
187. Jaffe, D. A., D. Griffin, and J. Ricker. Analyzing Cigarette Smoke. The Science Teacher v.64 (December), 29-33, 1997.
188. Herring, J. A., D. A. Jaffe, H. J. Beine, S. Madronich, and D. R. Blake. High-Latitude Springtime Photochemistry Part II: Sensitivity Studies of Ozone Production. J. Atmos. Chem. 27, 155-178, 1997.
189. Beine, H. J., D. A. Jaffe, J. A. Herring, J. A. Kelley, T. Krognes, and F. Stordal. High Latitude Springtime Photochemistry Part I: NOx, PAN and Ozone Relationships. J. Atmos. Chem. 27, 127-153, 1997.
190. Emmons, L. K. et al., Climatologies of NOx and NOy: A Comparison of Data and Models. Atmos. Environ. 31, 1851-1904, 1997.
191. Solberg, S., T. Krognes, F. Stordal, Oslash;. Hov, H. J. Beine, D. A. Jaffe, K. C. Clemitshaw, and S. A. Penkett. Reactive Nitrogen Compounds at Spitsbergen in the Norwegian Arctic. J. Atmos. Chem. 28, 209-225, 1997.
192. Jaffe, D. A., T. Berntsen, and I. S. A. Isaksen. A Global 3D Chemical Transport Model; 2. Nitrogen Oxides and Non Methane Hydrocarbon Results. J. Geophys. Res. 102, 21281-21296, 1997.
193. Beine, H. J., D. A. Jaffe, D. R. Blake, E. Atlas, and J. Harris. Measurements of PAN, Alkyl nitrates, ozone and hydrocarbons during spring in Interior Alaska. J. Geophys. Res. 101, 12613-12619, 1996.
194. Beine, H. J., M. Engardt, D. A. Jaffe, Ø, Hov, K. Holmen, and F. Stordal. Measurements of NOx and aerosol particles at the Ny Ålesund Zeppelin Mountain station on Svalbard: Influence of regional and local pollution sources. Atmos. Environ. 7, 1067-1079, 1996.
195. Akimoto, H., H. Mukai, N. Masataka, C.-M. Liv, M. Buhr, K. T. Hsu, D. A. Jaffe, L. Zhang, R. Honrath, J. T. Merrill, and R. E. Newell. Long Range Transport of Ozone in the East Asian Pacific Rim Region. J. Geophys. Res. 101, 1999-2010, 1996.
196. Jaffe, D. A., R. E. Honrath, L. Zhang, H. Akimoto, A. Shimizu, H. Mukai, K. Murano, S. Hatakeyama, and J. Merrill. Measurements of NO, NOy, CO and O3 and Estimation of the Ozone Production Rate at Oki Island, Japan during PEM-West. J. Geophys. Res. 101, 2037-2048, 1996.
197. Jaffe, D. A. and S. Herndon. The Measurement of Carbon Monoxide in Auto Exhaust by Gas Chromatography. J. Chem. Ed. 72, 364-366, 1995.
198. Jaffe, D. A., R. E. Honrath, D. Furness, T. J. Conway, E. Dlugokencky, and L. P. Steele. A Determination of the CH4, NOx, and CO2 Emissions from the Prudhoe Bay, Alaska Oil Development. J. Atmos. Chem. 20, 213-227, 1995.
199. Kelley, J. A., D. A. Jaffe, A. Baklanov, and A. Mahura. Heavy Metals on the Kola Peninsula: Aerosol Size Distribution. Sci. Total Environ. 160/161,135-138, 1995.
200. Jaffe, D. A., B. Cerundolo, J. Rickers, R. Stolzberg, and A. Baklanov. Deposition of Sulfate and Heavy Metals on the Kola Peninsula. Sci. Total Environ. 160/161, 127-134, 1995.
201. Jaffe, D. A., T. Iversen, and G. Shaw. Comment on “A long term decrease in arctic haze at Barrow, Alaska” by B. A. Bodhaine and E.G. Dutton. Geophys. Res. Lett. 22, 739-740, 1995.
202. Jaffe, D. A., E. Leighton, and M. A. Tumeo. Environmental Impact on the Polar Regions. Forum for Appl. Res. and Policy 9, 65-70, 1994.
203. Jaffe, D. A., B .M. Cerundolo, and J. A. Kelley. The Influence of Redoubt Volcano Emissions on Snow Chemistry. J. Volcanology and Geophys. Res. 62, 359-367, 1994.
204. Jaffe, D. A. and M. D. Zukowski. Nitrate Deposition to the Alaskan Snowpack. Atmos. Environ. 27A, 2935-2941, 1993.
205. Honrath, R. E. and D. A. Jaffe. The Seasonal Cycle of Nitrogen Oxides in the Arctic Troposphere at Barrow, Alaska. J. Geophys. Res. 97, 20615-20630, 1992.
206. Jaffe, D. A., R. E. Honrath, J. A. Herring, S. M. Li, and J. D. Kahl. Measurements of Nitrogen Oxides at Barrow, Alaska during spring: Evidence for Regional and Northern Hemispheric Sources of Pollution. J. Geophys. Res. 96, 7395-7405, 1991.
207. Jaffe, D. A. and N. J. Rose. The Heat of Dimerization of Acetic Acid and the Heat of Decomposition of Ammonium Acetate as Determined by FT-IR Spectroscopy. Spectrochimica Acta 47A, 1695-1705, 1991.
208. Honrath, R. E. and D. A. Jaffe. Measurements of Nitrogen Oxides in the Arctic. Geophys. Res. Lett. 17, 611-614, 1990.
209. Jaffe, D. A. Accuracy of Measured Ammonium Nitrate Equilibrium Values. Atmos. Environ. 22, 2329, 1988.
210. Jaffe, D. A. An FT-IR Study of Acetic Acid and Deuterated Analogues in the Monomer O-H, and O-D Stretching Regions. Spectrochimica Acta 43A, 1393-1396, <https://doi.org/10.1016/S0584-8539(87)80017-X>, 1987.
211. Weiner R.F. and Jaffe D.A. A Study of the PSD Permitting Process in EPA Region X, Journal of the Air Pollution Control Association, 33:8, 797-801, DOI: 10.1080/00022470.1983.10465645, 1983.

**Book Chapters, Technical Reports, National Assessments and Other Publications**

1. Peterson, D.L.; McCaffrey, S.M.; Patel-Weynand, T., eds. 2021. Wildland fire smoke in the United States: a scientific assessment. Springer, Dordrecht, The Netherlands. <https://doi.org/10.1007/978-3-030-87045-4>. Lead author for Chapter 1 (Introduction); Contributing author for chapter 6 (smoke chemistry).
2. Jaffe D. Evaluation of Ozone Patterns and Trends in 8 Major Metropolitan Areas in the U.S. Final project report for CRC Project A-124, Coordinating Research Council, Alpharetta, GA, March 2021. Available at: <http://crcao.org/wp-content/uploads/2021/04/CRC-Project-A-124-Final-Report_Mar2021.pdf>
3. Jaffe D. Role of Meteorology, Emissions and Smoke on Ozone in the South Coast Air Basin. Final project report for CRC Project A-118, Coordinating Research Council, Alpharetta, GA, January 2020. Available at: <http://crcao.org/wp-content/uploads/2020/01/CRC-Project-A-118-Final-Report_Jan2020.pdf>
4. Louisiana DEQ, Louisiana Exceptional Event of September 14, 2017, Section on Generalized Additive Modeling by D.Jaffe. Submitted to the U.S. EPA on March 1, 2018. (Available at: https://www.epa.gov/air-quality-analysis/exceptional-events-documents-ozone-louisiana)
5. Zhang Q., Zhou S., Collier S., Jaffe D., Onasch T., Kleinman L., and Sedlacek A. 2018. Understanding Composition, Formation, and Aging of Organic Aerosols in Wildfire Emissions via Combined Mountain Top and Airborne Measurements. In: Hunt et al.; Multiphase Environmental Chemistry in the Atmosphere ACS Symposium Series; American Chemical Society: Washington, DC, 2018.
6. GMA 2018 Draft Chapter 3. Levels of mercury in air. Nicola Pirrone, Mariantonia Bencardino, Sergio Cinnirella, Aurélien Dommergue, Joseph Timothy Dvonch, Ralf Ebinghaus, Xinbin Feng, Alessandra Fino, Xuewu Fu, Katarina Gårdfeldt, Antonella Macagnano, David Schmeltz, David Gay, Milena Horvat, Dan Jaffe, Joze Kotnic, Henrik Skov, Francesca Sprovieri, Helen Angot, Alexandra Steffen, Amanda Cole, Elsie Sunderland, Kjetil Torseth, Simon Wilson (Members of the UNEP Fate & Transport Partnership Group, -Air Subgroup Technical Expert Team)
7. Gustin et al., Importance of Integration and Implementation of Emerging and Future Mercury Research into the Minamata Convention. Envir. Sci Tech doi:10.1021/acs.est.6b00573, 2016.
8. Jaffe, D.A., Lyman, S., Amos, H.M., Gustin, M.S., Huang, J., Selin, N.E., Levin, L., ter Schure, A., Mason, R.P., Talbot, R., Rutter, A., Finley, B., Jaeglé, L., Shah, V., McClure, C., Arnbrose, J., Gratz, L., Lindberg, S., Weiss-Penzias, P., Sheu, G.-R., Feddersen, D., Horvat, M., Dastoor, A., Hynes, A.J., Mao, H., Sonke, J.E., Slemr, F., Fisher, J.A., Ebinghaus, R., Zhang, Y., Edwards, G. Progress on Understanding Atmospheric Mercury Hampered by Uncertain Measurements. Envir. Sci Tech. doi: 10.1021/es5026432, 2014.
9. Sources, Transport and Fate of Mercury: A Global Problem, P. Swartzendruber and D. Jaffe. In: Ed. M.Bank, Mercury in the Environment: Pattern and Process. University of California Press, 2011.
10. Hemispheric Transport of Air Pollution, 2010, Ozone and Particulate Matter. LRTAP Air pollution studies No. 17., United Nations, Geneva, 2010 (Contributing author)
11. Hemispheric Transport of Air Pollution, 2010, Part B. Mercury. LRTAP Air pollution studies No. 18., United Nations, Geneva, 2010 (Contributing author to Part A (ozone) and Part B (mercury).
12. National Research Council-Board on Atmospheric Sciences and Climate. [Global Sources of Local Pollution: An Assessment of Long-Range Transport of Key Air Pollutants to and from the United States](http://www.nap.edu/catalog.php?record_id=12743), 2010. Available at: <http://books.nap.edu/catalog/12743.html> (Lead author for chapters 2 and 4).
13. [Ebinghaus](http://www.springerlink.com/content/?Author=Ralf+Ebinghaus)r R., [Catharine Banic](http://www.springerlink.com/content/?Author=Catharine+Banic), [Steve Beauchamp](http://www.springerlink.com/content/?Author=Steve+Beauchamp), [Dan Jaffe](http://www.springerlink.com/content/?Author=Dan+Jaffe), [Hans Herbert Kock](http://www.springerlink.com/content/?Author=Hans+Herbert+Kock), [Nicola Pirrone](http://www.springerlink.com/content/?Author=Nicola+Pirrone), [Laurier Poissant](http://www.springerlink.com/content/?Author=Laurier+Poissant), [Francesca Sprovieri](http://www.springerlink.com/content/?Author=Francesca+Sprovieri) and [Peter S. Weiss-Penzias](http://www.springerlink.com/content/?Author=Peter+S.+Weiss-Penzias) . [Spatial coverage and temporal trends of land-based atmospheric mercury measurements in the Northern and Southern Hemispheres](http://www.springerlink.com/content/phgmlt36u2k4tn25/?p=0dcd3ce0ca4b45208447e6c651b66c2e&pi=8). In Pirrone, Nicola; Mason, Robert (Eds.) Mercury Fate and Transport in the Global Atmosphere Emissions, Measurements and Models, Springer US, ISBN 978-0-387-93957-5, 2009.
14. Jaffe et al. Findings and recommendations from a workshop on “Reducing the uncertainty in measurements of atmospheric Hg” held at the University of Washington (Oct 2008). (available at: http://research.uwb.edu/jaffegroup/modules/uncertainty/)
15. Keating et al. UN ECE Task Force on Hemispheric Transport of Air Pollutants 2007 Interim Report. Coordinating lead author for Chapter 3 (available at: <http://www.htap.org/activities/2007_Interim_Report.htm>).
16. Landers, D. H.; Simonich, S. L.; Jaffe, D. A.; Geiser, L. H.; Campbell, D. H.; Schwindt, A. R.; Schreck, C. B.; Kent, M. L.; Hafner, W. D.; Taylor, H. E.; Hageman, K. J.; Usenko, S.; Ackerman, L. K.; Schrlau, J. E.; Rose, N. L.; Blett, T. F.; Erway, M. M., The Fate, Transport, and Ecological Impacts of Airborne Contaminants in Western National Parks (USA). In U.S. Environmental Protection Agency, Office of Research and Development, Western Ecology Division, Corvallis, OR, Ed. 2008.
17. Jaffe, D. A. and P. S. Weiss-Penzias. Biogeochemical Cycles, Nitrogen Cycle, In: Encyclopedia of Atmospheric Sciences. Ed: J.R. Holton, J.A. Pyle and J.A. Curry. <http://dx.doi.org/10.1016/B0-12-227090-8/00016-6>, Academic Press, N.Y. 2003.
18. Jaffe, D. A. Nitrogen Cycle, Atmospheric. In Encyclopedia of Physical Science and Technology, 3rd Edition. Ed: Paul Crutzen. Academic Press, N.Y. 2003.
19. Jaffe, D.A. The Nitrogen Cycle, in: Earth System Science: From Biogeochemical Cycles to Global Change, eds. M. Jacobson, R. Charlson, H. Rodhe and G. Orians. Academic Press, N.Y., 2000.
20. Jaffe, D. A., J. Herring, and S. Madronich. Impact of Large Solar Zenith Angles, Total Column Ozone and New O1D Quantum Yields on Atmospheric Chemistry at High Latitudes. IGAC Activities Newsletter. 14, 8-10, 1998.
21. Jaffe, D., A. Mahura, R. Andres, A. Baklanov, L. Thaning, R .Bergman, and S. Morozov. Atmospheric Transport Pathways from the Kola Nuclear Power Plant. Barentsregion Environmental Centres Network, University of Tromso, Norway. ISBN 82-7934-000-9. February 1998.
22. Jaffe, D., A. Mahura, R. Andres, A. Baklanov, A. Thaning, L. Bergman and S. Morozov. Atmospheric Transport from the Kola Nuclear Power Plant. Pilot Study Research Report. UAF-FOA-BECN Joint Report, p.61, 1998.
23. Jaffe, D., A. Mahura, R. Andres. Atmospheric Transport Pathways to Alaska from Potential Radionuclide Sites in the Former Soviet Union. Report to Alaska Department of Environmental Conservation (ADEC) UAF-ADEC Joint Project 96-001, February 1997.
24. Jaffe, D. A. Relationship between Anthropogenic Nitrogen Oxides and Ozone Trends in the Arctic Troposphere, In: (eds.) H. Niki and K.H. Becker, The Tropospheric Chemistry of Ozone in the Polar Regions. NATO ASI Series, Springer-Verlag, N.Y., 1993.
25. Baklanov, A., D. A. Jaffe, and B. M. Cerundolo. Deposition of Air Pollutants on the Kola Peninsula During 1990-1991, In: ed, M. Kozlov, Aerial Pollution in the Kola Peninsula, Univ. of Turku Press, Turku, Finland, 1993.
26. Jaffe, D. A. The Nitrogen Cycle in Global Biogeochemical Cycles, eds. S. Butcher, R. Charlson, G. Orians, and G. Wolfe, Academic Press, NY, 1992.
27. Jaffe, D. A., D. Parris, and P. Goldan. Report on Boulder NO/NOy Intercomparison. Technical report to the National Science Foundation, May 1991.
28. Jaffe, D. A. Local Sources of Pollution in the Arctic: from Prudhoe Bay to the Taz Peninsula in Pollution of the Arctic Atmosphere, ed. W. Sturges, Elsevier Science Pub. Ltd., NY, 1991.

**Funded Projects (with D. Jaffe as the Principal Investigator)**

Impact of smoke on ozone, aerosols and oxidant chemistry in urban and rural areas in the U.S. Funded by the National Oceanic and Atmospheric Administration. September 1 2022-August 31, 2025. Three year project with a total budget $457,005.

Impacts of Freeways, Cooking and Wildfires on Indoor Air Quality in a variety of WA households: Towards Actionable Solutions UWB SRCP Seed grant program, June 1, 2022-June 1, 2023, $25,000.

The Salt Lake regional Smoke, Ozone and Aerosol Study (SAMOZA). Funded by the Utah Dept of Air Quality, (UW, USU and UMt collaboration with D.Jaffe as lead PI), June 1, 2022-August 31, 2023, $360,580. UW portion of budget is $136,699.

Collaborative Research: Aerosols, Nitrogen Oxides, and Ozone at the Mt. Bachelor Observatory. Funded by the NSF, Sept.1, 2018-Aug. 31, 2023, $ $873,270.

NOAA Support for Mt Bachelor Flask Sampling. Nov. 1, 2017-Jan. 31, 2023. Funded by NOAA, Global Monitoring Division, $24,969.

Measurements of oxygenated volatile organic compounds (OVOCs) as tracers of biomass burning. Funded by the University of Texas at Austin (pass thru funding from State of Texas), Feb. 25,2020-Sept. 30, 2021, $120,000.

Wildfire Impacts on O3 and Particulate Matter in Urban Areas of the Western US. Funded by the National Oceanic and Atmospheric Administration (NOAA), July 1, 2017-June 30, 2021, four year award total of $616,024.

NOAA Support for Mt Bachelor Flask Sampling. Jan. 1, 2016-Sept 30, 2017. Funded by NOAA, Global Monitoring Division, $23,000.

Influence of Free Tropospheric Ozone and Particulate Matter on Surface Air Quality in the Western U.S. Funded by the NSF, March 15, 2015-Feb. 28, 2018, three year award of $822,406.

Do coal and diesel trains make for unhealthy air? May 2013-no end date. Funded by gifts to the UW from Experiment.com (crowd-funding), the Sierra Club and Friends of the Columbia Gorge. Total award of $75,000.

Ultrafine Particle study in Jefferson and Clallam Counties (J. Thornton Co-PI). July 1, 2013-June 30, 2015. Funded by the Olympic Region Clean Air Agency. Total award of $451,000.

NOAA Support for Mt Bachelor Flask Sampling. Feb. 1, 2013-Sept 30, 2015. Funded by NOAA, Global Monitoring Division, $30,000.

Collaborative Research: Mercury in the Atmosphere Over the Eastern United States (L. Jaeglé, Co-PI). Funded by the NSF, Oct 2012-Sept. 2015, total award of $984,559.

Measurements of Total Hg (THg) at the Birmingham SEARCH site and cross-calibrations of a Tekran system with an HgBr2 source. Funded by Atmospheric Research Associates, March 1,2013- February 28, 2014, total award of $62,998.

Influence of Free Tropospheric Ozone and PM on Surface Air Quality across the West Coast of the United States. Funded by the NSF, May 2011-2014, three year award of $822,406.

Collaborative Research: Reno Atmospheric Mercury Inter-comparison Experiment, Funded by the NSF. April 2011-Oct. 2012, total award of $205,133.

Identifying Oxidized Mercury in the Atmosphere using Mass Spectrometry, Funded by Electric Power Research Institute, January 2011-April 2012, Total budget of $113,000.

Import of Asian Mercury to the U.S. as Observed at the Mt. Bachelor Observatory. Funded by the Electric Power Research Institute, December 2006- Dec 2012, $450,966.

Western Airborne Mercury Observations (WAMO), Funded by the National Science Foundation, October 2008 – September 2011. Total budget $320,786.

Understanding the Influence of Global Air Pollution on US Air Quality through Observations at the Mt. Bachelor Observatory (MBO). Funded by the National Science Foundation. Sept. 2007-August 2011. Total budget $592,358.

Workshop on Reducing the Uncertainty in Measurements of Atmospheric Mercury (RUMA) Funded by the National Science Foundation, October 2008 – October 2009, $32,809.

Development of Speciated Mercury Measurement Capabilities for use on Future NASA Aircraft Missions. Funded by the National Aeronautics and Space Administration, July 2007-June 2008, $237,860.

Western Airborne Contaminants Assessment Project (WACAP). Cooperative agreement with U.S. National Park Service to participate in the WACAP project as the lead atmospheric scientist. Sept. 2002-Oct. 2007, $264,797.

Influence of Global Sources on Free Tropospheric O3 and Aerosols in the Western U.S. August 2004-July 2007, Three year award of $609,233 funded by the National Science Foundation.

Inflow, Chemistry and Deposition of Mercury to the West Coast of the U.S. Funded by the U.S. EPA (EPA-STAR program). February 2003- August 2006. Award total of $756,774.

Cheeka Peak as a Baseline ITAP Observatory. Funded by the Olympic Region Clean Air Agency, Sept. 2004-June 2006, $118,535.

Photochemical Ozone Budget of the Eastern North Pacific Atmosphere-II (PHOBEA-II). National Science Foundation/Atmospheric Chemistry, 3 year award total $508,000. April 2001-2004.

Trans-Pacific Transport of Ozone, Carbon monoxide and Particulates. National Oceanic and Atmospheric Administration, Co-PI: Dr. Lyatt Jaeglé, 2 year award total $204,964., Sept 2001-Sept 2003.

Transport of Mercury and Other Metals to the West Coast of the U.S. U.S. Environmental Protection Agency. Two year total $298,251. August 1, 2000-August 2002.

Photochemical Ozone Budget of the Eastern North Pacific Atmosphere (PHOBEA). National Science Foundation/Atmospheric Chemistry, 4 year total, $475,000. ATM-9529604 and ATM-9896270 (transferred to UW), June 1996-June 2000.

Identification of Sources and Long Term Trends for Pollutants in the Arctic. (through UW-JISAO), NOAA Cooperative Institute for Arctic Research (CIFAR). Two year total $127,667. May 1998-2000.

Benzene and Carbon Monoxide as Air Pollutants in Fairbanks, Alaska. Partners in Science: with Janet Ricker (West Valley High School). Research Corp, 2 year total, $14,000. June 1997-June 1999.

Identification of Sources and Long Term Trends for Pollutants in the Arctic using Clustered Trajectory Analysis. NOAA, Cooperative Institute for Arctic Research (CIFAR). One year total, $60,000. May 1997-May 1998.

Atmospheric Transport Pathways to Alaska from Potential Radionuclide Sites in the Former Soviet Union, Sept. 1995-December 1996, $40,000. PI: Dr. Dan Jaffe, Co-PI: Dr. Robert Andres (UAF-INE), Funded by the State of Alaska.

A Study of the High Latitude Nitrogen Oxide Reservoir, NSF Division of Atmospheric Sciences/ Atmospheric Chemistry, ATM-9215127, 3 year total $373,800., Sept. 1992-June 1996

Impact of East Asian Emissions on CO and O3 Concentrations in the North Pacific Atmosphere. NOAA Climate and Global Change Program, NA36GPO253, 3 year total $180,000., May 1993-May 1996.

Ground-Based Measurements of Nitrogen Oxides as Part of the Pacific Exploratory Mission-West (PEM-West) Program. NSF, ATM-9022004, 2 years grant June 1991-June 1993, 2 year total $99,000.

Tropospheric Nitrogen Oxide Chemistry in Central, Alaska. NSF Division of Atmospheric Sciences/ Atmospheric Chemistry, ATM-8814518, Oct. 1988- March 1992. 3 year total $299,202.

**Funded projects (with D. Jaffe as Co-PI)**

Ozone Vertical Profile Measurements at Fairbanks, Alaska in Support of the Polaris Campaigns. NASA, 7 month total $58,250, April 1, 1997-October 30, 1997. Principal Investigator: Samuel J. Oltmans; Co-Investigators: Daniel Jaffe, Bryan Johnson.

Soviet Arctic Haze: A study of Pollution in Northern Russia, Earthwatch, $30,000 (approximate total) + volunteer labor, co-PI with Alexander Baklanov, Kola Science Center, Russia, March 1990-September 1993.

Gaseous Emissions of Redoubt Volcano. USGS/Alaska Volcano Observatory. 1 year grant, May 1990-May 1991, $34,143. (This is a multiple PI effort, the funds listed are for the portion on gas and snow chemistry for which D. Jaffe was the sole PI).

**Graduate students advised (Major Professor)**

Claire Buysse, M.S. 2019, Atmospheric Sciences-UWS

Crystal McClure, PhD 2018, Atmospheric Sciences-UWS

Pao Baylon, PhD 2018, Atmospheric Sciences-UWS

Nicole Wigder (Briggs), PhD 2014, Atmospheric Sciences-UWS

Emily Fischer, PhD 2010, Atmospheric Sciences-UWS

David Reidmiller, PhD, 2010, Atmospheric Sciences-UWS

Phil Swartzendruber PhD, 2009, Atmospheric Sciences-UWS

Heather Price, PhD, 2004, Chemistry-UWS

Bob Kotchenruther, PhD, 2000, Chemistry-UWS

Alexander Mahura, M.S. 1998, Environmental Chemistry-UAF

Harry Beine, PhD 1996, Atmospheric Chemistry-UAF

Zhiyong Zhang, M.S. 1996, Environmental Chemistry-UAF

Lizhen Zhang, M.S. 1995, Environmental Chemistry-UAF

Jennifer Kelley, M.S. 1993, Environmental Chemistry-UAF

Bianca Cerundolo, M.S. 1993, Environmental Chemistry-UAF

Richard Honrath, PhD 1991, Atmospheric Chemistry-UAF

Matt Zukowski, M.S. 1988, Geochemistry-UAF

**In-Progress: None.**

**Invited Presentations**

Fires and Air Quality. NW Weather workshop. Seattle, WA, July 2018.

Background O3. What is it? Why does it matter? SCORES workshop. Riverside, CA, June 2018.

The Mt. Bachelor Observatory. “Sampling the free troposphere since 2004”. NSF Atmospheric Chemistry symposium. Boulder, CO, June 2018.

Scientific assessment of background ozone over the U.S.: Implications for air quality management. National Academy of Sciences-Board of Atmos. Science, Wash. D.C. May 2018.

Where there’s smoke, there’s PM and O3, sometimes! Univ. of Montana, Feb. 2018.

Scientific assessment of background ozone over the U.S.: Implications for air quality management. WESTAR workshop. Denver, CO. Nov. 2017.

Background O­3 Scientific Assessment Workshop. Lead Presentation. Denver, CO, April 2017.

Use of NOAA Hazard Mapping System Fire and Smoke Product (HMS-FSP) to understand fire impacts on PM and O3.. NASA HQAST workshop. Seattle, WA, Feb. 2017.

Impacts of Heat, Wind and Fire on 2015 Ozone in the West: A year of extremes! EPA workshop. Denver CO, Nov. 2016.

Impacts of Fire and Temperature on Ozone in 2015 in the West: A year of extremes. MIT, Cambridge, MA, Aug. 2016.

Merging of the streams: Integration of Modeling and Observations to Understand Background Ozone. EPRI EnviroVision. Wash. DC, May 2016.

Identification of Ozone Sources in the Western US. WESTAR/EPA meeting, Phoenix, AZ. Feb. 2016.

O3, PM and Black carbon in wildfire plumes and impact on urban air quality, Univ. of Nevada-Reno, Jan. 2016.

The Air We Breathe: Three Decades of Research on Global Air Pollution. Wilson Center, Washington D.C., Nov. 2015.

Richard Honrath Memorial Lecture: An Overview of Air Quality Issues in the Western U.S. Michigan Tech University, Oct. 2015.

Diesel PM and Coal Dust from Trains. Asian Aerosol Assn. Taipei, Sept 2015.

The Air We Breathe: 18 Years of Atmospheric Research at UW Bothell. 1st Distinguished Research, Scholarship and Creative Activities Award. UWB-Bothell, April 2015.

Importance of Boundary Conditions (BC) and Use of a Statistical Model to Help Interpret O3 in W. US. Transboundary Ozone Pollution Conference. Tenaya Lodge, Yosemite, CA, March 2015.

Is Crowd-funding Right for Me? AGU Fall meeting, Session PA13C, San Francisco, Dec. 2014.

Aircraft Observations of Mercury over the US: The NOMADSS Experiment. AGU Fall meeting, Session B52B, San Francisco, Dec. 2014.

Observations of O3, PM and Hg in the Pacific Northwest, USA: Using Science to Understand and Fight Global Pollution. Invited presentation at National Research Council (CNR)- Bologna, Italy, May 2014.

Observations of O3, PM and Hg in the Pacific Northwest, USA: Using Science to Understand and Fight Global Pollution. Invited presentation at Weizmann Institute, Rehovot Israel, May 2014.

Results from the NOMADSS/SAS Mercury experiment. Invited presentation at EPRI Mercury Workshop, Pensacola, FL, January 2014.

Mercury in the Environment: What do we know? What do we need to know? Invited presentation to EPA Region X Tribal Summit, Spokane, WA, October 2013.

New methods to understand mercury in the atmosphere:  Results from MBO, WAMO RAMIX and NOMADSS Campaigns. Invited presentation at Tsinghua University, Beijing China, Sept. 2013.

Using science to fight global pollution: Two tales from the Pacific NW. Invited presentation at Gordon Research Conference, Mt. Snow VT, July 2013.  
The challenge of tropospheric ozone in the W. US. Invited presentation at Gordon Research Conference, Colorado State Univ., Fort Collins CO, February 2013.

Ozone, mercury and fires, oh my! Recent discoveries from the Mt. Bachelor Observatory. Invited presentation at National Institute of Environmental Studies, Tsukuba Japan, Nov 2013.

Ozone, mercury and fires, oh my! Recent discoveries from the Mt. Bachelor Observatory. Invited presentation at NOAA, Boulder CO, Nov 2012.

Ozone production from wildfires in the West: Quantifying the impact in urban areas, Invited presentation at EPA Workshop on Exceptional Events, Sacramento CA, March 2013.

New measurement technology and new insights into the oxidation of atmospheric Hg0. National Research Council (CNR)-Rende Italy, July 2012.Made in China: Global sources of local pollution. Invited presentation at National Research Council (CNR), Rome, July 2012.

Global Transport of Aerosols, Ozone and Mercury: Implications for Climate, Air quality and Environmental Chemistry, Invited presentation to EPA Georgia Basin/Puget Sound workshop, Seattle, WA, Nov. 2011.

Searching for the sources of O3 and Hg in the global atmosphere. Invited talk at University of British Columbia, Nov. 2011.

Uncertainty in Environmental Analysis. Invited presentation to Harvard Atmospheric Chemistry Group, October 2011.

Global Transport of O3, Aerosols and Hg. Invited presentation to Chinese Meteorological Agency, Beijing, Sept 2011.

New approaches for understanding atmospheric Hg. Invited talk at International Conf on Mercury as a Global Pollutant. Halifax NS, July 2011.

Policy relevant background and exceptional events: Identification of UTLS, Asian and fire influence on O3 in AQ data. Invited talk at PNW Airquest meeting, Pullman WA, June 2011.

Transport of radionuclides from the Japanese nuclear accident: mass hysteria or serious concern? Pacific Northwest Weather Workshop, May 2011.

Let the data speak! What do observations say about PRB in the western U.S.? Invited presentation at API workshop on Policy Relevant Ozone, Austin TX, April 2011.

Relationship between surface and free tropospheric ozone. Invited presentation to the Nevada Dept. of Environmental Protection, Carson City, NV, Jan. 2011.

Role of the free troposphere on surface air quality, Invited talk at annual Amer. Met. Society meeting, Seattle, WA, Jan. 2011.

Global Transport of O3, Aerosols and Hg: Implications for Climate, Air quality and Environmental Chemistry. Invited talk to Pacific Northwest National Laboratory (PNNL), Richland, WA, Nov. 2010.

Contributions to the European GMOS project from the University of Washington (USA). Invited presentation to GMOS steering board, Nov. 2010, Rome, Italy.

Key Uncertainties in the Global Mercury Cycle. Keynote talk at Taiwan Aerosol Association for Research, September 2010.

RGM: What happens when good analytical chemists breathe toxic vapors. Invited talk at Goldschmitt conference, Knoxville Tenn, June 2010.

Adventures in mercury. Invited to talk to Puget Sound Toxics workshop, UWT June 2010.

Impact of the free troposphere on the proposed new ozone standard, UW Atmospheric Sciences colloquium, May 2010.

Global sources of local pollution, Presentation to the Board on Atmospheric Sciences, National Academy of Sciences, Nov. 2009.

Made in China- Global Influences on Local Air Quality. Invited talk to the UW Board of Regents, March 2009.

Testimony before the US-China Economic and Security Review Commission, Washington D.C. August 2008.

Global Transport of Mercury, Ozone and PM: Policy Relevant Results. International Joint Commission, Anchorage, AK, Sept 2008.

Long-Range Transport of Pollutants: Does it Matter for U.S. Air Quality? UN ECE Hemispheric Transport of Air Pollutants (HTAP) working group. Washington D.C., June 2008.

## Free tropospheric observations at the Mt. Bachelor Observatory in Oregon and the PICO-NARE observatory in the Azores. Presentation at the Swiss Federal Institute for Materials Science and Technology (EMPA), April 2008.

## Influence of Long-Range Transport and Oxidation on the Global and Regions Cycles of Mercury. UNEP/HTAP/LRTAP Joint International Conference on Intercontinental Transport of Atmospheric Mercury and Persistent Organic Pollutants, Rome, Italy, April 2008.

Influence of Long-Range Transport and Oxidation on the Global Cycle of Mercury in the Atmosphere. Great Basin Mercury Working Group (EPA regions, 8,9,10). Reno, NV, January 2008.

Influence of Long-Range Transport and Oxidation on the Global Cycle of Mercury in the Atmosphere. Air Quality VI. Washington D.C., Sept. 2007.

An overview of free tropospheric observations of background air quality at the Mt. Bachelor Observatory in Oregon. Presentation at the annual NOAA-ESRL meeting, Boulder Colo, April 2007.

Who’s polluting the Columbia River Gorge. Presentation to the Gorge Commissions. March 2007.

Long-Range Transport of Pollutants: Does it Matter for U.S. Air Quality? UN ECE Hemispheric Transport of Air Pollutants (HTAP) working group. Geneva, Switzerland, January 2007.

Transport and Cycling of Asian Mercury in the Pacific Atmosphere. Invited presentation. Western Pacific Geophysics Meeting. Beijing, China, July 2006.

Free Troposphere Sampling at the Mt. Bachelor Observatory, Invited presentation given at Harvard University (Atmospheric Modeling Research Group), June 2006.

Long-Range Transport of Pollutants: Does it Matter for US Air Quality. Annual Meeting of the Health Effects Institute, San Francisco, April 2006.

Global Influences on Mercury and Local Air Quality. Annual Meeting of the Electric Power Research Institute (EPRI), San Jose, March 2006.

Carmen San Diego and the Case of the Increasing Regional (and Global?) Ozone, Michigan Technological University, Houghton, MI, February 2006.

Free Troposphere Sampling at the Mt. Bachelor Observatory, Invited presentation at the Task Force on Hemispheric Transport of Air Pollution Workshop, Washington, DC, January 2006.

Long-Range Transport of Mercury to the United States, Presented at the EPA Region 10, Air Toxics Summit, Portland, OR, October 2005.

Fate and transport of atmospheric mercury in Asia. Presented at the First International Symposium by the China, Korea and Japan Meteorological Societies, “Atmospheric Sciences in East Asia,” Tokyo, Japan, May 2005.

“Made in China” Global Influences on Local Air Quality, University of Wyoming, Laramie, March 2005.

Measurements of mercury in the US and Okinawa Japan. Presented to US EPA-Taiwan bilateral meeting on environmental cooperation. San Francisco, December 2004.

Use of tracer ratios to identify Asian industrial, biomass burning and strat. influences on the west coast of the US. Atmospheric Chemistry seminar, Harvard University, November, 2004.

Influence of Asian emissions on mercury and ozone in the U.S.. Presented to US EPA-ICAP meeting, Durham NC, October 2004.

Transport and Chemical Processing of Mercury During Long-range Transport in the Pacific. Invited presented to USGS-EPA Mercury Roundtable. September 2004.

Atmospheric chemistry/biogeochemistry linkages between Asia, North America and the North Pacific. Presented at Beijing workshop on Collaborative US-China programs in Arctic and Marine Sciences. Organized by NOAA. Beijing, July 2004.

Quantifying the contribution from long- range transport to a regional smog episode during the summer of 2003. Frontier Research Institute for Global Change, Tokyo, Japan. March 2004.

Trans-Pacific Transport of Pollution: Impact on Urban Air Quality in the U.S. Presented at AAAS annual meeting, Seattle, WA. February 2004.

Influence of global sources on mercury in the Pacific Northwest. EPA-Region X Air Toxics Summit. Seattle, December 2003.

Long-range transport of pollutants from Asia to the US: Does it matter for US air quality? Invited presentation at USGS, St Petersburg, Florida, September 2003.

Long-range transport of pollutants from Asia to the US: Does it matter for US air quality? Invited presentation at University of Miami, September 2003.

Implications of long-range transport on atmospheric deposition to the Pacific Northwest. Invited presentation at EPA deposition workshop. Portland, July 2003.

Long-range transport of pollutants from Asia to the US: Does it matter for US air quality? Invited presentation to US EPA Office of Air Quality Planning and Standards, RTP, North Carolina. May 2003.

Long-range transport of pollutants from Asia to the US: Does it matter for US air quality? Invited presentation to Atmospheric modeling group, Harvard University. May 2003.

Influence of Long-Range Transport on Air Quality in Western North America. Presentation to Environment Canada-MSC, Toronto, Canada, January 2003.

Influence of Long-Range Transport on Air Quality in the Western U.S. Invited presentation at Society for Environmental Toxicology and Chemistry (SETAC), Salt Lake City, November 2002.

What Controls Ozone in the Northeast Pacific? Invited presentation at Telluride Summer Research Institute, Workshop on Atmospheric Chemistry. Telluride, CO. August 5-9, 2002.

What can atmospheric scientists do for WACAP. Invited presentation to National Park Service planning meeting on the Western Air Contaminants Assessment Program. Corvallis, OR. June 2002.

Influence of Long-Range Transport on Air Quality in the Western U.S. Presentation at Oregon State University, Corvallis, June 2002.

Presentation on Transboundary Air Pollution in the Pacific to the International Air Quality Advisory Board of the International Joint Commission. E.P.A. Region X, Seattle, January 2002.

Presentation on Long range atmospheric transport of pollutants across the Pacific: An overview of current knowledge. Presented at the North Pacific Marine Science Organization (PISCES) annual meeting. Victoria, Canada, October 2001.

Presentation at Pacific Northwest National Laboratory. Observations of Ozone, CO, NOx, PAN, NMHCs, and Aerosols in the Northeastern Pacific Atmosphere During Spring. September 2000.

Presentation on Long Range Transport of Asian Air Pollution to North America. Conference on Trans-Pacific Transport of Atmospheric Pollutants. Seattle. July 2000.

Presentation at IGAC planning meeting on “Intercontinental Transport and Chemistry”. Tokyo, Japan, March 2000 (also in Boulder CO July 2001 and Nov. 2001).

Presentation at Ecological Society of America (ESA) workshop on Atmospheric deposition to the Pacific Coast. Invited talk on tools for assessing long range transport of pollutants, UCLA, February 2000.

Presentation at international workshop in Nagoya, Japan on Transport of Asian air pollution to the U.S. and results from the 1999 PHOBEA observations". November 1999.

Presentation at University of British Columbia on Transport of Asian air pollution to North America, October 1999

Presentation at Portland State University on Transport of Asian air pollution and results from 1999 PHOBEA observations, November 1999.

Presentation at Washington State University-Vancouver on Transport of Asian air pollution and results from 1999 PHOBEA observations, November 1999.

Presentation at workshop on Ozone and vegetation impacts. "Transport of Asian air pollution to North America. University of Tokyo, Nov. 1998.

Presentation at Washington State University on “Transport of Asian pollutants to the U.S. West Coast,” Feb. 1998.

Presentation at workshop on Ozone in the Asia Pacific region. University of Tokyo, Nov 1996.

Presentation to Lawrence Livermore National Laboratory on Potential Sources of Radionuclides in Alaska from Sources in the Former Soviet Union. Livermore, CA. Oct 1996.

Presentation at the US-Japan Workshop on Arctic Research. Fairbanks, Alaska, February 1996.

Presentation to joint Office of Naval Research on Acidification in the Arctic-U.S. EPA workshop on Arctic Contaminants. Fairbanks Alaska, August 1996.

Presentation to Japanese scientists on Asian pollutants in the Pacific. University of Tokyo- January 1996

Invited participant on NASA team to evaluate the Hong Kong air monitoring station. Hong Kong, October 1995.

NASA Nitrogen Oxide Evaluation panel. Menlo Park, CA, December 1993.

NATO Advance Research Workshop on “The Tropospheric Chemistry of Ozone in the Polar Regions.” Halifax, Nova Scotia, August 1992.

Workshop on Tropospheric Ozone in the Polar Regions, Halifax N.S., August 1992.

NSF Working Group Participant to develop a research plan for an arctic photochemistry experiment (TAPESTRIES). Washington, D.C., May 1992,

Earthwatch Principal Investigators' Meeting. Invited to present an overview of our Earthwatch sponsored research on air pollution in the Kola Peninsula, Russia, Boston, MA, March 1992 and March 1991.

Alaska Clean Seas workshop on “In-Situ Burning.” Invited to give luncheon address on putting the air pollution aspects of in-situ burning (the burning of oil after an oil spill) into a global perspective. Anchorage, AK, November 1991.

Symposium on the Tropospheric Chemistry of the Antarctic Region. Invited Participant. June 1991, Boulder, CO.

NASA PEM-West Science Team Meeting. As a participant in the International Global Atmospheric Chemistry Program's experiment (PEM-West), I was an invited attendee at this meeting. PEM-West is an international experiment to document the transport of air pollutants from the Asian continent to remote Pacific atmosphere. Herndon, VA, April 1991.

Invited presentation to Corvallis, OR, office of the EPA on arctic air pollution, January 1991.

Invited presentation to NOAA GMCC lab in Boulder, CO, on the results of our Barrow measurement campaigns. January 1991,

Invited presentation on Arctic Pollution; International Symposium on Environmental Problems of the North. Murmansk, USSR- February 1990

**Other Professional Activities**

External examiner for doctoral dissertation by Cheung Vincent, Hong Kong Polytechnic University (Hong Kong Sept 2001).

Board member, Seattle’s Urban Environmental Institute March 2001-current.

Co-chair of IGAC-Atmospheric Chemistry Education subcommittee (with J. Boonjawat) to develop courses in atmospheric chemistry in developing regions of the world. Presentations to IGAC Steering committee in Seattle (August 1998), Shonan Village, Japan (May 1999), Bangkok (Jan. 2001).

Member Steering Committee for International Global Atmospheric Chemistry (IGAC) projects on Asia-Pacific (APARE) and Polar regions (PASC). 1995

National Academy of Sciences, Young Investigation Program on Arctic Ecology, US-Russian exchange Program, 1993-1994.

Chosen to attend the National Center for Atmospheric Research's 1986 Summer Colloquium; Boulder, CO. One of 30 international graduate and post-doctoral students selected to meet with NCAR's scientific staff to discuss current topics in atmospheric chemistry. July 1986.

Sabbatical leave during AY 1993-1994 at the University of Oslo working with Dr. Ivar Isaksen on global chemical pollutant modeling.

Formerly certified secondary science teacher, Massachusetts and Washington

Member of the American Chemical Society

Member of the American Geophysical Union

Several Lectures at the University of Oslo and the Norwegian Institute for   
Air Research during my sabbatical. 1993

Reviewer for the Journals: Atmospheric Environment, Journal of Geophysical Research; Geophysical Research Letters; Environmental Science and Technology; Journal of Atmospheric Chemistry; Environmental Pollution; and Science of the Total Environment.

Proposal and panel reviewer for the National Science Foundation, NASA and NOAA.

**University Service**

**University of Washington**

Chair Physical Sciences Division, UWB-School of STEM. (2013-current)

UW Provost Search Committee, AY 2011-2012.

UW Senate Committee on Planning and Budget (SCPB), Sept 2008-August 2011

UWB, General Faculty Organization, Executive Committee. Sept. 2007-Sept. 2010.

UWB, General Faculty Organization, Executive Committee Vice-chair/Chair (Sept.2007-Sept. 2009).

UWB Chancellor Search Committee, AY 06-07.

Developed and coordinated approval for UWB's first science degree (B.S. in Environmental Science) February 1998-June 2000.

Developed and chaired UWB Science Advisory Board (1998-2000).

Coordinator for Science, Technology and the Environment option within Interdisciplinary Arts and Sciences, September 1997-June 2000.

Extensive curriculum development for science at UWB (12 new courses developed), September 1998-current.

Development of outreach program for community colleges to recruit science students to UWB, January 1998-current.

Chair of Biology/Ecology search committee, October 1997-February 1998.

Advisor on science labs for new UWB campus, September 1997-current.

Advisor for integration of wetlands studies into UWB curriculum, September 1997-current.

Development of budget request for new UWB science labs, February 1998.

Coordinate of usage for science labs with Cascadia Community College

**University of Alaska-Fairbanks**

Chairman, College of Natural Sciences Curriculum Council, University of Alaska Fairbanks, Sept. 1992-June 1993. Member of committee Sept. 1991-Sept. 1992.

UAF Chairman of the "Billion Pound Diet", campus-wide educational program on energy conservation, AY 1990-1991.

UAF member representative to the University Corporation for Atmospheric Research (UCAR), October 1991, 1992.

Department of Chemistry Search committees: 1991 (2), 1993, 1995.

Advisor to the University “Climbing Wall Committee”

Faculty advisor to the Student Conservancy (1992-1997).

Faculty Advisor to the Student Environmental Club, 1991-1993.

Faculty Advisor for the Student Chapter of the Northern Alaska Environmental Center, 1990-1992.

Faculty Advisor for the Student “Science Outreach” program, 1992.

Department of Chemistry graduate committee (1987-1997).

UAF representative to the University Corporation for Atmospheric Research annual members meeting: 1989, 1992.

UAF representative for negotiations with the Alaska Department of Environmental Conservation on creation of the joint UA-ADEC cooperative agreement, November 1994.

Member of UAF task force on Arctic Pollution issues.

Lead for development of an Atmospheric Chemistry PhD, 1992.

**Public Service**

Public presentations on diesel and coal dust from trains, City of Seattle, Community Wise Bellingham, Shoreline CC, Highline CC.

Numerous outreach events for STEM in Washington and Bend OR.

Volunteer with Temple Beth Am homeless shelter program (2011-present).

Numerous discussions with EPA officials on the implications of long range transport of Asian air pollution to the U.S. 1998-2000.

Volunteer Board member for the Northern Alaska Environmental Center from September 1995-June 1997. Board President from January 1996-June 1997.

Session Chair, Relationship between CO, O­3 and nitrogen oxides, American Geophysical Union Fall Meeting, December 1996.

Lecturer for the second IGAC/WMO/NSF Short course on Atmospheric Chemistry November 4-15, 1996 Salvador, Brazil.

Teacher/Team Leader, First IGAC/WMO/NSF Short course on Instrumentation in Atmospheric Chemistry, Buenos Aires, Argentina, October 30-November 10, 1995.

Session Chair, High Latitude Tropospheric Chemistry, American Geophysical Union Fall Meeting, December 1995.

Member of the U.S. delegation to the Arctic Monitoring and Assessment Program.

Consultation with the Alaska Dept. of Environmental Conservation (ADEC) in Juneau in Nov. 1994 on activities of the Arctic Monitoring and Assessment Program.

International Global Atmospheric Chemistry Program-Committee member for Polar (PASC) and Asia/Pacific (APARE) programs.

U.S. Delegate to the Arctic monitoring and Assessment Task Force, Dec. 1991 (TromsØ) December 1992 (Toronto), Oct. 1993 (Reykjavik), March 1994 (TromsØ), Nov. 1994 (Wash. D.C.).

Facilitator, Non-Radionuclide Contamination Technical Session, the Interagency Arctic Research Policy Committee Workshop on Arctic Contamination. Anchorage, Alaska, May 1993.

Session Chair, Arctic Atmospheric Chemistry Session, Arctic Science Conference, Anchorage, Alaska, Oct. 1990.

Numerous presentations to state and local agencies on urban air quality, ozone depletion, arctic air pollution, and etc.

Numerous presentations to Fairbanks public schools on various environmental chemistry issues including ozone depletion, acid rain, climate change, local air quality, etc.