Gavin R. McMeeking, PhD
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SUMMARY/BIOGRAPHY:

Dr. Gavin McMeeking is an aerosol scientist with 20+ years of background and experience in scientific instrument development, evaluation, and deployment. He has worked across academia, research, and private industry in several fields including atmospheric chemistry, cloud physics, indoor air quality, and environmental health. He focuses on bridging emerging technology, both hardware and software, from the research laboratory into solving practical real-world problems. He holds a Ph.D. and M.S. in Atmospheric Science from Colorado State University and a B.A. in Earth and Planetary Science from the University of California, Berkeley.

Dr. McMeeking has worked at several R&D-focused companies working on scientific instrumentation development, including Droplet Measurement Technologies, Handix Scientific, and most recently, CloudSci, which he co-founded. He has led both R&D and business development teams, and has worked closely with engineers, scientists, and business leaders to produce and deliver instrument solutions to challenging research problems. He has advised multiple governmental organizations, including the Department of Energy, the National Science Foundation, and the National Aeronautical and Space Administration, on topics ranging from instrument development, atmospheric measurement techniques, soot and black carbon aerosol impacts, wildfire emission characterization, and technology translation. He has published over 60 peer-reviewed scientific papers in the field of aerosol science and technology and led or co-led over a dozen sponsored research projects.

EXPERIENCE:

RedSpire LLC	
Chief Executive Officer, co-founder	2025 – current
CloudSci LLC	
Co-founder, owner	2024 – present
Vice President, Business Development	2024 – 2025
Colorado State University	
Research Associate II	2022 – 2024
Handix Scientific LLC	
VP, Research & Development	2020 – 2022
Principal Scientist	2017 – 2020
Senior Scientist	2015 – 2017
Droplet Measurement Technologies	
Scientist/Sales Specialist	2012 – 2015
Colorado State University	
Postdoc/Research Scientist I	2011 – 2012
University of Manchester	
Postdoctoral Researcher	2008 – 2011

EDUCATION/DEGREES:

Ph.D., Atmospheric Science - Colorado State University	2008
M.S., Atmospheric Science - Colorado State University	2005
B.A., Earth and Planetary Science - University of California, Berkeley (atmospheric science concentration)	2002

PROFESSIONAL HONORS/AWARDS:

Invited Speaker, National Center for Atmospheric Research	2023
Invited Speaker, National Oceanic and Atmospheric Administration	2011
Royal Society Travel Grant Awardee	2009
American Association for the Advancement of Science Mass Media Fellowship	2005
Herbert Riehl Memorial Award, Colorado State University	2005

PROFESSIONAL MEMBERSHIPS AND SERVICE TO PROFESSIONAL SOCIETIES:

Past and current memberships: American Industrial Hygiene Association, American Association for Aerosol Research, American Geophysical Union, American Meteorological Society

Instrumentation Working Group Chair, American Association for Aerosol Research 2019

Reviewer: [government organizations] Environmental Protection Agency, National Science Foundation, Department of Energy, National Oceanic and Atmospheric Administration, National Aeronautical and Space Administration, Netherlands Space Office, [journals] *Geophysical Research Letters, Environmental Science and Technology, Tellus B, Journal of Geophysical Research, Atmospheric Chemistry and Physics, Atmospheric Environment, Atmospheric Measurement Techniques, Energy and Fuels, Atmospheric Science Letters, Optics and Lasers in Engineering, Journal of the Air and Waste Management Association, Boreal Environmental Research, Industrial and Engineering Chemistry Research*

SIGNIFICANT PROJECTS:

Instrument Development

Photoacoustic and Extinction Measurement Systems

Advanced photoacoustic and cavity-based methods for direct absorption and extinction measurements. Contributed to DOD and NASA efforts to develop high-accuracy spectral absorption instruments and balloon-borne cavity ringdown spectrometers. Research addressed calibration stability, spectral coverage, and field-deployable performance, improving characterization of aerosol radiative properties in both clean and polluted atmospheres.

Aerosol and Cloud Instrumentation Development

Extensive experience in the design, testing, and deployment of new measurement technologies for atmospheric research. Co-Investigator and contributor roles on multiple NASA and DOE projects developing the Airborne Multiangle Aerosol Size Spectrometer (A-MASS), Small-Angle Light Scattering Spectral Analyzer (SALSSA), and related probes. Work emphasizes robust, open-path, in-situ optical and microphysical characterization of cloud and aerosol particles.

Holographic and Fluorescence Sensor Technology

Co-developed a new generation of holographic and fluorescence-based instruments for particle detection and classification. Principal and Co-Investigator roles on DOE projects developing low-cost, networkable fluorescence spectrometers and holographic sensors for urban aerosol and pollen identification. This work underpins emerging applications of digital holography and AI-driven particle classification in environmental and public-health contexts.

Miniaturized and Airborne Measurement Platforms

Principal Investigator and Co-Investigator roles on projects miniaturizing and/or commercializing aerosol and cloud sensors for UAV and aircraft deployment, including an airborne cloud condensation nuclei counter, microfluidics-based ice nucleation particle counter, and the Portable Optical Particle Spectrometer (POPS). Emphasis on compact, low-power, high-performance optical systems enabling distributed networks and small-platform deployments. Demonstrated capability integrating optical, mechanical, and data systems for research aircraft and balloon missions.

Field & Laboratory Campaigns

Aerosol Optical and Absorption Properties

Led investigations into the wavelength-dependent absorption of atmospheric aerosols from the near-UV through near-IR spectrum. Contributed to understanding how aerosol chemical composition and mixing state influence radiative forcing. Served as Co-Investigator on DOD–funded projects developing spectral absorption instruments with integrated calibration systems (2021–2025). Publications include work on brown carbon and light absorption in fresh and aged aerosols.

Black Carbon and Brown Carbon Characterization

Examined physical and optical evolution of black and brown carbon in laboratory and ambient environments, quantifying changes in refractive index, morphology, and mixing state. Integrated field and laboratory measurements to constrain climate impacts of absorbing carbonaceous aerosol. Research emphasized soot aging, wet processing, and absorption enhancement mechanisms, establishing expertise in instrument-based measurement and modeling of absorbing particles.

Ice Nucleation and Cloud Microphysics

Investigated sources and activity of ice-nucleating particles (INPs) including sea spray, mineral dust, and refractory soot primarily using the Continuous Flow Diffusion Chamber (CFDC). Co-developed a commercial version of the CFDC and experimental microfluidic INP counters for airborne and ground-based platforms (NASA, DOE, 2019–2024). Principal Investigator for NASA and DOE projects advancing CINCH and microfluidic INP instruments. Publications in PNAS and ACP document these findings and highlight novel observational constraints on freezing processes in the atmosphere.

Biomass Burning and Combustion Emissions

Designed and executed controlled combustion experiments quantifying gas- and particle-phase emissions of trace species and aerosols across fuel and combustion conditions. Contributed to emission factor databases and understanding of plume evolution in regional and global contexts. Work supported by DOE and NASA field campaigns; publications include characterization of trace gases and aerosols during large-scale biomass burning events.

Field Campaigns and Regional Aerosol–Cloud Studies

Participated in major international and national field efforts (EUCAARI, ICE-T, DOE SAIL campaigns), operating and interpreting data from advanced airborne instrumentation. Research examined aerosol–cloud interactions, aerosol transport, and absorption across varied environments, from Europe to North America's mountainous terrain. DOE-funded projects (2021–2024) explored spatial variability of aerosols, CCN, and INPs in complex topography.

Collaborative Research and Interagency Program Participation

Active collaborator in DOE, NASA, and DOD atmospheric research programs, contributing to interagency efforts on aerosol–cloud–radiation interactions and technology innovation. Experience spans proposal development, technical management, and multi-institution coordination. Research has directly supported national goals in atmospheric monitoring, defense test range characterization, and environmental sensor advancement.

PEER-REVIEWED PUBLICATIONS AND GOVERNMENTAL REPORTS (AUTHORED)

1. Gibson, L. D., E. J. T. Levin, E. Emerson, N. Good, A. Hodshire, G. McMeeking, K. Patterson, B. Rainwater, T. Ramin, and B. Swanson, Measurement report: An investigation of the spatiotemporal variability in aerosols in the mountainous terrain of the upper Colorado River basin using SAIL-net, Atmos. Chem. Phys., doi:10.5194/acp-25-2745-2025, 2025.

2. Boedicker, E. K., Emerson, E. W., G. R. McMeeking, S. Patel, M. E. Vance, and D. K. Farmer, Fates and spatial variations of accumulation mode particles in multi-zone indoor environments during the HOMEChem campaign, Env. Sci. Process Impacts, doi:10.1039/d1em00087j, 2021.
3. Mei, F., G. McMeeking, M. Pekour, R. S. Gao, G. Kulkarni, S. China, H. Telg, D. Dexheimer, J. Tomlinson, and B. Schmid, Performance assessment of Portable Optical Particle Spectrometer (POPS), Sensors, doi:10.3390/s20216294, 2020.
4. Emerson, E. W., A. L. Hodshire, H. M. DeBolt, K. R. Bilsback, J. R. Pierce, G. R. McMeeking, and D. K. Farmer, Revisiting particle dry deposition and its role in radiative effect estimates, Proceedings of the National Academy of Sciences, doi: 10.1073/pnas.2014761117, 2020.
5. Selimovic, V., R. J. Yokelson, G. R. McMeeking, and S. Coefield, Aerosol mass and optical properties, smoke influence on O_3 and high NO_3 production rates in a western US city impacted by wildfires, Journal of Geophysical Research, doi: 10.1029/2020JD032791, 2020.
6. Li, H., G. R. McMeeking, A. A. May, Development of a new correction algorithm applicable to any filter-based absorption photometer, Atmospheric Measurement Techniques, 13, 2865-2886, 2020.
7. Bi, K., G. R. McMeeking, D. P. Ding, E. J. T. Levin, P. J. DeMott, D. L. Zhao, F. Wang, Q. Liu, P. Tian, X. C. Ma, Y. B. Chen, M. Y. Huang, H. I. Zhang, T. D. Gordon, and P. Chen, Measurements of ice nucleating particles in Beijing, China, Journal of Geophysical Research, doi:10.1029/2019JD030609, 2019.
8. Li, H., K. D. Lamb, J. P. Schwarz, V. Selimovic, R. J. Yokelson, G. R. McMeeking, and A. May, Inter-comparison of black carbon measurement methods for simulated open biomass burning emissions, Atmospheric Environment, 206, 156-169, 2019.
9. Selimovic, V., R. J. Yokelson, G. R. McMeeking, and S. Coefield, In situ measurements of trace gases, PM, and aerosol optical properties during the 2017 NW US wildfire smoke event, Atmospheric Chemistry and Physics, 19, 3905-3926, 2019.
10. Cappa, C. D., X. Zhang, L. M. Russell, S. Collier, A. K. Y. Lee, C.-L. Chen, R. Betha, S. Chen, J. Liu, D. J. Price, K. J. Sanchez, G. R. McMeeking, L. R. Williams, T. B. Onasch, D. R. Worsnop, J. Abbatt, and Q. Zhang, Light absorption by ambient black and brown carbon and its dependence on black carbon coating state for two California, USA, cities in winter and summer, Journal of Geophysical Research, doi:10.1029/2018JD029501, 2019.
11. Ditas, J., N. Ma, Y. Zhang, D. Assmann, M. Neumaier, H. Riede, E. Karu, J. Williams, D. Scharffe, Q. Wang, J. Saturno, J. M. Katich, G. R. McMeeking, A. Zahn, M. Hermann, C. A. M. Brenninkmeijer, M. O. Andreae, U. Pöschl, H. Su, and Y. Cheng, Strong impact of wildfires on the abundance and aging of black carbon in the lowermost stratosphere, Proceedings of the National Academy of Sciences, 115, E11595-E11603, 2018.
12. Krasowsky, T. S., G. R. McMeeking, C. Sioutas, and G. Ban-Weiss, Characterizing the evolution of physical properties and mixing state of black carbon particles: from near a major highway to the broader urban plume in Los Angeles, Atmospheric Chemistry and Physics, 18, 11991-12010, 2018.
13. Emerson, E. W., J. M. Katich, J. P. Schwarz, G. R. McMeeking, and D. K. Farmer, Direct measurements of dry and wet deposition of black carbon over a grassland, J. Geophys. Res., doi:10.1029/2018JD028954, 2018.
14. Gordon, T. D., A. J. Prenni, J. R. Renfro, E. McClure, B. Hicks, T. B. Onasch, A. Freedman, G. R. McMeeking, and P. Chen, Open-path, closed-path and reconstructed aerosol extinction at a rural site, J. of Air & Waste Manage, 68, 824-835, 2018.
15. Broda, K. N., J. S. Olfert, M. Irwin, G. Schill, G. McMeeking, E. Schnitzler, W. Jager, A novel inversion method to determine the mass distribution of non-refractory coatings on refractory black carbon using a Centrifugal Particle Mass Analyzer and Single Particle Soot Photometer, Aerosol Science and Technology, 52, 567-578, 2018.

16. Khan, A., G. McMeeking, J. P. Schwarz, P. Xian, K. Welch, B. Lyons, and D. McKnight, Near-surface refractory black carbon observations in the atmosphere and snow in the McMurdo Dry Valleys, Antarctica and potential impacts of foehn winds, J. of Geophysical Research, 123, 2877-2887, 2018
17. Hanna, S. J., J. Xu, J. C. Schroder, A. Morrow, Q. Wang, G. R. McMeeking, W. R. Leaitch, A. M. MacDonald, K. von Salzen, R. V. Martin and A. K. Bertram, Measurements and modeling of refractory black carbon at the Whistler Peak High Elevation Research Site, Atmospheric Environment, 181, 34-46, 2018
18. Krasowsky, T. S., G. R. McMeeking, D. B. Wang, C. Sioutas, and G. A. Ban-Weiss, Measurements of the impact of atmospheric aging on physical and optical properties of ambient black carbon particles in Los Angeles, Atmospheric Environment, 142, 496-504, 2016.
19. Levin, E. J. T., G. R. McMeeking, P. DeMott, C. McCluskey, C. Carrico, S. Nakao, T. Jayarathne, E. Stone, C. Stockwell, R. J. Yokelson, and S. M. Kreidenweis, Ice nucleating particle emissions from biomass combustion and the potential importance of soot aerosol, Journal of Geophysical Research, doi:10.1002/2016JD024879, 2016.
20. Twohy, C. H., G. R. McMeeking, P. J. DeMott, C. S. McCluskey, T. C. J. Hill, S. M. Burrows, G. R. Kulkarni, M. Tanarhte, D. N. Kafle, and D. W. Toohey, Abundance of fluorescent biological aerosol particles at temperatures conductive to the formation of mixed-phase and cirrus clouds, Atmospheric Chemistry and Physics, 16, 8205-8225, 2016.
21. Aiken, A. C., G. R. McMeeking, E. J. T. Levin, M. K. Dubey, P. J. DeMott, and S. M. Kreidenweis, Quantification and online removal of refractory black carbon using laser-induced incandescence in the single particle soot photometer, Aerosol Science and Technology, 50, 679-692, 2016.
22. Carrico, C. M., A. J. Prenni, S. M. Kreidenweis, E. J. T. Levin, C. S. McCluskey, P. J. DeMott, G. R. McMeeking, S. Nakao, C. Stockwell and R. J. Yokelson, Rapidly evolving ultrafine and fine mode biomass smoke physical properties: Comparing laboratory and field results, Journal of Geophysical Research, doi:10.1002/2015JD024389, 2016.
23. DeMott, P. J., T. C. J. Hill, C. S. McCluskey, K. A. Prather, D. B. Collins, R. C. Sullivan, M. J. Ruppel, R. H. Mason, V. E. Irish, T. Lee, C. Y. Hwang, T. S. Rhee, J. R. Snider, G. R. McMeeking, S. Dhaniyala, E. R. Lewis, J. Wentzell, J. Abbatt, C. Lee, C. M. Sultana, A. P. Ault, J. L. Axson, M. D. Martinez, I. Venero, G. Santos-Figeroa, M. Dale Stokes, G. B. Dean, O. Mayol-Bracero, V. H. Grassian, T. H. Bertram, A. K. Bertram, B. F. Moffett, and G. D. Franc, Sea spray aerosol as a unique source of ice nucleating particles, Proceedings of the National Academy of Sciences, doi:10.1073/pnas.1514034112, 2016.
24. Alvarado, M., C. R. Lonsdale, R. J. Yokelson, S. K. Akagi, I. R. Burling, H. Coe, J. S. Craven, E. Fischer, G. R. McMeeking, J. H. Seinfeld, T. Soni, J. W. Taylor, S. P. Urbanski, D. R. Weise, and C. E. Wold, Investigating the links between ozone and organic aerosol chemistry in a biomass burning plume from a California chaparral fire, Atmospheric Chemistry and Physics, 15, 6667-6688, 2015.
25. Retama, A., D. Baumgardner, G. B. Raga, G. R. McMeeking, and J. W. Walker, Seasonal and diurnal trends in black carbon properties and co-pollutants in Mexico City, Atmospheric Chemistry and Physics, 15, 9693-9709, 2015.
26. May, A. A., T. Lee, G. R. McMeeking, S. Akagi, A. P. Sullivan, S. Urbanski, R. J. Yokelson and S. M. Kreidenweis, Observations and analysis of organic aerosol evolution in some prescribed fire smoke plumes, Atmospheric Chemistry and Physics, 15, 6323-6335, 2015.
27. Perring, A. E., J. P. Schwarz, D. Baumgardner, M. T. Hernandez, D. V. Spracklen, C. L. Heald, R. S. Gao, G. Kok, G. R. McMeeking, J. B. McQuaid, and D. W. Fahey, Airborne observations of regional variation in fluorescent aerosol across the United States, Journal of Geophysical Research, 120, 1153-1170, 2015.

28. DeMott, P. J., A. J. Prenni, G. R. McMeeking, R. C. Sullivan, M. D. Petters, Y. Tobo, M. Niemand, O. Möhler, J. R. Snider, Z. Wang, and S. M. Kreidenweis, Integrating laboratory and field data to quantify the immersion freezing ice nucleation activity of mineral dust particles, Atmospheric Chemistry and Physics, 15, 393-409, 2015.
29. Jolleys, M. D., H. Coe, G. McFiggans, G. R. McMeeking, T. Lee, S. M. Kreidenweis, J. L. Collett, Jr., and A. P. Sullivan, Organic aerosol emission rates from the laboratory combustion of biomass fuels, Journal of Geophysical Research Atmospheres, 119, doi:10.1002/2014JD021589, 2014.
30. McCluskey, C., P. J. DeMott, A. J. Prenni, E. L. Levin, G. R. McMeeking, A. P. Sullivan, T. Hill, S. Nakao, C. M. Carrico, and S. M. Kreidenweis, Characteristics of atmospheric ice nucleating particles associated with biomass burning in the US: Prescribed burns and wildfires, submitted to Journal of Geophysical Research, 119, doi:10.1002/2014JD021980, 2014.
31. Levin, E. J. T., G. R. McMeeking, P. J. DeMott, C. S. McCluskey, C. E. Stockwell, R. J. Yokelson, and S. M. Kreidenweis, A new method to determine the number concentrations of refractory black carbon ice nucleating particles, Aerosol Science and Technology, 48, 1264-1275, doi:10.1080/02786826.2014.977843, 2014.
32. McMeeking, G. R., E. Fortner, T. B. Onasch, J. W. Taylor, M. Flynn, H. Coe and S. M. Kreidenweis, Impacts of nonrefractory material on light absorption by aerosols emitted from biomass burning, Journal of Geophysical Research Atmospheres, 119, doi:10.1029/2014JD021750, 2014.
33. Wright, T. P., J. D. Hader, G. R. McMeeking, and M. D. Petters, High relative humidity as a trigger for widespread release of ice nuclei, Aerosol Science and Technology, 48:11, i-v, doi:10.1080/02786826.2014.968244, 2014.
34. May, A. A., G. R. McMeeking, J. W. Taylor, J. Craven, T. Lee, I. Burling, A. P. Sullivan, S. Akagi, J. L. Collett, Jr., M. Flynn, H. Coe, S. P. Urbanski, J. H. Seinfeld, R. J. Yokelson, and S. M. Kreidenweis, Emissions of carbonaceous aerosols from biomass burning: A synthesis of laboratory and aircraft measurements, Journal of Geophysical Research Atmospheres, 119, doi:10.1029/2014021848, 2014.
35. Sullivan, A. P., A. A. May, T. Lee, G. R. McMeeking, S. M. Kreidenweis, S. K. Akagi, R. J. Yokelson, S. P. Urbanski, and J. L. Collett, Jr., Airborne characterization of smoke marker ratios from prescribed burning, Atmospheric Chemistry and Physics, 14, 10535-10545, doi:10.5194/acp-14-10535-2014, 2014.
36. Lack, D. A., H. Moosmüller, G. R. McMeeking, R. K. Chakrabarty, D. Baumgardner, Characterizing elemental, equivalent black, and refractory black carbon aerosol particles: a review of techniques, their limitations and uncertainties, Analytical and Bioanalytical Chemistry, 406, 99-122, 2014.
37. Reddington, C. L., G. McMeeking, G. W. Mann, H. Coe, M. G. Frontoso, D. Liu, M. Flynn, D. V. Spracklen and K. S. Carslaw, The size distribution and mixing state of black carbon over Europe, Atmospheric Chemistry and Physics, 13, 4917-4939, 2013.
38. Akagi, S. K., R. J. Yokelson, I. R. Burling, S. Meinardi, I. Simpson, D. R. Blake, G. R. McMeeking, A. Sullivan, T. Lee, S. Kreidenweis, S. Urbanski, J. Reardon, D. W. T. Griffith, T. J. Johnson and D. R. Weise, Measurements of reactive trace gases and variable O_3 formation rates in some South Carolina biomass burning plumes, Atmospheric Chemistry and Physics, 13, 1141-1165, 2013.
39. Saleh, R., C. J. Hennigan, G. R. McMeeking, W. K. Chuang, E. S. Robinson, H. Coe, N. M. Donahue, and A. L. Robinson, Absorptivity of brown carbon in fresh and photo-chemically aged biomass-burning emissions, Atmospheric Chemistry and Physics, 13, 7683-7693, 2013.
40. Hamburger, T., G. McMeeking, A. Minikin, A. Petzold, H. Coe, and R. Krejci, Airborne observations of aerosol microphysical properties and particle ageing in the troposphere above Europe, Atmospheric Chemistry and Physics, 12, 11533-11554, 2012.

41. Highwood, E. J., M. J. Northway, G. R. McMeeking, W. T. Morgan, D. Liu, S. Osborne, K. Bower, H. Coe, C. Ryder and P. Williams, Aerosol scattering and absorption during the EUCAARI-LONGREX flights of the Facility for Airborne Atmospheric Measurements (FAAM) BAe-146: can measurements and models agree?, Atmospheric Chemistry and Physics, 12, 7251-7267, 2012.
42. McMeeking, G. R., M. Bart, P. Chazette, J. M. Haywood, J. R. Hopkins, J. B. McQuaid, W. T. Morgan, J. –C. Raut, C. L. Ryder, N. Savage, K. Turnbull and H. Coe, Airborne measurements of trace gases and aerosols over the London metropolitan region, Atmospheric Chemistry and Physics, 12, 5163-5187, 2012.
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44. Kulmala, M., A. Asmi, H. K. Lappalainen, U. Baltensperger, J.-L. Brenguier, M. C. Facchini, H.-C. Hansson, Ø. Hov, C. D. O'Dowd, U. Pöschl, A. Wiedensohler, R. Boers, O. Boucher, G. de Leeuw, H. A. C. Denier van der Gon, J. Feichter, R. Krejci, P. Laj, H. Lihavainen, U. Lohmann, G. McFiggans, T. Mentel, C. Pilinis, I. Riipinen, M. Schulz, A. Stohl, E. Swietlicki, E. Vignati, C. Alves, M. Amann, M. Ammann, S. Arabas, P. Artaxo, H. Baars, D. C. S. Beddows, R. Bergström, J. P. Beukes, M. Bilde, J. F. Burkhart, F. Canonaco, S. L. Clegg, H. Coe, S. Crumeyrolle, B. D'Anna, S. Decesari, S. Gilardoni, M. Fischer, A. M. Fjaeraa, C. Fountoukis, C. George, L. Gomes, P. Halloran, T. Hamburger, R. M. Harrison, H. Herrmann, T. Hoffmann, C. Hoose, M. Hu, A. Hyvärinen, U. Hõrrak, Y. Iinuma, T. Iversen, M. Josipovic, M. Kanakidou, A. Kiendler-Scharr, A. Kirkevåg, G. Kiss, Z. Klimont, P. Kolmonen, M. Komppula, J.-E. Kristjánsson, L. Laakso, A. Laaksonen, L. Labonnote, V. A. Lanz, K. E. J. Lehtinen, L. V. Rizzo, R. Makkonen, H. E. Manninen, G. McMeeking, J. Merikanto, A. Minikin, S. Mirme, W. T. Morgan, E. Nemitz, D. O'Donnell, T. S. Panwar, H. Pawlowska, A. Petzold, J. J. Pienaar, C. Pio, C. Plass-Duelmer, A. S. H. Prévôt, S. Pryor, C. L. Reddington, G. Roberts, D. Rosenfeld, J. Schwarz, Ø. Seland, K. Sellegri, X. J. Shen, M. Shiraiwa, H. Siebert, B. Sierau, D. Simpson, J. Y. Sun, D. Topping, P. Tunved, P. Vaattovaara, V. Vakkari, J. P. Veefkind, A. Visschedijk, H. Vuollekoski, R. Vuolo, B. Wehner, J. Wildt, S. Woodward, D. R. Worsnop, G.-J. van Zadelhoff, A. A. Zardini, K. Zhang, P. G. van Zyl, V.-M. Kerminen, K. S Carslaw, and S. N. Pandis, General overview: European Integrated project on Aerosol Cloud Climate and Air Quality interactions (EUCAARI) – integrating aerosol research from nano to global scales, Atmospheric Chemistry and Physics, 11, 13061-13143, 2011.
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46. McMeeking, G. R., W. T. Morgan, M. Flynn, E. J. Highwood, K. Turnbull, J. Haywood, and H. Coe, Black carbon aerosol mixing state, organic aerosols and aerosol optical properties over the United Kingdom, Atmospheric Chemistry and Physics, 11, 9037-9052, 2011.
47. Hennigan, C. J., M. A. Miracolo, G. J. Engelhart, A. A. May, A. A. Presto, T. Lee, A. P. Sullivan, G. R. McMeeking, H. Coe, C. E. Wold, W.-M. Hao, J. B. Gilman, W. C. Kuster, J. de Gouw, B. A. Schichtel, J. L. Collett, Jr., S. M. Kreidenweis, and A. L. Robinson, Chemical and physical transformations of organic aerosol from the photo-oxidation of open biomass burning emissions in an environmental chamber, Atmospheric Chemistry and Physics, 11, 7669-7686, 2011.
48. Allen, G., H. Coe, A. Clarke, C. Bretherton, R. Wood, S. J. Abel, P. Barrett, P. Brown, R. George, S. Freitag, C. McNaughton, S. Howell, L. Shank, V. Kapustin, V. Brekhovskikh, L. Kleinman, Y.-N. Lee, S. Springston, T. Toniazzo, R. Krejci, J. Fochesatto, G. Shaw, P. Krecl, B. Brooks, G. McMeeking, K.

N. Bower, P. I. Williams, J. Crosier, I. Crawford, P. Connolly, D. Covert and A. R. Bandy, South East Pacific atmospheric composition and variability sampled along 20S during VOCALS-REx, Atmospheric Chemistry and Physics, 11, 5237-5262, 2011.

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INVITED SPEAKING ENGAGEMENTS - PRESENTATIONS, WEBINARS

1. “Network of Atmospheric Composition and Aerosol Sensors”, FARE Users’ Workshop (NSF), Boulder, Colorado, 18-22 September 2023.
2. “Fluorescence-based detection of bioaerosols: Examples of applications for atmospheric science”, Bioaerosols: Characterization and Impact, US Army Research Office, Austin, Texas, 26-28 March 2014.
3. “Better living through chemistry: Contributions of the CSU atmospheric chemistry program”, Colorado State University Department of Atmospheric Science 50th Anniversary Symposium, Fort Collins, 13 July 2012.
4. “From a fiery birth to a watery grave: The lifecycle and impacts of black carbon aerosol”, 95th Canadian Chemistry Conference (invited), Calgary, Alberta, 28 May 2012.
5. “The impact of mixing state on black carbon aerosol properties”, NOAA Chemical Sciences Division, 7 March 2012.
6. “Measurements to evaluate the impacts of carbonaceous trace gas and particle emissions from fire”, SERDP/ESTCP Partners in Environmental Technology Program, Washington DC, 29 November 2011.