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Education

Ph.D.	2012	Department of Chemistry, University of California, San Diego (UCSD), La Jolla, CA
M.S.	2009	Department of Chemistry, University of California, San Diego (UCSD), La Jolla, CA
B.A.S.*	2007	Department of Chemistry, University of Illinois, Urbana-Champaign, Champaign, IL (*with high distinction)

Awards and Honors

2014	Grant to attend the International Early Career Workshop on Microbes at the Interface of Land-Atmosphere Feedbacks in St. Maxime, France
2012	National Research Council (NRC) Research Associateship Program fellowship
2008	Congratulatory letters from Graduate Affairs for excellence in teaching
2007	Proctor and Gamble Research Award for excellence in undergraduate research

Professional and Research Experience

2016-Pres.	Guest editor for <i>Atmosphere</i>
2016-Pres.	Temporary Graduate Faculty member, University of El Paso, Texas
2016-Pres.	Research Scientist II, CIRES/CU, Boulder, CO
2014-Pres.	Research Scientist I, CIRES/CU, Boulder, CO
2012-2014	Postdoctoral Researcher, NRC/NOAA, Boulder, CO
2008-2012	Graduate Researcher, UCSD, La Jolla, CA
2007-2008	Teaching Assistant, UCSD, La Jolla, CA
2007	Student Researcher, US Army Engineer Research & Development Center, Champaign, IL
2006-2007	Undergraduate Honors Researcher, UIUC, Champaign, IL
2006-2007	Organic chemistry I and II tutor, UCSD, Champaign, IL
2005-2006	Student Researcher, Tekion, Inc., Champaign, IL
2004-2005	Student Researcher, National Soybean Research Laboratory, UIUC, Champaign, IL

Activities and Outreach

2016-Pres.	IASOA aerosol working group leader
2016	Outreach education at Barrow, AK middle and high schools
2015-Pres.	Arctic thematic group lead for Microbes at the Interface of Land-Atmosphere Feedbacks, an international early-career workshop sponsored by NSF
2015-Pres.	PhD committee member for Jose Rivas, UTEP
2015	Presentation for NOAA PSD 5-year review (invited)
2015-Pres.	PROGRESS (Promoting Geoscience Research, Education, and Success) mentor
2015	"Ask a scientist" series for Midland Middle School 5 th grade science class
2015	Press science communication education with High Country News
2015-Pres.	NCAR aerosol-cloud steering group lead
2015-Pres.	DOE ASR site science team member
2015	Onboard scientist for WP-3D flight missions for CalWater 2015

2015 Lead chemical forecaster for CalWater 2015
 2013-Pres. Judge for American Geophysical Union student presentation competition
 2012-Pres. Reviewer for Journal of Geophysical Research–Atmospheres, Atmospheric Chemistry and Physics, Environmental Research Letters, Aerosol and Air Quality Research, and Atmospheric Research
 2012, 2013 Team in Training participant and mentor for the Leukemia and Lymphoma Society
 2011 Student volunteer for the Governor’s Conference on Extreme Climate Risks and California’s Future, Scripps Institution of Oceanography
 2011 Outreach volunteer at Paul Ecke Central Elementary School
 2010 Session chair (invited), American Assoc. for Aerosol Research Annual Meeting
 2009, 2010 Student assistant, American Assoc. for Aerosol Research Annual Meeting
 2009 Outreach volunteer for Family Day at Scripps Aquarium

Professional Memberships

2014-Pres. European Geosciences Union
 2010-Pres. American Geophysical Union
 2009-2010 American Association for Aerosol Research
 2007 American Chemical Society

Grants Awarded

Title: Exploratory Ice Nucleation Measurements at Oliktok
PI: Jessie Creamean
Program: US DOE Atmospheric Radiation Measurement Program
Period: 08/01/16 – 07/31/17
Budget: \$30,000
Effort by PI: 2 months/year

Title: HOVERCAT: A Novel Aerial System to Evaluate Aerosol Chemistry and its Impacts on Arctic Clouds
PI: Jessie Creamean
Program: CIRES Innovative Research Program
Period: 06/01/16 – 05/31/17
Budget: \$25,000
Effort by PI: 3 months/year

Title: Investigating the mechanisms driving extreme precipitation in atmospheric rivers with an integrated
PI: Hari Mix
Program: NSF RAPID
Period: 02/15/16 – 02/14/17
Budget: \$109,982
Effort by PI: 2 months/year

Title: Understanding the sources and impacts of Pacific Arctic aerosol particles
PI: Jessie Creamean
Program: NOAA Climate Program Office
Period: 08/01/15 – 07/31/20
Budget: \$394,376

Effort by PI: 3 months/year for FY2 and 3; 5 months/year for FY1, 4, and 5

Title: Advancing understanding of the Arctic atmosphere through process-level analysis and product development using Oliktok Point measurements

PI: Gijs de Boer

Program: US DOE Atmospheric System Research Program

Period: 03/01/15 – 02/28/19

Budget: \$1,994,097

Effort by PI: 4 months/year for FY1 and 2, 3 months/year for FY 3 and 4

Publications and Presentations

Publications

- Creamean, J.M.**, P.J. Neiman, T. Colman, C.J. Senff, G. Kirgis, R.J. Alvarez, and A. Yamamoto (2016), Colorado air quality impacted by long range transport: A set of case studies during the 2015 Pacific Northwest fires, *Atmos. Chem. Phys.*, 16, 12329-12345.
- Morris, C.E., S. Soubeyrand, K.E. Bigg, **J.M. Creamean**, and D.C. Sands (2016), Maps of rainfall feedback depict the geography of precipitation's sensitivity to aerosols, *Bull. Amer. Meteor. Soc.*, in press.
- Morris, C.E., S. Soubeyrand, K.E. Bigg, **J.M. Creamean**, and D.C. Sands (2016), A framework to assess the contribution of bioaerosols to the outcome of meteorological contexts favorable for rainfall, *bioRxiv*, doi:<http://dx.doi.org/10.1101/070532>.
- Creamean, J.M.**, A.B. White, P. Minnis, R. Palikonda, D.A. Spangenberg, and K.A. Prather (2016), The relationships between insoluble precipitation residues, clouds, and precipitation over California's southern Sierra Nevada during winter storms, *Atmos. Environ.*, 140, 298-310.
- Creamean, J.M.**, J.L. Axson, A.L. Bondy, R.L. Craig, N.W. May, H. Shen, M.H. Weber, K.A. Pratt, and A.P. Ault (2016), Changes in precipitating snow chemistry with location and elevation in the California Sierra Nevada, *J. Geophys. Res.*, 121, 7296-7309.
- Axson, J.L., H. Shen, A.L. Bondy, C. Landry, J. Welz, **J.M. Creamean**, and A.P. Ault (2016), Transported mineral dust deposition case study at a hydrologically sensitive mountain site: Size and composition shifts in ambient aerosol and snowpack, *Aerosol Air Qual. Res.*, 26, 555-567.
- Creamean, J.M.**, A.P. Ault, A.B. White, P.J. Neiman, F.M. Ralph, and K.A. Prather (2015), Impact of interannual variations in aerosol particle sources on orographic precipitation over California's Central Sierra Nevada, *Atmos. Chem. Phys.*, 15(1), 931-964.
- White, A.B., P.J. Neiman, **J.M. Creamean**, T. Coleman, F.M. Ralph, and K.A. Prather (2015), The Impacts of California's San Francisco Bay Area Gap on Precipitation Observed in the Sierra Nevada during HMT and CalWater, *J. Hydromet.*, 16, 1048-1069.
- Axson, J.L., **J.M. Creamean**, A.L. Bondy, S.S. Capracotta, K.Y. Warner, and A.P. Ault (2014), An in situ method for sizing insoluble residues in precipitation and other aqueous samples, *Aerosol Sci. & Tech.*, 49(1), 24-34.
- Creamean, J.M.**, J.R. Spackman, S.M. Davis, A.B. and White (2014), Climatology of long-range transported Asian dust on the west coast of the United States, *J. Geophys. Res.*, 119 (12), 12171-12185.
- Creamean, J.M.**, C. Lee, T.C. Hill, A.P. Ault, P.J. DeMott, A.B. White, F.M. Ralph, and K.A. Prather (2014), Chemical properties of insoluble precipitation residues, *J. Aerosol Sci.*, 76, 13-27.
- Creamean, J.M.**, K.J. Suski, D. Rosenfeld, A. Cazorla, P.J. DeMott, R.S. Sullivan, A.B. White, F.M. Ralph, P. Minnis, J.M. Comstock, J.M. Tomlinson, and K.A. Prather (2013), Dust and

biological aerosols from the Sahara and Asia influence precipitation in the Western U.S., *Science*, 339, 1572-1578.

- Creamean, J.M.**, A.P. Ault, J.E. Ten Hoeve, M.Z. Jacobson, G.C. Roberts, and K.A. Prather (2011), Measurements of aerosol chemistry during new particle formation events at a remote rural mountain site, *Environ. Sci. & Tech.*, 45 (19), 8208-8216.
- Hatch, L.E., **J.M. Creamean**, A.P. Ault, J.D. Surratt, M.N. Chan, J.H. Seinfeld, E.S. Edgerton, Y.X. Su, and K.A. Prather (2011), Measurements of isoprene-derived organosulfates in ambient aerosols by aerosol time-of-flight mass spectrometry - Part 1: Single particle atmospheric observations in Atlanta, *Environ. Sci. & Tech.*, 45 (12), 5105-5111.
- Hatch, L.E., **J.M. Creamean**, A.P. Ault, J.D. Surratt, M.N. Chan, J.H. Seinfeld, E.S. Edgerton, Y.X. Su, and K.A. Prather (2011), Measurements of isoprene-derived organosulfates in ambient aerosols by aerosol time-of-flight mass spectrometry - Part 2: Temporal variability & formation mechanisms, *Environ. Sci. & Tech.*, 45 (20), 8648-8655.
- Ault, A.P., C.R. Williams, A.B. White, P.J. Neiman, **J.M. Creamean**, C.J. Gaston, F.M. Ralph, and K.A. Prather (2011), Detection of Asian dust in California orographic precipitation, *J. Geophys. Res.*, 116, D16205.

First Author Presentations

- Creamean, J.M.**, G. de Boer, M. Maahn, A. McComiskey, and A. Solomon (2017), Characterizing Arctic aerosol properties for evaluation of aerosol-cloud interactions on the North Slope of Alaska, *American Meteorological Society Annual Meeting*, Seattle, WA.
- Creamean, J.M.**, G. de Boer, M. Maahn, A. McComiskey, and A. Solomon (2016), Characterizing Arctic aerosol properties for evaluation of aerosol-cloud interactions on the North Slope of Alaska, *American Geophysical Union Fall Meeting*, San Francisco, CA (invited).
- Creamean, J.M.**, G. de Boer, M. Shupe, A. McComiskey, P. Quinn, J. Ogren, and A. Jefferson (2016), A comprehensive climatology of Arctic aerosol properties on the North Slope of Alaska, *Global Monitoring Annual Conference*, Boulder, CO.
- Creamean, J.M.**, G. de Boer, M. Shupe, and A. McComiskey (2016), A comprehensive climatology of Arctic aerosol properties on the North Slope of Alaska, *European Geosciences Union Meeting*, Vienna, Austria.
- Creamean, J.M.**, K.J. Suski, D. Rosenfeld, A. Cazorla, P.J. DeMott, R.S. Sullivan, A.B. White, F.M. Ralph, P. Minnis, J.M. Comstock, J.M. Tomlinson, and K.A. Prather (2016), Dust and biological aerosols from the Sahara and Asia influence precipitation in the Western U.S., *University of Alaska Seminar*, Fairbanks, AK (invited).
- Creamean, J.M.**, A.B. White, P. Minnis, R. Palikonda, D.A. Spangenberg, and K.A. Prather (2015), The relationships between insoluble precipitation residues, clouds, and precipitation over California's southern Sierra Nevada during winter storms, *American Geophysical Union Fall Meeting*, San Francisco, CA.
- Creamean, J.M.**, G. de Boer, M. Shupe, and A. McComiskey (2015), A comprehensive climatology of Arctic aerosol properties on the North Slope of Alaska, *Arctic Observing Open Science Meeting*, Seattle, WA.
- Creamean, J.M.**, P.J. Neiman, T. Colman, D. Gottas, and A. Yamamoto (2015), Colorado air quality impacted by long range transport: A case study during the 2015 Pacific Northwest fires, *SPARC Regional Workshop on Chemical and Physical Processes in the Climate System*, Boulder, CO.
- Creamean, J.M.**, J.L. Axson, A.L. Bondy, R.L. Craig, N.W. May, H. Shen, M.H. Weber, K.A. Pratt, and A.P. Ault (2015), Insights into aerosol-cloud-precipitation interactions from physicochemical characterization of insoluble residues in Sierra Nevada snow, *European Geosciences Union Meeting*, Vienna, Austria.

- Creamean, J.M.**, A.P. Ault, A.B. White, P.J. Neiman, F.M. Ralph, and K.A. Prather (2014), Interannual Variations in Aerosol Sources and Their Impact on Orographic Precipitation over California's Central Sierra Nevada, *American Geophysical Union Fall Meeting*, San Francisco, CA.
- Creamean, J.M.**, K.J. Suski, D. Rosenfeld, A. Cazorla, P.J. DeMott, R.S. Sullivan, A.B. White, F.M. Ralph, P. Minnis, J.M. Comstock, J.M. Tomlinson, and K.A. Prather (2014), Dust and biological aerosols from the Sahara and Asia influence precipitation in the Western U.S., *Naval Research Laboratory Seminar*, Monterey, CA (invited).
- Creamean, J.M.**, K.J. Suski, D. Rosenfeld, A. Cazorla, P.J. DeMott, R.S. Sullivan, A.B. White, F.M. Ralph, P. Minnis, J.M. Comstock, J.M. Tomlinson, and K.A. Prather (2014), Dust and biological aerosols from the Sahara and Asia influence precipitation in the Western U.S., *University of Utah Seminar*, Salt Lake City, UT (invited).
- Creamean, J.M.**, K.J. Suski, D. Rosenfeld, A. Cazorla, P.J. DeMott, R.S. Sullivan, A.B. White, F.M. Ralph, P. Minnis, J.M. Comstock, J.M. Tomlinson, and K.A. Prather (2014), Dust and biological aerosols from the Sahara and Asia influence precipitation in the Western U.S., *Colorado State University Seminar*, Fort Collins, CO (invited).
- Creamean, J.M.**, J.R. Spackman, S.M. Davis, A.B. and White (2013), Climatology of long-range transported Asian dust on the west coast of the United States, *American Geophysical Union Fall Meeting*, San Francisco, CA.
- Creamean, J.M.**, K.J. Suski, D. Rosenfeld, A. Cazorla, P.J. DeMott, R.S. Sullivan, A.B. White, F.M. Ralph, P. Minnis, J.M. Comstock, J.M. Tomlinson, and K.A. Prather (2013), Dust and biological aerosols from the Sahara and Asia influence precipitation in the Western U.S., *European Aerosol Conference*, Prague, Czech Republic.
- Creamean, J.M.** (2012), Investigating Aerosol-Cloud-Precipitation Effects in the Sierra Nevada during CalWater Phase I, *National Academy of Sciences Board on Atmospheric Sciences and Climate Spring Meeting*, La Jolla, CA (invited).
- Creamean, J.M.**, A.P. Ault, D.B. Collins, J.F. Cahill, E.M.M. Fitzgerald, A.B. White, P.J. Neiman, G.A. Wick, J. Fan, L.-Y. Leung, F.M. Ralph, and K.A. Prather (2011), Multiyear evidence from ground-based observations and modeling of the impact of dust on snowfall in the Sierra Nevada, *American Geophysical Union Fall Meeting*, San Francisco, CA.
- Creamean, J.M.**, D.B. Collins, A.P. Ault, A.B. White, F.M. Ralph, J. Roche, and K.A. Prather (2011), Evidence of Dust and Biological Aerosols Affecting Orographic Precipitation in the Sierra Nevada during CalWater Phase I, *Vulnerability and Adaptation to Extreme Events in California in the Context of a Changing Climate: New Scientific Findings Workshop*, La Jolla, CA.
- Creamean, J.M.**, A.P. Ault, L.T. Padro, A. Nenes, and K.A. Prather (2010), Signature marine aerosol chemistry observed in an inland urban location during tropical cyclones, *29th Annual Meeting of the American Association for Aerosol Research*, Portland, OR.
- Creamean, J.M.**, A.P. Ault, E.M.M. Fitzgerald, D.B. Collins, G.C. Roberts, and K.A. Prather (2010), Inter-annual comparison of new particle formation chemistry and cloud condensation nuclei measurements at a remote rural mountain site, *American Geophysical Union Fall Meeting*, San Francisco, CA.
- Creamean, J.M.**, A.P. Ault, C.J. Gaston, G.C. Roberts, C.R. Williams, F.M. Ralph, and K.A. Prather (2009), Variation in the chemistry of precipitation and ambient aerosols at a remote rural site, *28th Annual Meeting of the American Association for Aerosol Research*, Minneapolis, MN.
- Creamean, J.M.** and G.S. Girolami (2007), Bis(dimethylphosphino)methane synthesis from reaction with aluminum, *233rd American Chemical Society National Meeting*, Chicago, IL.
- Creamean, J.M.** and G.S. Girolami (2007), Bi- and tri-dentate phosphine compounds as ligands for metal centers, *University of Illinois, Urbana-Champaign Undergraduate Research Symposium*, Champaign, IL.

Graduate and Postdoctoral Advisors

- Postdoctoral Advisor: Dr. F. Martin Ralph, National Oceanic and Atmospheric Administration, Boulder, CO (now at University of California, San Diego, La Jolla, CA)
- Postdoctoral Advisor: Dr. Randall Dole, National Oceanic and Atmospheric Administration, Boulder, CO
- Ph.D. Advisor: Prof. Kimberly Prather, University of California, San Diego, La Jolla, CA