

Ross C. Petersen

CONTACT INFORMATION

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EDUCATION

University of Utah, Salt Lake City, Utah USA **September 2016 -**
M.S., Atmospheric Sciences (Expected Summer 2018)
• Advisor: A. Gannet Hallar

Reed College, Portland, Oregon USA **September 2011 - May 2015**
B.S., Physics (Graduated May 2015)
• Thesis Topic: “The Optical Properties of Reflection Nebulae”
• Undergraduate Advisor: Johnny Powell
• Thesis Advisor: Alison Crocker

Steamboat Mountain School, Steamboat Springs, Colorado USA **2009 - 2011**
Edina High School, Edina, Minnesota USA **2007 - 2009**

PAPERS

Hallar, A. G., N. Molotch, J. Hand, B. Livneh, I. McCubbin, **R. Petersen**, J. Michalsky, and D. Lowenthal, 2016: Impacts of Increasing Aridity and Wildfires on Aerosol Loading in the Intermountain Western U.S., *Environ. Res. Lett.* 12 014006.

Hallar, A. G., **R. Petersen**, I. B. McCubbin, D. Lowenthal, S. Lee, E. Andrews, F. Yu: 2016, Climatology of New Particle Formation and Corresponding Precursors at Storm Peak Laboratory, *Aerosol and Air Quality Research*, Volume 16, No. 3, March 2016, Pages 816-826, doi:10.4209/aaqr.2015.05.0341.

Hallar, A. G., **R. Petersen**, E. Andrews, J. Michalsky, I. B. McCubbin, and J.A. Ogren: Contributions of dust and biomass-burning to aerosols at a Colorado mountain-top site, *Atmospheric Chemistry and Physics*, 15, 13665–13679, doi:10.5194/acp-15-13665-2015, 2015.

CONFERENCE PRESENTATIONS

Hallar, A. G., **R. Petersen**, E. Andrews, J. Ogren, J. Michalsky, I. B. McCubbin, and N. Molotch, 2015. Comparable Role in Dust and and Biomass-Burning to Aerosol Optical Depth at a Colorado Mountain-top Site. AGU Fall Meeting.

Petersen, R. C. 2012. Ozone and atmospheric chemistry analysis near Wamsutter Wyoming. Reed College Atmospheric Chemistry Research Group.

FIELD STUDIES

Utah Winter Fine Particulate Aircraft Study: University of Utah **January - February 2017**

Increase scientific understanding of the complex atmospheric chemistry that drives the formation of unhealthy levels of particulate matter.

PROFESSIONAL
EXPERIENCE

Reed college, Portland, Oregon USA

Teaching Assistant

September 2014 - May 2015

Grading assignments and providing feedback for the junior level Electrodynamics I and II courses.

Storm Peak Laboratory, Steamboat Springs, Colorado USA

Technical Staff

June 2013 - Present

Processed data for the MFRSR radiometer, determining various optical parameters and measurements related to the aerosol optical depth. Spent multiple weeks at the NOAA Earth Science Research Laboratories in Boulder, Colorado, working with Joe Michalsky to learn about aerosol optical depth retrieval, analysis, and associated technical skills.

Storm Peak Laboratory, Steamboat Springs, Colorado USA

Research Intern

May 2012 - June 2013

Studied atmospheric chemistry, and provided assistance with file management, reference retrieval and data analysis. Reported on atmospheric ozone in rural Wyoming.

COMPUTER SKILLS

- Extensive use of R, C and Fortran statistical libraries, and Unix shell scripts.
- Familiar with Unix/Linux and LaTeX.
- CSS and HTML
- Experience with aerosol optical depth extraction, processing, and analysis.
- Some experience with Monte Carlo simulations of radiative transfer.