Hallar Aerosol Research Team (HART)

Research Theme

Using high quality measurements of:

- Aerosol physical and chemical properties
- Cloud microphysics
- Trace Gases

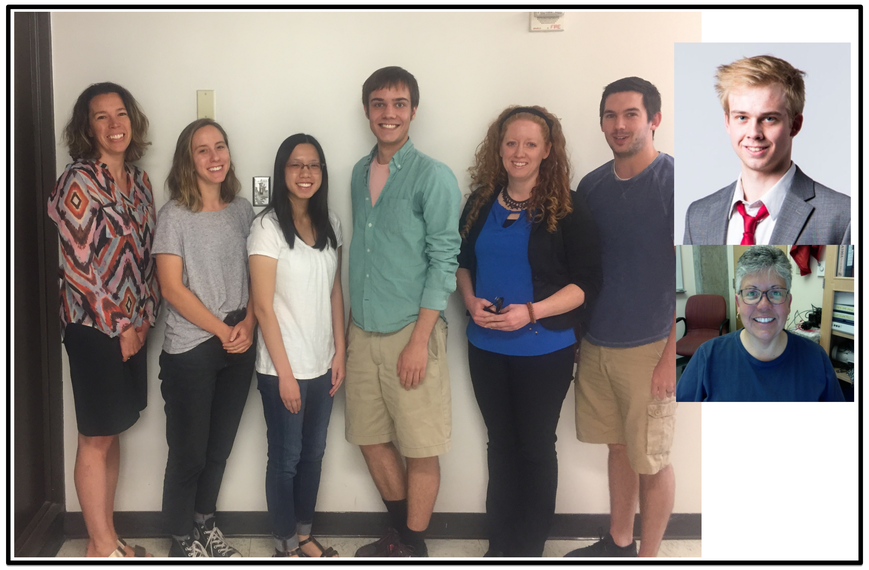
To understand connections between the biosphere, atmosphere, and climate along with the impacts of anthropogenic emissions on these connections focusing on mountain regions.

Aerosol measurements at Alta's Atwater Site

U. of Wyoming King Air
Visits Salt Lake City for TECPEC in March 2019

Weather Balloon Launch During Air Quality Flight on March 22, 2019

Open House at SLC airport on March 22, 2019



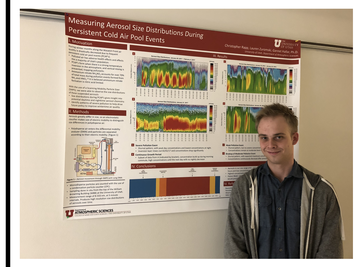
Pictured left to right, and then top to bottom: Gannet Hallar, Lauren Zuromski, McKayla Pham, Ross Petersen, Crystal Green, Andy Lambert, Chris Rapp, Maria Garcia

Activities over the last year:

1. Spring measurements of dust size distribution at Alta Atwater site in conjunction with "dust on snow study". Paper published in Environmental Research Letters.
2. USTAR grant allowed for continued work with aerosol system in wind tunnel. Paper published in AS&T.
3. First successful deployment of new inlet technology to separate ice and liquid in mixed phase clouds (collaboration with MIT) at Storm Peak Lab, funded by NSF.
4. Continued Analysis of DOE StormVEx dataset (paper in review in Atmospheric Chemistry and Physics).
5. Aerosol Laboratory in WBB is nearing completion!

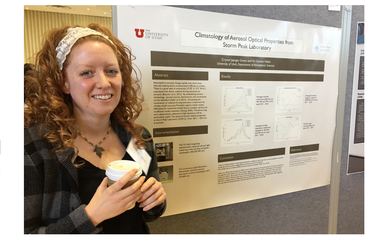
Storm Peak Laboratory

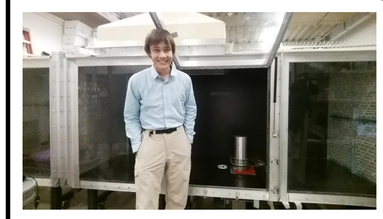
Presenting / Publishing Research Results



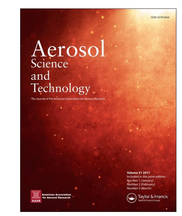
Chris presented his results in March 2019 on Measuring Aerosol Size Distributions during PCAPs at the Air Quality: Science For Solutions Conference at Utah State University

Crystal's peer-reviewed paper was accepted on the climatology of aerosol optical properties at Storm Peak Lab in Aerosol and Air Quality Research!





Ross's peer reviewed paper was accepted in AS&T



Articles

Numerical, Wind-Tunnel, and Atmospheric Evaluation of a Turbulent Ground-Based Inlet Sampling System

R.C. Petersen, A.G. Hallar, I.B. McCubbin, J.A. Ogren, E. Andrews, D. Lowenthal, R. Gorder, R. Purcell, D. Sleeth & I. Novosselov ...show less

Received 14 Aug 2018, Accepted 07 Mar 2019, Accepted author version posted online: 03 Apr 2019

Download citation https://doi.org/10.1080/02786826.2019.1602718 Check for updates

Gannet, Maria and Ian spent January 2019 at Storm Peak Laboratory making aerosol and cloud microphysical measurement to validate the MIT Spider inlet

The Salt Lake Tribune

Dust blowing off the shrinking Great Salt Lake is eroding Wasatch snowpack and that could eventually threaten drinking water

Andy, Ross, and Gannet co-authored a paper (with several others at the U. of Utah from M. Skiles' and J. Lin's research groups) that was published in ERL and received a lot of local press. This paper included aerosol measurements made at Atwater site.