



Anna Mebust

Graduate Institution: University of California-Berkeley

Graduate Discipline: Atmospheric Chemistry

Hometown: Minneapolis, MN

Relevant SC Research: Biological and Environmental Research

Research Interest:

My research aims to constrain the effects of wildfire emissions of NO_x (NO + NO₂) on radiative forcing and global climate change, as well as local, regional and global air quality. Wildfire emissions of NO_x impact tropospheric O₃ and secondary organic aerosol formation, as well as the atmospheric lifetime of various greenhouse gases. Additionally, climate change may act to increase fire activity over the next century; accurate measures of fire NO_x emissions are needed to evaluate the effects of this increase.

Current models of wildfire NO_x emissions do not account for the high variability in emissions observed from natural fires and lead to spatial and temporal biases in NO_x and O₃. My work employs the large sample size of observations provided by satellite instruments to explore variability across biomes (e.g. grassland vs. forest), and within a single biome both spatially (e.g. North American vs. Siberian boreal forests) and temporally (e.g. seasonal variability in African savannas).

About Me:

I attended Pomona College in Claremont, CA for my undergraduate education, graduating cum laude in 2008 with double majors in mathematics and chemistry. While at Pomona, I performed research with Charles Taylor, exploring

methods to induce selectivity in thin film gas microsensor arrays. I came to Berkeley as a graduate student in chemistry in the fall of 2008, where I am a Ph.D. candidate in Ron Cohen's group (<http://www.cchem.berkeley.edu/rccgrp/>), where I study emissions of NO_x from fires and soils. I love teaching; I graded and mentored extensively for both math and chemistry classes at Pomona, and have been a TA for general and analytical chemistry classes at Berkeley. I am a member of the American Geophysical Union, Phi Beta Kappa, and Sigma Xi.

In my spare time, I am a competitive member of the University of California Ballroom Dance team, and am a teacher and administrator for the intermediate-level (2nd year) dance class. As part of UCBD I also developed a training program for social dance teachers, and I very much enjoy social dancing, especially salsa which I do on a weekly basis. I love all forms of dance and music, play ultimate frisbee and do yoga, and also enjoy cooking and baking as a creative process.



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