

Thompson Lecture Series 2019

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Chemistry-climate connections from the polluted to remote atmospheric regions

Connections between the climate system and atmospheric chemistry cascade across space and time. Climate variability and change influence the emissions, chemistry, and meteorology that shape spatiotemporal distributions of air pollutants. Radiatively active air pollutants influence regional and global climate. Here, I will discuss three different chemistry-climate interactions: (1) the response of eastern U.S. pollution events to 21st century warming; (2) climate responses to changes in regional sulfur dioxide emissions; and (3) variability in atmospheric oxidation, the key removal process for many air pollutants and reactive greenhouse gases. The first two examples draw conclusions from simulations with global chemistry-climate models, while the third seeks to develop observation-based constraints for evaluating those models.

Monday 22 July 2019, 11:00 am. Mesa Lab Main Seminar Room

Science with Stakeholders: Collaborative research with air quality and health applications

While science may occasionally “speak for itself” and be inherently useful for applications by stakeholders who implement air quality and health policy, this outcome is not typically a foregone conclusion. In some cases, small tweaks to the analysis or metrics reported in scientific publications can increase usability of scientific knowledge in real-world applications. I will share some reflections on my experience collaborating with air quality, and more recently health, managers, at different stages in my career. I will highlight examples where these collaborations generated new research ideas and emphasize the importance of building relationships and fostering open communication at all phases of a project.

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