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Online Seminar

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Linking Air Pollution and Climate from the Anthroposphere to the Biosphere

Earth system processes couple air pollution with climate change. Climate change can influence the emissions, chemistry, deposition, and meteorology that shape spatio-temporal distributions of air pollutants. In turn, radiatively active air pollutants can alter regional and global climate. I will briefly highlight a few air pollution-climate interactions: [1] summertime eastern U.S. air pollution responses to rising long-lived greenhouse gases, [2] climate system responses to declining regional anthropogenic particle pollution, and [3] climate-sensitive uptake of tropospheric ozone by the terrestrial biosphere. Knowledge of air pollution-climate linkages can reveal otherwise inadvertent synergies and tradeoffs that arise, for example, from health-motivated controls on national air pollutant emissions.