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Observational Studies on Ozone Photochemical Production and Aerosol Optical Properties

This presentation will include two parts of my work on ozone and aerosols from the perspective of field measurements. A comparative study on surface ozone photochemistry in typical megacities (Shanghai and Tianjin) in Eastern China was performed based on observations and analysis of surface ozone and its precursors, nitrogen oxides (NO_x) and volatile organic compounds (VOCs). In addition, measurements of trace gases including ozone and several other trace gases were conducted in Lhasa, Tibet in 2012 to study the impacts of urbanization on their variability and ozone formation. Aerosol optical properties in polluted areas in China were intensively studied, such as multi-wavelength absorptive properties near the surface, vertical distributions of black carbon, as well as ground-based and airborne multi-angle aerosol scattering.