NCAR ATMOSPHERIC CHEMISTRY OBSERVATIONS & MODELING

Virtual ACOM Seminar

Wildfire smoke predictions: gaps, solutions, and future prospects

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ABSTRACT

Smoke from biomass burning can generate a variety of impacts, including visibility issues, negative health effects on population, and meteorology and climate change effects. Air quality models can be used to predict smoke and its impacts; however, they can be highly uncertain. This presentation will show how observations collected during the NOAA-NASA Fire Influence on Regional to Global Environments and Air Quality (FIREX-AQ) field campaign are used to evaluate smoke forecasting systems to identify the main gaps. Models are evaluated in multiple dimensions, including emissions, total column and surface smoke concentrations, smoke injections, and representation of aging. Highlights of work proposing and testing potential model improvements will be also discussed.

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