

ACOM Seminar

Improving the understanding of atmospheric composition for air quality management in a data scarce region: perspectives from South Africa

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Link: <https://operations.ucar.edu/live-acom>

ABSTRACT

Global assessments estimate large impacts from exposure to poor air quality in many countries in Africa. However, these estimates have large uncertainties due to insufficient information, which often stems from the lack of ground-based measurements, as well as the lack of integration of local knowledge. The combined effect of insufficient data and uncertainties impacts not only the understanding and quantification of air pollution levels and impacts, but also affects the understanding of the climate. Available monitoring data across South Africa show that ambient air pollutant concentrations often exceed South Africa's National Ambient Air Quality Standards, especially for PM and ozone, and have not been improving. A spatially and temporally heterogeneous mix of pollutants with varying concentrations is present, especially in the large urban areas. This complex atmospheric composition makes effective air quality management a difficult task. This presentation will discuss our work that has focused on improving the understanding of atmospheric science to support effective air quality management in South Africa despite the scarcity of available data. In addition, key atmospheric chemistry research questions and gaps will be highlighted.

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