

1.066 Atmospheric Chemistry: A quiet revolution helping people mitigate risks of air pollution .

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Abstract:

Atmospheric chemistry emerged out of the societal need to mitigate health effects of deadly smog events that occurred in North America and Europe around the middle of 20th century. In less than 70 years, atmospheric chemistry has advanced so much that we are now capable of predicting air quality in short-term (1-3 days) and long-term (climate time scales), and assessing the implications of air pollution for public health and food security. This presentation will begin with a brief discussion of the evolution of atmospheric chemistry research. This will be followed by a discussion of the information provided by short- and long-term air quality predictions and how that information can help the public mitigate their risk to acute air pollution episodes and evaluate the response of air quality to projected socioeconomic development pathways. Finally, I will talk about the progress of a recent project called the Monitoring, Analysis and Prediction of Air Quality (MAP-AQ) that focuses on developing air quality prediction capabilities in the developing world where the frequency of acute air pollution events has been increasing dramatically.