Title:

What is realistic and doable for an atmospheric chemistry database?

Abstract:

This presentation discusses some practical constraints to database development from a scientific community perspective, using a current NSF supported database project in the field of atmospheric chemistry called ICARUS (Index of Chamber Atmospheric Research in the United States) as a case study. As head of the scientific steering committee of ICARUS, the author will discuss the motivations for this initiative, constraints expected and encountered during the development phase, lessons learned from the project's European counterpart, current progress and ongoing work, and vision for the long term management and operation of the database.

Bio:

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I'm an atmospheric chemist and environmental mass spectrometrist with a background in laboratory and field research. I started my atmospheric science career by analyzing greenhouse gases for New Zealand's national lab NIWA at the Baring Head site near Wellington. My thesis work on determining the detailed composition of organic aerosols was performed at UC Irvine in the group of Professor Sergey Nizkorodov (co-advised by Professor Alexander Laskin at PNNL, who is now at Purdue). My postdoctoral research focused on the chemical oxidation mechanism of isoprene and the biosphere-atmosphere exchange of trace gases. This work was performed at Caltech under the mentorship of Professor Paul Wennberg and Professor John Seinfeld.

Currently, I direct an atmospheric chamber facility at UC Davis and leading the NSF-sponsored effort to develop the first Atmospheric Chamber Database in the United States. My scientific goal is to investigate the prevailing oxidation mechanisms in the atmosphere and explore the link between aerosol composition and their climate and health effects.

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