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Nordic/U.S. Workshop: Biogenic Secondary Organic Aerosols

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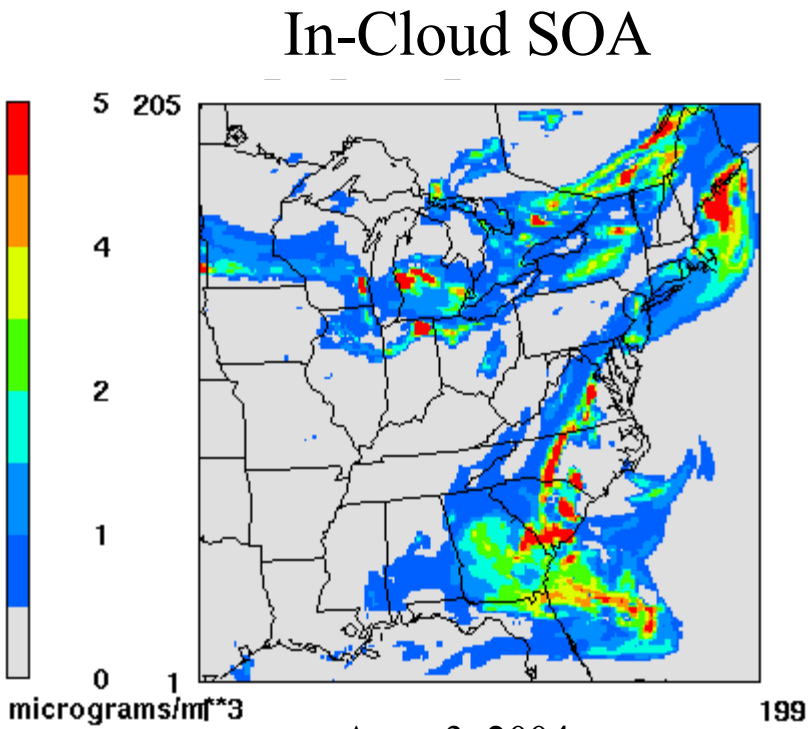
SOA Formation Through Cloud Processing

Reactive organic emissions

- Gas phase organic emissions are oxidized (e.g., in the interstitial spaces of clouds) forming water-soluble organic gases.
- Water-soluble gases partition into cloud droplets where they oxidize further, forming low volatility products.
- These products remain in the particle phase upon cloud evaporation, contributing secondary organic aerosol (SOA).

Current Research

- Adding organic chemistry to EPA regional air quality model (CMAQ)
- Developing generalized (Rosenbrock) solver
- Expanding aqueous mechanism to include new species



Future Goals

- Collaborate with other modelers to investigate radiative feedbacks due to cloud-produced aerosol
- Collaborate with field investigators to add other important biogenic emissions not currently included in CMAQ