The Regional Atmospheric Chemistry Mechanism

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Models such as the Community Multi-scale Air Quality Model (CMAQ) and the Weather Research and Forecasting Model with Chemistry WRF/CHEM are used by NOAA and EPA for air quality forecasting. The new Regional Atmospheric Chemistry Mechanism, version 2, (RACM2) has been developed for implementation in these models. The mechanism is being tested against chamber experiments performed at the University of California, Riverside, and against field observations made at Howard University's Beltsville Center for Climate System Observation (BCCSO) and the Desert Research Institute in Reno, NV. It is likely that the RACM2 approach to the organic chemistry will provide better forecasts of the production of aerosol from organic compounds. The Carbon Bond mechanism loses much information on the number of carbon atoms in the precursor molecules but this information is retained to a greater degree in RACM2.

References

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