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EVALUATION OF FLUX DIVERGENCE OF OZONE USING MEASURED AND MODELED OZONE NET PRODUCTION RATES

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During June and July 1995, as part of the Southern Oxidants Study (SOS), the NOAA instrumented Twin Otter research aircraft was utilized for meteorological and chemical measurements to characterize atmospheric conditions in and around the Nashville, TN, area. There were flights concentrating on flux and flux divergence of ozone, temperature, water vapor and carbon dioxide. We used a steady state model to calculate the chemical production and loss rates of ozone in terms of measured concentrations of ozone, nitrogen oxide, carbon monoxide and hydrocarbons. The net chemical production rate of ozone from the model calculation will be compared with direct aircraft flux divergence estimates of this quantity.

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