

***MIXING STATE OF BLACK CARBON AND EVOLUTION DURING  
TRANSPORT: RESULTS FROM CARES 2010***

R. Subramanian and G. L. Kok, Droplet Measurement Technologies, Boulder, CO 80301  
D. Baumgardner, Universidad Nacional Autónoma de México, Ciudad Universitaria  
Arthur J. Sedlacek, Atmospheric Sci. Div., Brookhaven National Laboratory, Upton, NY  
Rahul Zaveri, Atmospheric Sciences and Global Change Div., PNNL, Richland, WA

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**ABSTRACT**

During the recent Carbonaceous Aerosols and Radiative Effects Study (2010) in California, two single particle soot photometers (SP2s) were run in parallel at the T0 and T1 sites in Sacramento and Cool, respectively. The SP2 uses laser-induced incandescence (LII) to detect black carbon mass, while scattering is used to determine the mixing state of individual BC-containing particles. At the T0 site near downtown Sacramento, BC concentrations higher than  $1 \mu\text{g}/\text{m}^3$  were measured at times, and BC particles tended to be thinly-coated. This suggests that the T0 site was impacted by fresh emissions, as expected for an urban area. During days when the urban plume was transported to T1, the morning T0 plume was seen during the afternoon at T1. Mixing state results from the T1 site, as well as a comparison of the mixing state at the two sites during transport days, will be presented in this poster.