

Abstract Submitted  
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**Calibration of a cavity ring down spectrometer and nephelometer using polystyrene spheres and Mie theory**<sup>1</sup> KHALIL MCMILLAN, SUJEETA SINGH, MARC FIDDLER, SOLOMON BILILIGN, North Carolina AT State Univ — The extinction and scattering cross section of 700 nm polystyrene spherical particles are measured in the 500-660 nm light wavelength range using CRD (Cavity Ring Down) Spectroscopy and an integrating nephelometer. The measurement using spherical particles can be compared with Mie theory predictions to evaluate sources of errors in the system in order to use the system for studying real aerosols. Measurement of optical properties of aerosols such as absorption and scattering cross sections and single scattering albedo are important to quantify the radiative properties of aerosols for climate models.

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