



Laboratory measurements of the complex refractive index of Saharan dust aerosol

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High quality aerosol optical properties are essential if satellite measurements are to be used to quantify the atmospheric effects of aerosols. The optical properties can be directly used to quantify the radiative effects of the aerosols on the atmosphere. The latest results from a set of laboratory measurements of the optical properties of Saharan dust aerosols representative of those found in the atmosphere are shown. The extinction cross section spectra has been determined by IR Fourier transform spectrometry. The size distributions of the aerosol are measured directly by two instruments; a sequential mobility particle sizer and counter and an aerodynamic particle sizer. Conversion of the extinction cross spectra to refractive index is then accomplished by an novel inversion technique using Mie theory.