

Aerosols in the atmosphere are often a mixture of several absorbing and non-absorbing species. At times they are mixed homogeneously, at times they are coated. In this talk we will discuss new methods for measuring the properties of complex particles using cavity ring down and White light aerosol spectrometers. Examples will include biogenic aerosols, soot particles and laboratory generated particles. We will also discuss a new CRD-photo acoustic spectrometer for deconvoluting the absorption and refractive parts of particles' refractive indices.