Retrieval of complex refractive index and size distribution of spherical particles from Dual-Polarization Polar Nephelometer data

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To cite this version:

Christophe Verhaege, Valery Shcherbakov, Pascal Personne. Retrieval of complex refractive index and size distribution of spherical particles from Dual-Polarization Polar Nephelometer data. 11th Electromagnetic and Light Scattering, Sep 2008, Hatfield, United Kingdom. 111, pp.2338 - 2348, 2004. hal-01897791

HAL Id: hal-01897791
https://uca.hal.science/hal-01897791
Submitted on 17 Oct 2018

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Aerosols can affect weather and climate and have complex properties. Depending upon their shapes, sizes and composition they can reflect sunlight back to space and cool the atmosphere, they can also absorb sunlight and warm the atmosphere. The laboratory Dual-Polarization Polar Nephelometer (D2PN) measure the parallel and perpendicular polarized components of light scattered by an ensemble of aerosol particles. Measurements are made in the range of scattering angles from 10° to 169° with step of 1°. This study is based from data of spherical aerosols with different refractive index generated by different generators.

References