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Characterization of small dust particles in the Solar System through polarization: Laboratory measurements

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Small dust particles are present in different scenarios in the Solar System like in the atmospheres of planets, satellites an comets, surfaces of different objects, in the space between them, and planetary rings. By analyzing the solar light scattered by those particles we can retrieve valuable information about their physical properties (shape, size, and composition) as well as their location within a certain atmosphere. The main purpose of this talk is to show how experimental data of intensity and polarization of the scattered light of different atmospheric dust analogues can be used to shed some light on the nature of dust particles in the Solar System.

The experimental data presented in this talk are available in digital form in the Amsterdam-Granada Light scattering Database at www.iaa.es/scattering (Muñoz, Moreno, Guirado, Dabrowska, Volten, Hovenier; JQSRT 2012; 113(7): 565-574).