

## **Application of light scattering analysis – Experiences in the imaging, spectroscopy and polarimetry domain**

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Light scattering models were applied for the analysis of ground-based and space-based datasets of different type taken from airless minor bodies in the solar system. The aim was the deduction of characteristics of the body surfaces on local and global scales. The Hapke approach was used for multi-colour visible imaging data of asteroids Ceres, Vesta, Steins and Lutetia from the space missions Dawn and Rosetta as well as for the interpretation of infrared telescopic spectra of Pluto and Charon. Modeling codes following the radiative-transfer approach (including coherent backscattering and using double Henyey-Greenstein phase function) were applied to telescopic visible polarimetric spectra of Saturn's moon Iapetus. A brief outline of the various approaches used for the light scattering analyses in the past is presented and relevant experiences are addressed. The presentation also describes briefly a lab facility at MPS that is suitable for light scattering experiments.