



Polarimetric investigation of extra-solar planets and planets in the solar system

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Light reflected from planets is polarized. Because the scattering polarization from planets can be quite high, polarimetry provides a sensitive differential techniques for detecting and characterizing extra-solar planets with upcoming instruments like the SPHERE “VLT planet finder” instrument. In this talk we give an overview of the capabilities of SPHERE polarimetry for the investigation of extra-solar planets and solar system objects. In addition we discuss model calculation of the polarization signal from planets, compare the results with measurements from solar system objects and discuss the diagnostic potential of polarimetry for the determination of the atmospheric structure of extra-solar planets.