



12.05.2022 – 10:00 h

At Zoom virtual meeting: <https://desy.zoom.us/j/83631120632>

Meeting ID: 836 3112 0632 Password: 235618

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"Optical Properties Investigation of Interstellar Ice Analogs"

The cryogenic laboratory CASICE, originally developed and built by the CAS group at the Max Planck Institute for Extraterrestrial Physics, has reached the operative stage. The long-term experimental program, which started with IR spectroscopy of binary ice mixtures, has recently been extended to the analysis of more complex ice mixtures in the IR, and to the systematic measurements of the ice optical constants in the sub-mm range. The chemical and physical processes occurring in icy mantles, which cover dust grains in many astronomical environments, are of key importance to unravel the molecular complexity observed in space. These processes are critically affected by the ice composition, and therefore it is necessary to develop a reliable methodology to identify imprints of different ices in observable properties of cosmic dust. The aim of these measurements is to provide reliable data needed to estimate dust opacity in dense and cold regions of pre-stellar cores and protoplanetary disks and to provide a benchmark for upcoming IR astronomical observations.