

# ISAC (Interstellar Astrochemistry Chamber)

## Objectives

Simulation of interstellar and circumstellar ice processes including photo – and thermal processing. The ice structure and composition are monitored in situ during the experiment. Among the ice photo products are prebiotic species which could be present in some comets, and be delivered to the primitive earth.

## Environmental conditions

- Sample temperature range: From 7K to 300K in sample holder computer controlled.
- Atmosphere: vacuum base pressure  $10^{-11}$  mbar by Turbo pumps, TSP and NEG.
- Irradiation: Vacuum - UV lamp.
- Ice sample contains molecules detected in interstellar and circumstellar ices ( $H_2O$ ,  $CO$ ,  $CO_2$ ,  $CH_3$ ,  $OH$ ,  $NH_3$ ...).

## Analytical Techniques

- **FTIR** (Fourier Transform Infrared)
- **TPD** (Temperature Programmed Desorption)
- **UV** (UV Spectrometry)
- **RAMAN** (Raman Spectroscopy)
- **QMS** (Quadrupole Mass Spectrometer)

