

ROTATIONAL SPECTROSCOPY OF REACTIVE SPECIES AT THE CENTER FOR ASTROCHEMICAL STUDIES.

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The Center for Astrochemical Studies at the Max Planck Institute for Extraterrestrial Physics in Garching, is a recently established group which collects scientists with very diverse backgrounds. In the same group observers, theoreticians, chemists and molecular astrophysicists join their efforts with the ultimate goal of properly interpreting observations with the new generation telescopes and unveiling our astrochemical/physical heritage. Among these tasks, the gas-phase spectroscopic characterisation of molecular species of astrophysical relevance is one of the main goals of the laboratory sub-group. This talk will mainly focus on the first experiment built in our center, the CASAC (CAS Absorption Cell) spectrometer: this experiment has been optimised on the production and probe of small molecular ions and radicals. The main laboratory techniques along with the more prominent outcomes of recent studies will be presented. Finally, a brief update on the status of the other instruments available in our center will be given, including their planned upgrades.