UNIVERSITÄT DUISBURG ESSEN

PHYSIK E=

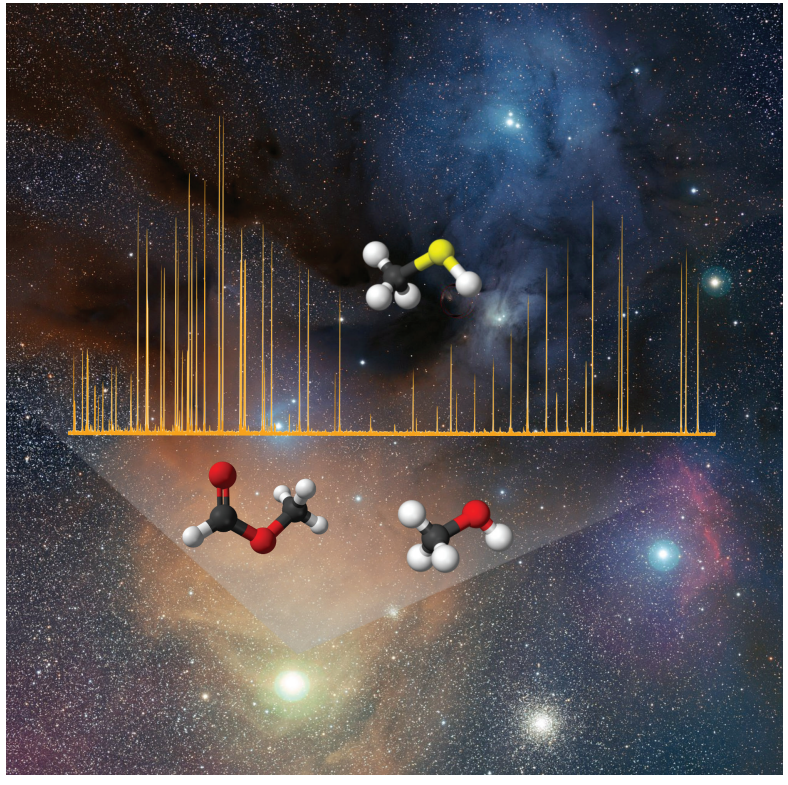
Physikalisches Kolloquium

Mittwoch, 17.07.2025
13:00 Uhr
MC 122 und Zoom

https://uni-due.zoom-x.de/j/64228670246?pwd=RjVQeFNIUkRKRkpiNVpKYXhJaFNLdz09 (gilt für alle Vorträge)

Laboratory molecular spectroscopy and its importance in understanding interstellar chemistry.

Dr. Hayley Bunn, Max Planck Institute for Extraterrestrial Physics



Stars form in dense cloud cores that can be studied through the emission of cold dust and molecules. The molecular compositions at each stage of star and planet formation give vital information on the chemical and physical evolution of these environments. In order to identify and correctly characterise these molecules, laboratory spectroscopy is essential. The structural specificity of rotational spectroscopy makes it the best tool for the identification of molecules in the interstellar medium (ISM). This presentation will focus on the laboratory rotational spectroscopy of complex (6 or more atoms) organic molecules (COMs) with varying degrees of molecular and spectral complexity. The spectral analysis of these species provide the necessary information for their interstellar detection with the aim of understanding how far molecular complexity can go at each stage of star and planetary formation

Background image of Rho Ophiuchi star formation region is credit of: ESO/S. Guisard