Colloquium

SFB 956

Conditions and Impact of Star Formation

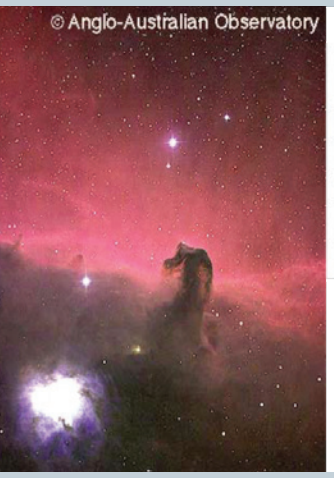
12 June 2017

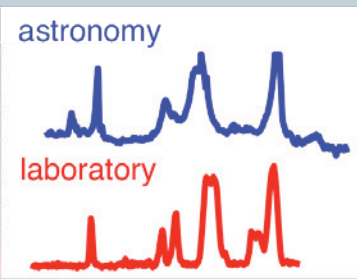
Monday 3:00 pm

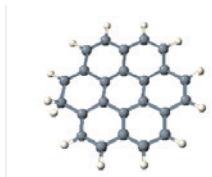
Physikalische Institute Köln

Lecture Hall III

Zülpicher Straße 77 | 50937 Köln







Otto Dopfer

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Laboratory Spectroscopy of Ions and Clusters Relevant for Astrochemistry

The identification of stable and transient molecules, radicals, ions, clusters, and nanoparticles in space by astronomy requires detailed knowledge of their spectroscopic properties. To this end, their spectra have to be measured in the laboratory for comparison with astronomical data. Our group develops modern and highly sensitive spectroscopic techniques coupled with sophisticated molecular sources and mass spectrometric techniques to measure infrared and optical spectra of the size-selected molecular species of interest isolated in the gas phase at low temperature and at low concentration. Recent examples to be presented include elusive carbocations, protonated PAHs (up to coronene), nanodiamondoids, and silicon- containing molecules, for most of which we have measured the first spectroscopic laboratory data.