UNIKASSEL VERSITÄT

Physikalisches Kolloquium

Thursday, 16.06.2016, 17:15, HS 100
Reception with coffee & cookies 16:45

Dr. Holger Kreckel, Max-Planck-Institut für Kernphysik (MPIK), Heidelberg:

Experiments on fundamental properties of molecular ions: From the formation of the first stars to Coulomb explosion of chiral molecules

Abstract
Modern telescopes have detected more than 180 different molecules, bearing witness to a surprisingly rich interstellar chemistry network that operates efficiently at extremely low densities and temperatures. The gas-phase formation of molecules in space is dominated by ion-neutral reactions, and despite decades of research and technological developments, some of the most frequent molecular reactions in the universe are still poorly understood.
In the first part of my talk I will present experiments on fundamental properties of molecular ions, ranging from the formation of H2 in the early universe to imaging studies of chiral molecules. In the second part I will outline the new Cryogenic Storage Ring (CSR) project at MPIK, with an emphasis on experiments that aim to shed light on the formation and destruction of interstellar molecules.

Photo: The Cryogenic Storage Ring (CSR) at the Max-Planck-Institut für Kernphysik (MPIK) in Heidelberg

All of you interested in physics are cordially invited!

Contact: Dr. Guido Fuchs, More Information: uni-kassel.de/go/physikalisches_kolloquium