UNIKASSEL VERSITÄT

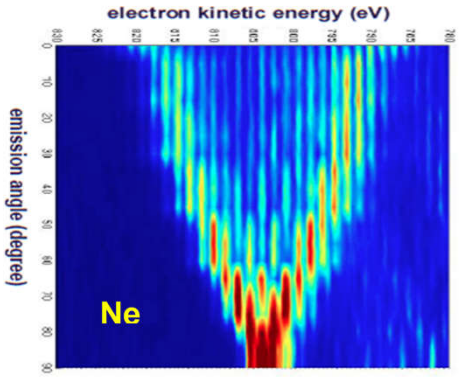
Physikalisches Kolloquium

Thursday, 29.06.2017, 17:15, HS 100
Reception with coffee & cookies 16:45

Dr. Michael Meyer, European XFEL GmbH, Schenefeld:

Nonlinear photoionization in intense optical and X-ray laser fields

Abstract
The availability of X-ray Free Electron Lasers (FELs), providing intensities of up to 10^{16} W/cm^2 and pulse duration as short as a few femtoseconds, has opened various new possibilities in the study of light-matter interaction. Some recent examples of this research on atomic systems will be discussed focussing on multi-photon processes in the short wavelength regime, such as multiple-ionization, resonant two-photon excitation and above threshold ionization (ATI). Furthermore, the application of an additional optical field has shown to be a very sensitive tool to uncover details of the photoionization dynamics and on the source parameters. Especially the electron angular distribution enables us to highlight interfering ionization pathways and dichroic phenomena in two-color photoionization. Finally, possibilities for future research at the new X-ray free-electron laser in Hamburg, the European XFEL, which becomes operational this year, are presented.



All of you interested in physics are cordially invited!

Contact: Dr. André Knie, Experimental Physics IV, More Information: uni-kassel.de/go/physikalisches_kolloquium