



Institutskolloquium

Am **08. Juni 2005, 16:00 Uhr** spricht:

Prof. Dr. Jürgen Meyer-ter-Vehn
MPQ Garching

über

“Relativistic laser plasma and particle acceleration”

Abstract

CPA lasers now produce focused intensities up to 10^{21} W/cm². Already intensities of 10^{18} W/cm² drive electrons to the velocity of light in gas and solid targets and generate relativistic laser plasma with surprising new properties. Most remarkable is the generation of highly collimated relativistic electron beams, either in self-focused channels or in bubble-shaped wake-fields. The latter show up for very short laser pulses (<50 fs, shorter than plasma-wavelength) and can produce quasi-monoenergetic pulses. Experimentally, 0.5 nC pulses of 170 MeV electrons have been demonstrated (J. Faure et al., Nature 431, 541 (2004)). In the talk, I explain the underlying physics in terms of simulations and discuss applications which arise from these new developments

Ort: Max-Born-Saal, MBI, Max-Born-Str. 2a

Interessenten sind herzlich eingeladen.

Prof. Dr. Wolfgang Sandner