EINLADUNG ZUM

WIENER PHYSIKALISCHEN KOLLOQUIUM

ATTOSECOND PHOTONICS: WHAT WE LEARN BY TRANSFORMING MANY PHOTONS INTO ONE

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The extreme nonlinear optics that underlies attosecond science is very different from perturbative nonlinear optics. Extreme nonlinear optics is understood through quantum trajectories of an ionizing electron wave packet. A trajectory begins from a bound state and returns to the same state, following an excursion in the continuum.
Quantum trajectories map onto an interferometer – an electron interferometer created by light. A weak additional field can perturb these trajectories, manipulating the interferometer while simultaneously constructing a perturbative nonlinear optics on top of the extreme process. Using interferometric concepts, I will show how we can measure the space-time properties of attosecond pulses and the the space-time structure of electronic wave packets.

Montag, 19. November 2012, 17:30 Uhr
(ab 17:00 Uhr Kaffee)

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