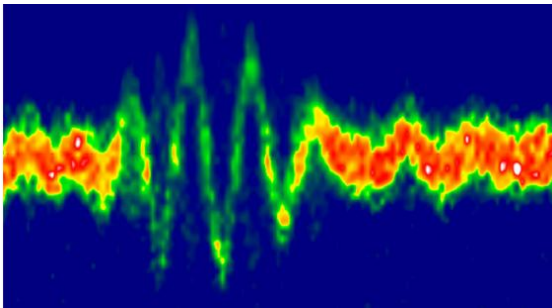


PRESS RELEASE

**Prof. Ferenc Krausz receives Progress Medal of the
Royal Photographic Society**

Prof. Ferenc Krausz, director at the Max Planck Institute of Quantum Optics (MPQ) and head of the "Attosecond and High-Field Physics Division" is the winner of this year's "Progress Medal" of the British Royal Photographic Society. He receives this distinctive award for "his contributions to femtosecond and attosecond physics applied to imaging the wave nature of light for the first time".

The awarded picture (shown below) demonstrates the energy distribution of electrons in the field of a femtosecond laser pulse. One can clearly see how the electrons get accelerated and decelerated by the oscillating electric field vector. Precondition of an image like this is the possibility to generate the electrons in a time window that is an order of magnitude smaller than one oscillation cycle. In this particular case the electrons had been produced by attosecond pulses (an attosecond= 10^{-18} seconds, a femtosecond= 10^{-15} seconds). This first image of the wave nature of light was taken at Vienna University of Technology in 2004. It was the first proof of the power of attosecond physics.



In 2003 Professor Krausz was appointed Director at the MPQ. In 2004 he was also made head of the Department of Experimental Physics at Ludwig Maximilian's University of Munich (LMU). The main interest of his MPQ-LMU-team is the control and real-time observation of the motion of electrons in atoms, molecules and solids using attosecond measuring technique. Professor Krausz and his team are also pursuing the goal of developing new tools (e.g. high-energy electron and X-ray beams) for investigating microscopic processes with high resolution in both space and time. Such tools would constitute a space-time microscope that makes the motion of electrons visible with subatomic resolution in slow motion. The new radiation sources could also afford new prospects in structural biology and in the diagnosis and therapy of cancer. [O.M.]

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