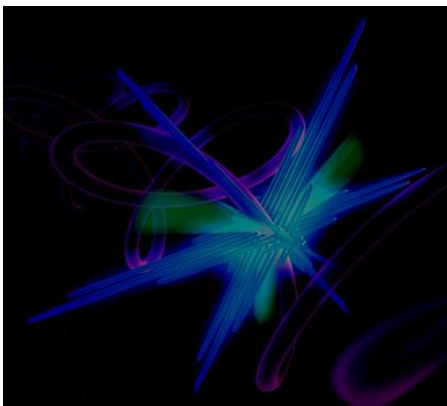


HiLASE Centre is pleased to invite you to attend the seminar

Recollision-less High Harmonic Generation

Avner Fleischer

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The phenomena of High Harmonic Generation (HHG) relies on the extreme-nonlinear optical phenomena of tunneling, and on electron recollision. Here we show theoretically how attosecond pulses of electrons and photons could be generated in the regime of linear optics. We utilize electron interference phenomena, initiated by an extreme ultra violet (XUV) laser field shined on atoms, in the presence of an infrared (IR) laser field. As a result, attosecond electron pulses are generated, which are accompanied, as usual, by the emission of attosecond optical pulses, composed of high-order

harmonics of the IR field. Both the electron and optical attosecond pulses are generated by the release of electrons, not by their recollision. This recollision-less HHG process has a potential to bypass one of the biggest limitations accompanying the usual HHG scheme: low conversion efficiency due to the lateral spreading of the recolliding electronic wavepacket..

When: Tuesday, 05/06/2018 at 15:00

Where: HiLASE Centre – Seminar room