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PhD Thesis Abstract

Spatio-temporal Characterization of High Harmonic Generation (HHG) for Advanced Plasma Diagnostics

The coherent XUV pulses produced by the process of high harmonic generation (HHG) have application in nano-imaging, plasma diagnostics, and ultrafast probing. To use XUV pulses as a probe we have to optimize the source (HHG) in terms of photons and then characterize the pulses spatially and temporally. I am working on the development and characterization of a XUV source at L2I, IPFN. We have successfully established a XUV beamline at L2I. I am working on further optimization of the XUV pulses and also testing and developing an all optical temporal characterization technique (in collaboration with LOA, France) for XUV pulses.