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Macroscopic HHG simulations using microscopic TDSE calculations[1] RAN REIFF, ANDREAS BECKER, AGNIESZKA JARON-BECKER, Univ of Colorado - Boulder — Modelling high harmonic generation from a gas jet or other macroscopic collection of atoms requires combining microscopic solution of the time dependent Schrodinger equation (TDSE) and simulation of the response of billions of atoms. We present a method of interpolation of TDSE results as a function of laser intensity at a given wavelength. These (pre-calculated) data are then used in simulations of the macroscopic propagation of the high harmonic signals using the discrete dipole approximation. Results for different atoms, represented via single-active electron potentials, and driver wavelengths will be presented.

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