Effect of pulse shapes and phases on stabilization of atoms in intense laser fields

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We have investigated the effect of pulse shapes and phases on suppression of ionization of atoms in intense laser fields by performing both 1D and 3D numerical calculations. We show that the turn-on process may either deliver populations to Rydberg states to \ suppress ionization or induce a drift velocity to the electron to increase the ionization. The dependence of the drift velocity on pulse phase is also investigated.

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