

Abstract Submitted
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Control of the two-Photon Double Ionization of Helium with Intense Chirped Attosecond Laser Pulses SAMIRA BARMAKI, STEPHANE LAULAN, Laboratoire de Physique Computationnelle et Photonique, Universite de Moncton Campus de Shippagan, 218 boulevard J. D. Gauthier, Shippagan, NB E8S 1 — We study the two-photon double ionization process of the helium atom by solving numerically the nonrelativistic time-dependent Schrödinger equation in its full dimensionality. We investigate with an intense chirped attosecond laser pulse of central carrier frequency that corresponds to the 29th harmonic of a Ti-sapphire laser the direct and sequential processes in helium. We show how it is possible by adjusting the chirp parameter to control the dominance of one process over the other within the atom. Attosecond chirped laser pulses offer a promising way to probe and control the two-photon double ionization of helium when compared with attosecond transform-limited pulses.

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