Abstract Submitted
for the DAMOP14 Meeting of
The American Physical Society

Control of the Atomic Ionization with Short and Intense Chirped Laser Pulses SALIMA HENNANI, Laboratoire de Physique Computationnelle et Photonique, Universite de Moncton Campus de Shippagan, Shippagan, NB Canada, STEPHANE LAULAN, Laboratoire de Physique Computationnelle et Photonique, Universite de Moncton Campus de Shippagan, Shippagan, NB Canada, SAMIRA BARMAKI, Laboratoire de Physique Computationnelle et Photonique, Universite de Moncton Campus de Shippagan, Shippagan, NB Canada — We investigate a two-photon ionization process in a real hydrogen atom by short and intense chirped laser pulses. Our simulation of the laser-atom interaction consists on numerically solving the three-dimensional time-dependent Schrödinger equation with a spectral method. The unperturbed wave functions and electronic energies of the atomic system were found by using an accurate L2 discretization technique based on the expansion of the wave functions on B-spline functions. We show the efficiency of chirped laser pulses to control the ionization yield and the transfer of the population to the $2p$ bound state involved in the ionization path.

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Date submitted: 31 Jan 2014 Electronic form version 1.4