

Abstract Submitted
for the DAMOP14 Meeting of
The American Physical Society

Carrier-Envelope-Phase-Induced Asymmetries in Double Ionization of Helium by an Intense Few-Cycle XUV Pulse¹ ANTHONY F. STARACE, J.M. NGOKO DJIOKAP, The University of Nebraska-Lincoln, N.L. MANAKOV, A.V. MEREMIANIN, Voronezh State University, Russia — A complete formulation of the carrier-envelope-phase (CEP) dependence of electron angular distributions in double ionization of He by an arbitrarily-polarized, few-cycle, intense XUV pulse is carried out using perturbation theory (PT) in the pulse amplitude.² The broad pulse bandwidth induces interference of first- and second-order PT amplitudes producing thus asymmetric angular distributions which can be controlled by the CEP of the pulse. For linear polarization of the pulse, our PT parametrization is in excellent agreement with results of solutions of the full-dimensional, two-electron time-dependent Schrödinger equation, validating thus the PT approach.

¹This work is supported in part by the U.S. Department of Energy, Office of Science, Division of Chemical Sciences, Geosciences, and Biosciences, Grant No. DE-FG03-96ER14646 and by the Russian Foundation for Basic Research, Grant No. 13-02-00420.

²J.M. Ngoko Djiokap, N.L. Manakov, A.V. Meremianin and A.F. Starace, Phys. Rev. A **88**, 053411 (2013).

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Date submitted: 30 Jan 2014

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