

Abstract Submitted
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Fragmenting multi-electron atoms: from single photons to attosecond pulses AGAPI EMMANOUILIDOU, ITS, University of Oregon, Eugene — Attosecond collisions govern the ionization of multi-electron atoms by single photon absorption. These collisional processes are consistent with the break-up geometry we predict for energies close to threshold. Confirming the predicted break-up geometries and observing in time these collisional patterns will be the impetus for future experiments [1]. In single photon ionization the electronic correlation is essential for full fragmentation of many electron atoms. This is not the case when the atoms are driven by ultra-short laser pulses. We discuss the correlated motion of the escaping electrons in multi-electron atoms driven by attosecond pulses [2]. [1] A. Emmanouilidou, P. Wang and J.M. Rost, to be published in Phys. Rev. Lett (February 2008) [2] A. Emmanouilidou and T. Uzer to be submitted

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