

Abstract Submitted  
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**Laser induced fragmentation dynamics analyzed using Monte Carlo event generators: the single ionization case**<sup>1</sup> M. CIAPPINA, ICFO-Institut de Ciències Fotoniques, 08860 Castelldefels (Barcelona), Spain, M. SCHULZ, Department of Physics and LAMOR, Missouri University of Science & Technology, Rolla, MO 65409, T. KIRCHNER, Department of Physics and Astronomy, York University, Toronto, Ontario, Canada M3J 1P3 — Monte Carlo event generators (MCEG) have shown to be a very powerful tool to tackle the fragmentation dynamics of atoms driven by heavy ions and electrons [1,2]. One of the advantages MCEG offer is the possibility to include in a direct way the experimental conditions in the theoretical calculations. We present in this work an extension of MCEG to treat single ionization of H atoms by laser pulses employing the time-dependent distorted wave approach. We show how the experimental resolution affects the structures present in the angle-resolved photoelectron spectrum and in the electron energy distributions.

[1] M. F. Ciappina *et al.* *Comp. Phys. Comm.* **181**, 813 (2010); M. Schulz *et al.* *Phys. Rev. A* **81** 052705 (2010)

[2] M. F. Ciappina *et al.*, *Phys. Rev. A* **82**, 062701 (2010)

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