

Abstract Submitted
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Resonant-Like Enhancement of the High-Energy Plateau in ATD¹

KATARZYNA KRAJEWSKA, University of Nebraska-Lincoln, USA, and Institute of Theoretical Physics, University of Warsaw, Poland, ILYA I. FABRIKANT, ANTHONY F. STARACE, University of Nebraska-Lincoln, USA — We calculate the intensity variation of above-threshold detachment (ATD) rates for H^- and F^- in the high-energy plateau region, by solving the time-dependent Schrödinger equation within the Sturmian-Floquet approach [1]. We find pronounced enhancement of the ATD spectra as the laser-field intensity induces ATD channel closings. We confirm previous results on negative ions with an active s-electron [2], and extend them to the case of p-symmetry of the initial state. Depending on the symmetry of the initial state, we show that the enhancement is most pronounced for even- or odd-channel closures. Similar resonant-like enhancements have been observed experimentally in above-threshold ionization spectra for rare gases [3], calculations for which are in progress. [1] R. M. Potvliege, *Comp. Phys. Comm.* **114**, 42 (1998); [2] B. Borca *et al.*, *Phys. Rev. Lett.* **88**, 193001 (2002); [3] See, e.g., F. Grasbon *et al.*, *Phys. Rev. Lett.* **91**, 173003 (2003).

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Anthony F. Starace
University of Nebraska-Lincoln

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