

Abstract Submitted  
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**Multi-electron correlation effects in atomic photoemission time delay within a classical model**<sup>1</sup> Q. LIAO, U. THUMM, Physics Department, Kansas State University — A recent attosecond-streaking experiment [M. Schultze, *et al.*, *Science* **328**, 1658 (2010)] revealed a delay of 21 attoseconds between photoemission from 2s and 2p levels of neon atoms. Several independent subsequent theoretical approaches based on the time-dependent Schrodinger equation include electronic correlation at various levels of approximation, but all significantly underestimate the measured streaking delay. We propose a classical model that describes correlated photoelectron emission following the absorption an XUV photon. This model reproduces the measured delay, suggesting that the interaction between the photoelectron and other bound electrons is responsible for the large observed delay.

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