

Abstract Submitted  
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**Time-dependent local density approximation study of iodine photoionization delay.**<sup>1</sup> MAIA MAGRAKVELIDZE, University of Mary Washington, Fredericksburg, USA, HIMADRI CHAKRABORTY, Northwest Missouri State University, Maryville, USA — We investigate dipole quantum phases and Wigner-Smith (WS) time delays in the photoionization of iodine using Kohn-Sham time-dependent local density approximation (TDLDA) [1] with the Leeuwen and Baerends exchange-correlation functional [2]. Study of the effects of electron correlations on the absolute as well as relative delays in emissions from both valence 5p and 5s, and core 4d, 4p and 4s levels has been carried out. Particular emphasis is paid to unravel the role of correlations to induce structures in the delay as a function of energy at resonances and Cooper minima. The results should encourage attosecond measurements of iodine photoemission and probe the WS-temporal landscape of an open-shell atomic system. [1] Magrakvelidze et al, Phys. Rev. A 91, 063415 (2015). [2] van Leeuwen et al, Phys. Rev. A 49, 2421 (1994).

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