

Abstract Submitted
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Double photoionization of atomic carbon and neon¹ FRANK YIP, California State University-Maritime Academy, THOMAS RESCIGNO, Lawrence Berkeley National Lab, C. WILLIAM MCCURDY, University of California, Davis and Lawrence Berkeley National Lab. — Double photoionization events provide a direct probe of electron correlation, and focus on few-electron targets continues to reveal the consequences of electron correlation for atoms and molecules that possess several electrons. We consider the double photoionization of the $2p^2$ valence electrons of atomic carbon, which provides for distinct final-state symmetries depending on the three possible angular momentum couplings (3P , 1D , and 1S) of the initially-bound p^2 that are ejected into the continuum by a single photon. Comparison of this process with neon provides an analogous case for the resulting final states within the treatment of the double photoionization proceeding with the ejected electrons influenced by the remaining bound electrons. Fully-differential cross sections for both carbon and neon are compared.

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