

Abstract Submitted  
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**Double Photoionization of  $H^-$  by a Single Photon**<sup>1</sup> FRANK YIP, UC Berkeley/LBNL, DANIEL HORNER, LANL, C. WILLIAM MCCURDY, UC Davis/LBNL, THOMAS RESCIGNO, LBNL — We present fully differential cross sections for the three-body breakup of  $H^-$  by single photon absorption. Electron correlation drives the double photoionization process and thus should impact double photoionization results most strongly for  $H^-$ , which is a three-body atomic system bound only because of electron correlation. The absolute triple-differential and single-differential cross sections were obtained from *ab initio* calculations making use of exterior complex scaling within a discrete variable representation partial wave basis. Results calculated at photon energies of 18eV and 30eV are compared with reported cross sections for helium calculated at 20eV above the double ionization threshold.

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