Abstract Submitted for the DAMOP06 Meeting of The American Physical Society

Electron impact ionization of helium at 102 eV in coplanar and perpendicular geometries ZHANGJIN CHEN, DON MADISON, Laboratory for Atomic and Molecular Research, University of Missouri-Rolla, Rolla, MO 65409, USA, LABORATORY FOR ATOMIC AND MOLECULAR RESEARCH, UNI-VERSITY OF MISSOURI-ROLLA, ROLLA, MO 65409, USA TEAM — The triple differential cross sections for electron impact ionization of helium at 102 eV are presented for the case of coplanar and perpendicular plane asymmetric geometry within the framework of second-order distorted wave theory. The closure approximation and the simplified Green's function approximation which are currently used in the evaluation of the second-order amplitudes are investigated and the accuracy of the approximations is examined. It is found that the second-order effects are significant for this incident energy and the simplified Green's function approximation is generally more valid than the closure approximation.

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Date submitted: 24 Jan 2006

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