

Abstract Submitted
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Deep minimum in the Coulomb-Born TDCS for electron-impact ionization of atomic hydrogen S.J. WARD, J. B. KENT, University of North Texas — Recently, Macek *et al.* attributed a deep minimum in the triply differential cross section (TDCS) for electron impact ionization of helium to a vortex [1]. Vortices have been shown to be present for positron-impact ionization of atomic hydrogen [2]. Using the Coulomb-Born approximation [3] we have obtained a deep minimum in the TDCS for electron-impact ionization of atomic hydrogen for an incident energy of 76.45 eV and for the doubly symmetric coplanar geometry. At the scattering angle where there is a minimum in the TDCS, the real and imaginary parts of the transition matrix element are zero. [1] J. H. Macek, J. B. Sternberg, S. Y. Ovchinnikov and J. S. Briggs, *Phys. Rev. Lett.* **104**, 033201 (2010). [2] F. Navarrete and R. O. Barrachina, *J. Phys. B* **48**, 055201 (2015). [3] J. Botero and J. H. Macek, *Phys. Rev. A* **45**, 154 (1992).

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