

Abstract Submitted
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Three-body dynamics in single ionization ion-atom collisions¹ SEBASTIAN OTRANTO, RONALD OLSON, University of Missouri - Rolla — Kinematically complete differential cross sections are presented for single ionization of sodium by H^+ and C^{6+} at energies between 0.1 and 1.0 MeV/u. The momentum distributions for electron emission are studied as a function of the recoil momenta of the sodium ion. Calculations are made using the Classical Trajectory Monte Carlo model and the Continuum-Distorted-Wave (CDW) quantum method. Both models include the three-body interactions between the projectile, ionized electron, and Na^+ recoil ion. It is shown that the double collision dynamics between the active electron and both the projectile and recoil ion can be easily distinguished if the recoil ion momenta are measured in coincidence with that of the electron.

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