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Mutual Ionization in 200 keV H^- + He Collisions[1] MICHAEL SCHULZ, University of Missouri-Rolla, THOMAS FERGER, DANIEL FISCHER, ROBERT MOSHAMMER, ALEXANDER VOITKIV, BENNACEUR NAJJARI, JOACHIM ULLRICH, Max-Planck-Institut fuer Kernphysik Heidelberg — We have performed a kinematically complete experiment on mutual ionization in 200 keV H^- + He collisions by measuring the momentum analyzed recoil ions and both ejected electrons (from the projectile and the target) in coincidence with the neutralized projectiles. Comparison of the data to our calculations, based on various theoretical models, show that mutual ionization proceeds predominantly through the interaction between both electrons. The post-collision interaction between the outgoing ejected electrons as well as higher order processes involving the interaction between the core of both collision partners are also important.

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