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Coincidence measurements of scattered projectiles, ejected electrons, and recoil ions for 1000 eV electron impact on argon¹ JARED GAVIN, MARK THOMASON, ROBERT DUBOIS, University of Missouri-Rolla — Coincidences between projectiles scattered in the forward direction, ejected electrons, and target ions were measured for 1000 eV electron impact on argon atoms. A position sensitive detector was used to record scattered projectiles with energy losses up to approximately 100 eV and scattering angles less than 10° . A second position sensitive detector recorded electrons emitted from the target region between 90° $\pm 50^{\circ}$ in the θ , ϕ directions. Target ions were extracted through a small aperture and detected by a channeltron. This defined the collision region and from time-of-flight coincidences, the degree of ionization was determined. Positions on the projectile detector provide energy loss and scattering angle information. From positions on the electron detector plus energy loss information, the ejected electron energy and angles were determined. Examples of doubly and triply differential data will be presented and discussed. Similar studies using positron impact are in progress.

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