Using (e, 2e) technique for ionization of Argon by electron impact

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The ionization of electrons from 3p levels of argon has been extensively studied either theoretically or experimentally. However, most of the previous TDCS measurements are reported as a function of scattering angle at small scattering angles and small momentum transfer at low and intermediate electron energy region (Stevenson et al., 2005; Ren et al, 2010).

In this study, we used a modified traditional electron spectrometer with electron gun (0-350 eV) and two 180^0 electron energy analyzers. We measured TDCS at 200 eV incident electron energy and ejected electron energies of 15, 20, 25 eV and scattered electron angles of 10^0 and 15^0, at the coplanar asymmetric geometry. TDCS of the ejected electron energy of 15 eV at scattered electron angle of 15^0 with the comparison of the experimental data of Ren et al, 2010 is given. Also, present results accordance with the expectations in terms of binary to recoil ratio and momentum transfer direction.

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References

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