

AU Fritioff, K, Sandstrom, J, Hanstorp, D, Ehlerding, A, Larsson, M, Collins, GF, Pegg, DJ, Danared, H, Kallberg, A, Le Padellec, A
TI Electron-impact detachment from Cl-
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AB Single-, double- and triple-electron-impact detachments from the Cl- ion have been investigated over a collision energy range of 0-95 eV. The experiment was performed at the ion storage ring CRYRING at the Manne Siegbahn Laboratory. The Cl- ions, produced in a sputter ion source, were injected into the ring and accelerated to 2.7 MeV. Thereafter the ions were merged with an electron beam. The electrons served to cool the ion beam. Then they were used as a partner in the electron-ion collisions. The products of the detachment processes, Cl atoms, Cl+, and Cl2+ ions, were detected after the interaction region with surface-barrier detectors. The shapes of the cross sections for the single, double, and triple detachments show striking similarities.

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