An independent-atom-model description of $e^{\pm}$-HCN collisions including geometric screening corrections

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Using the single scattering independent model (IAM) along with the screening correction (IAMS) the differential, integrated elastic, inelastic, total (elastic + inelastic), momentum transfer and viscosity cross sections for both positron and electron impact elastic scattering from HCN molecule are evaluated for 1 eV -1 MeV. For this system, the spin polarization and the total ionization cross sections are also calculated. For generating all scattering observables, with a complex optical model potential the Dirac partial wave analysis is employed to calculate the required phase-shifts. A comparison with experimental and other theoretical predictions shows that IAMS yields better description of the data than those due to IAM. All details will be presented in the symposium.