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**Total electron scattering cross section of Fluorocarbons at intermediate electron energies** PRASANGA PALIHAWADANA, GILBERTO VILLELA, WICKRAMASINGHE ARIYASINGHE, Baylor University — Total electron scattering cross sections (TCS) of Tetrafluoromethane ( $\text{CF}_4$ ), Trifluoromethane ( $\text{CHF}_3$ ), Hexafluoroethane ( $\text{C}_2\text{F}_6$ ) and Octafluorocyclobutane ( $\text{C}_4\text{F}_8$ ) have been measured using the linear transmission technique for impact energies 0.10 – 4.00 keV. These TCS are compared to existing experimental and theoretical TCS in the literature. Based on the present measurements, an empirical formula is developed to predict the TCS of fluorocarbons as a function of incident electron energy.

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