

Fig. 27.1: Stopping power (= $\langle -dE/dx \rangle$) for positive muons in copper as a function of $\beta \gamma = p/Mc$ over nine orders of magnitude in momentum (12 orders of magnitude in kinetic energy). Solid curves indicate the total stopping power. Data below the break at $\beta \gamma \approx 0.1$ are taken from ICRU 49 [4], and data at higher energies are from Ref. 5. Vertical bands indicate boundaries between different approximations discussed in the text. The short dotted lines labeled " μ -" illustrate the "Barkas effect," the dependence of stopping power on projectile charge at very low energies [6].