Hello.

$$b = \frac{k_e z Z e^2}{2K} \frac{1}{\tan(\frac{1}{2}\theta)}$$

$$N(\theta) = \frac{nt}{4r^2} \left(\frac{zZ}{2K} \right)^2 \left(\frac{e^2}{4\pi\epsilon_0} \right)^2 \frac{1}{\sin^4(\frac{1}{2}\theta)}$$

$$\begin{array}{rcccc} \text{impulse} & \sim & F & & t \\ & \sim & \frac{k(2e)(Ne)}{R^2} & & \frac{L}{v} \\ & \sim & \frac{k(2e)(Ne)}{R^2} & & \frac{2R}{v} \\ & \propto & \frac{1}{R^2} & & R \end{array}$$