1 • Electron Velocity

Plate Distance (m)	Magnetic Field (T)	Voltage (V)
0.005000	0.000758	50.000000

$$F_E = F_B$$
$$Eq = qvB\sin(\theta)$$
$$v = \frac{E}{B\sin(\theta)}$$
$$v = \frac{V}{dB\sin(\theta)}$$
$$v = 13,100,000\frac{m}{s}$$

2 • Charge-to-Mass Ratio

Magnetic Field (T)	Radius (m)
0.00050	0.15032

$$F_B = F_C$$
$$qvB\sin(\theta) = \frac{mv^2}{r}$$
$$\frac{q}{m} = \frac{v}{rB\sin(\theta)}$$
$$\frac{q}{m} = \frac{v}{rB\sin(\theta)}$$
$$\frac{q}{m} = 174,290,000,000\frac{C}{kg}$$
$$\%_{error} = 0.9125\%$$