

Agudosi Steven

ENG221

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Mechanical Engineering

1. A gas of atom is ionized by fixing a beam of particle of the gas ^{which} neither adds electrons to the atom or knocks/reduce electrons depending on the type of particle used which gives the atom an electric charge. The ions are then sent through a tube in which they are subjected to both electric and magnetic field.

$$F = \frac{mv^2}{r}, \quad F = qvB$$

$$\therefore qvB = \frac{mv^2}{r}$$

$$r = \frac{mv}{qB}$$

By Newton's 2nd law of motion, $F = ma$.