Calculate the magnetic field of bending magnet

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1 Introduction

$$\frac{mv^2}{r} = \frac{Bqv}{r} \tag{1}$$

$$\frac{1}{2}mv^2 = E_k \tag{2}$$

Combined with the two equations,

$$B = \frac{\sqrt{2mE_k}}{rq} \tag{3}$$

could be deduced.
If units are given:

$$E_k : \text{keV}, 1\,\text{eV} = 1.6 \times 10^{-19}\,\text{J}$$

;

$$m : \text{amu}, 1amu = 1.67x10^{-27}kg;$$

$$q : e^-, 1e^- = 1.6x10^{-19}C;$$

$$r : cm.$$

The function $B = \frac{\sqrt{2mx1.67x10^{-27}xE_kx1.6x10^{-19}x10^3}}{rx10^{-2}xqx1.6x10^{-19}} = 0.457\frac{\sqrt{mE_k}}{qr}$

$$\frac{mv^2}{r} = \frac{Bqv}{r}$$

$$\frac{1}{2}mv^2 = E_k$$

$$B = \frac{\sqrt{2mE_k}}{rq}$$

$$\alpha = \sqrt{\beta} \tag{4}$$

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1.1 Subsection Heading Here

Write your subsection text here.

2 Conclusion

Write your conclusion here.