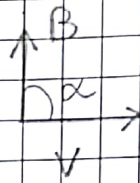


(1) p. 786

$$B_y = 2,5 \cdot 10^{-5} \text{ T}$$

$$F_H = P$$

V?



$$m_{\text{part}} = 1,6 \cdot 10^{-26} \text{ kg}$$

$$q_{\text{part}} = 1,60 \cdot 10^{-19} \text{ C}$$

$$F_H = B \cdot V \cdot \sin \alpha = q(v \times B)$$

$$V = \frac{F_H}{B \sin \alpha} = \frac{P}{B \sin \alpha} = \frac{1,6 \cdot 10^{-26} \text{ kg} \cdot 3,8 \cdot 10^8 \text{ m/s}^2}{(2,5 \cdot 10^{-5} \text{ T} \cdot \sin \alpha) \cdot (1,60 \cdot 10^{-19} \text{ C})} =$$

$$= 4,1 \cdot 10^{-3} \frac{\text{m}}{\text{s}}$$

(2) p. 786

$$q = -8,3 \mu\text{C} = -8,3 \cdot 10^{-6} \text{ C}$$

$$\Sigma F = 5,4 \cdot 10^{-3} \text{ N}$$

$$V = 7,4 \cdot 10^6 \frac{\text{m}}{\text{s}}$$

B?

$$\alpha = 52^\circ$$

$$F_L = qBV \sin \alpha = 5,4 \cdot 10^{-3} \text{ N}$$

$$B = \frac{F_L}{qV \sin \alpha} = \frac{5,4 \cdot 10^{-3} \text{ N}}{(-8,3 \cdot 10^{-6} \text{ C}) \cdot (7,4 \cdot 10^6 \frac{\text{m}}{\text{s}}) \cdot (\sin 52^\circ)} =$$

$$= 1,1 \cdot 10^{-4} \text{ T}$$

(p5) p. 788

$$r = 9,6 \text{ km} = 9,6 \cdot 10^3 \text{ m}$$

• $q < 0$

$$V = 14 \text{ m/s} \quad B = 0,48 \text{ T}$$

$$|q| = 8,7 \text{ mC} \quad m?$$

$$r = \frac{mv}{qB} \Rightarrow r q B = mv \Rightarrow m = \frac{r q B}{v}$$

$$m = 2,7 \cdot 10^{-6} \text{ kg} = 2,7 \text{ mg}$$