

- 29 A velocity selector for protons has an electric field of strength $3.0 \times 10^5 \text{ V m}^{-1}$ at right-angles to a magnetic field of flux density $1.5 \times 10^{-2} \text{ T}$.

What is the speed of the protons that pass undeflected through the selector?

- A $2.0 \times 10^7 \text{ ms}^{-1}$
- B $3.0 \times 10^5 \text{ ms}^{-1}$
- C $4.5 \times 10^3 \text{ ms}^{-1}$
- D $5.0 \times 10^{-3} \text{ ms}^{-1}$