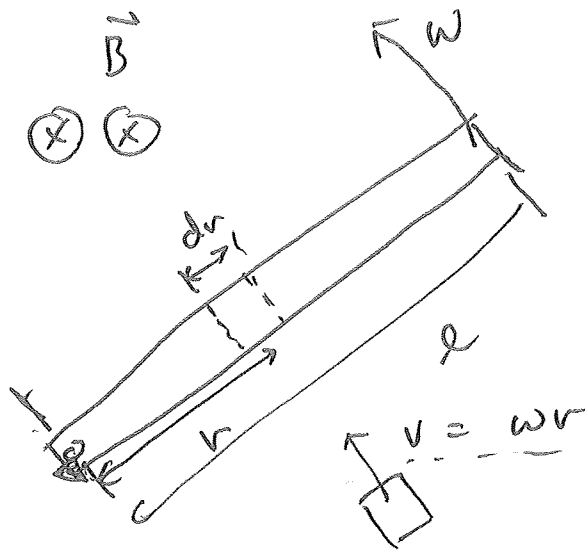


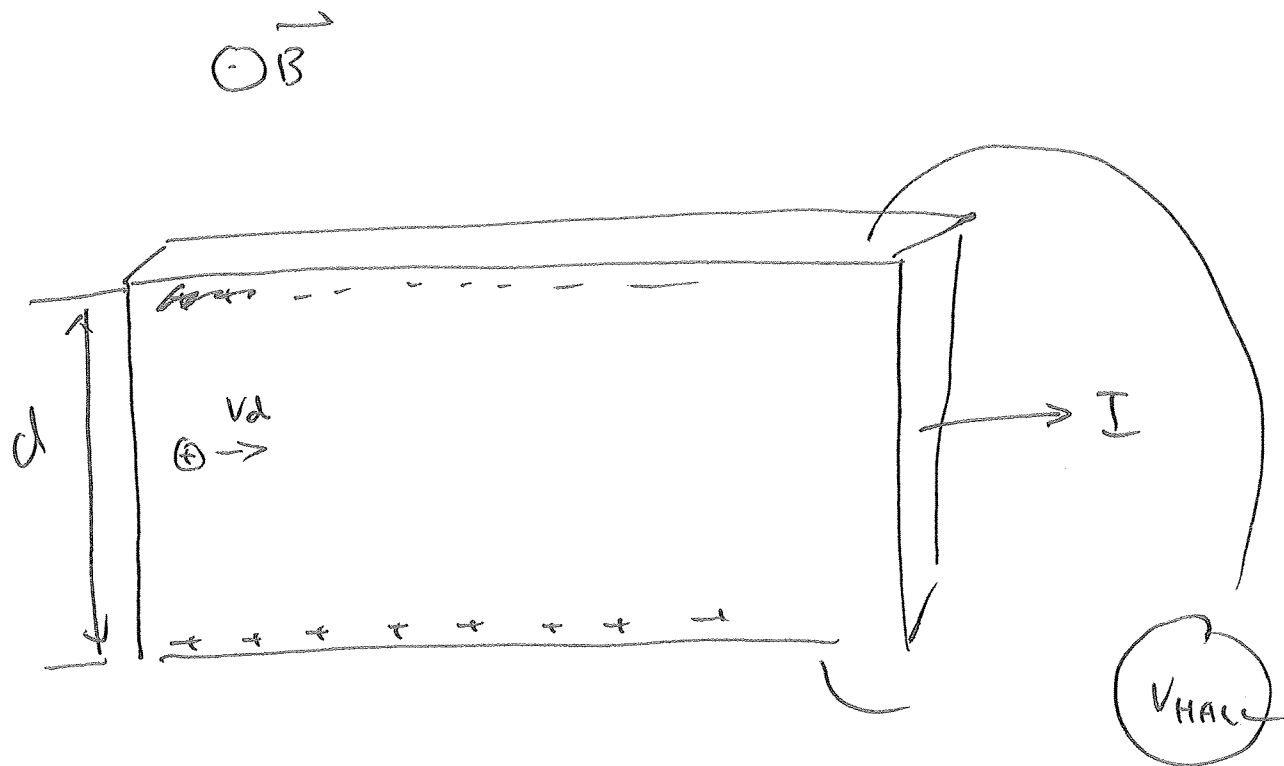
555 mph
 \downarrow
 893 km/hr
 \downarrow
 250 m/s
 $v = 250 \text{ m/s}$
 $l = 70 \text{ m}$
 $B = 0.5 \times 10^{-4} \text{ T (EARTH)}$
 $\mathcal{E} = 70 \times 250 \times 0.5 \times 10^{-4}$
 $= 0.875 \text{ V}$



SMALL SEGMENT

$$dE = \frac{dr v B}{2}$$

$$\begin{aligned}
 E = dE &= \int dr v B \\
 &= \int_0^l dr \omega r B \\
 &= \frac{B\omega}{2} r^2 \Big|_0^l \\
 &= \frac{B\omega l^2}{2}
 \end{aligned}$$



V_{HALL} : HALL VOLTAGE

$$qE = qvB$$

$$E = v_d B \quad v_d \text{ : DRIFT VELOCITY}$$

~~$$V_H$$~~
$$V_{HALL} = Ed = v_d B d$$

