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$$T = 27.3 \text{ days}$$

$$T = \frac{2\pi}{\omega}$$

$$\omega = \frac{2\pi}{T}$$

$$= \frac{2\pi}{27.3} \text{ rad/day}$$

$$= \frac{2\pi}{27.3} \times \frac{1}{24} \text{ rad/h}$$

$$= \underline{9.59 \times 10^{-3} \text{ rad/h.}}$$

$$v = r\omega$$

$$= 3.85 \times 10^5 \times 9.59 \times 10^{-3}$$

$$= \underline{3692 \text{ km/h}}$$