

15. We convert meters to astronomical units, and seconds to minutes, using

$$\begin{aligned}1000 \text{ m} &= 1 \text{ km} \\1 \text{ AU} &= 1.50 \times 10^8 \text{ km} \\60 \text{ s} &= 1 \text{ min} .\end{aligned}$$

Thus,  $3.0 \times 10^8 \text{ m/s}$  becomes

$$\left( \frac{3.0 \times 10^8 \text{ m}}{\text{s}} \right) \left( \frac{1 \text{ km}}{1000 \text{ m}} \right) \left( \frac{\text{AU}}{1.50 \times 10^8 \text{ km}} \right) \left( \frac{60 \text{ s}}{\text{min}} \right) = 0.12 \text{ AU/min} .$$