

77. (a) Assuming complete absorption, the radiation pressure is

$$p_r = \frac{I}{c} = \frac{1.4 \times 10^3 \text{ W/m}^2}{3.0 \times 10^8 \text{ m/s}} = 4.7 \times 10^{-6} \text{ N/m}^2 .$$

- (b) We compare values by setting up a ratio:

$$\frac{p_r}{p_0} = \frac{4.7 \times 10^{-6} \text{ N/m}^2}{1.0 \times 10^5 \text{ N/m}^2} = 4.7 \times 10^{-11} .$$