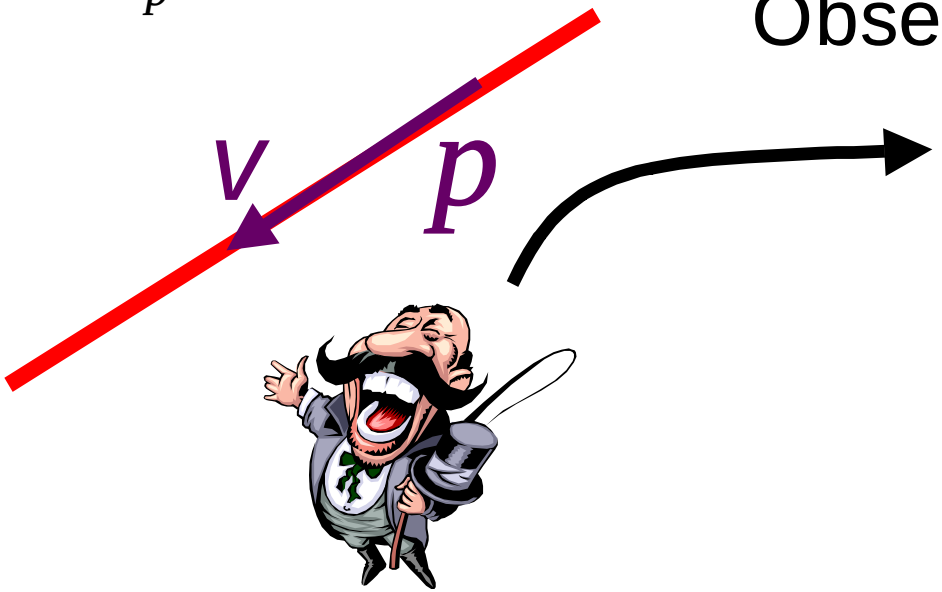
Right answer: Lab perspective

$$g = \frac{E_p}{m_p} = \frac{140\,GeV}{140\,MeV} = 1000$$



Observer: Time dilation

$$t_{lab} = gt = 1000 \times 2.6 \times 10^{-8}$$

$$t_{lab} = 2.6 \times 10^{-5}\ \text{sec}$$

$$t = 2.6 \times 10^{-6}\ \text{sec}$$

$$\frac{t}{t_{lab}} = 0.1 \quad \text{so} \qquad \textit{Right!!!}$$

$$\text{fraction left} = e^{-0.1} = 0.90$$