

76. If the momentum is measured at the same time as the position, then

$$\Delta p \approx \frac{\hbar}{\Delta x} = \frac{6.63 \times 10^{-34} \text{ J}\cdot\text{s}}{2\pi(50 \text{ pm})} = 2.1 \times 10^{-24} \text{ kg}\cdot\text{m/s} .$$