

**Instructor's guide** This activity follows <https://paradigms.oregonstate.edu/act/2525> and requires at minimum the end of the lecture which discusses this experiment.

In <https://paradigms.oregonstate.edu/act/2525> you learned about an experiment in which rubidium atoms are dropped from a trap into an optical two-slit experiment. During this experiment the atoms fall a total of 1.5 meters. What is the de Broglie wavelength of an atom after falling from rest 1.5 m?

$$\lambda = \frac{2\pi\hbar}{p} \quad (1)$$