Find v_{rms} for Cs atom at $T = 100\ nK = 100 \times 10^{-9} K$
(Cesium)

$$v_{rms} = \sqrt{\frac{3k_B T}{m}}$$

For Cesium, $m = 133u\left(\frac{1.67 \times 10^{-26} kg}{1u}\right)$

$$= 2.221 \times 10^{-25} kg$$

So:

$$v_{rms} = 4.317 \times 10^{-3} \frac{m}{s} = 4.317 \frac{mm}{s}$$