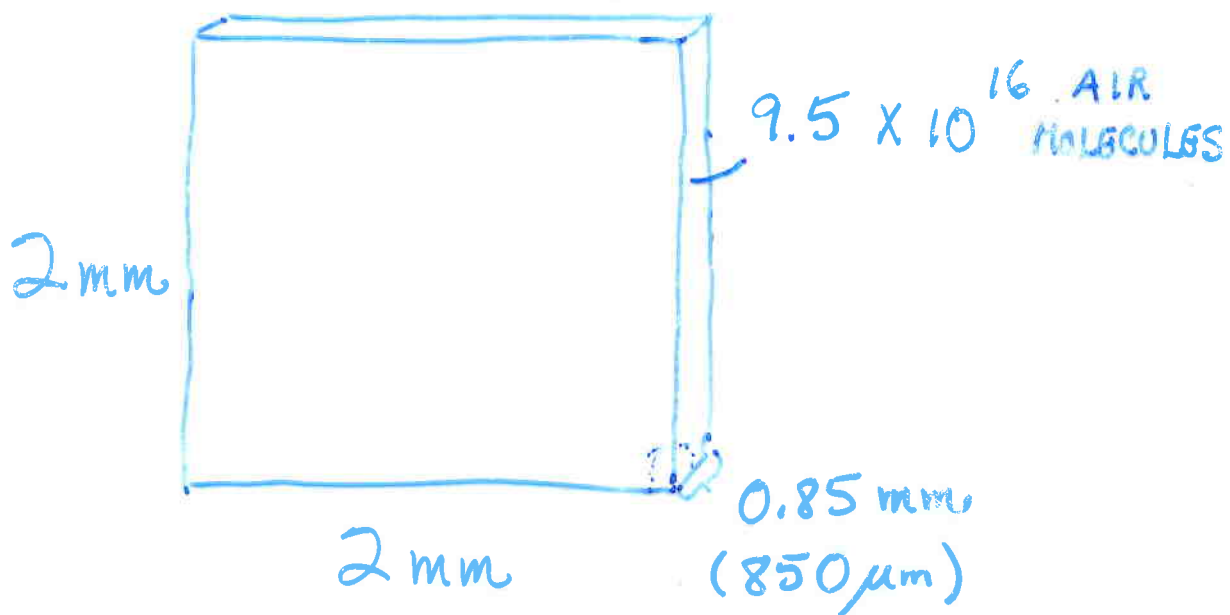


LITTLE BOXES OF AIR

(THIS BOX APPROPRIATE FOR HIGH FREQ. SOUND)

THICKNESS CHOSEN TO MAKE ~ 20 BOXES PER λ

BOX GOES BACK & FORTH \sim ONCE EVERY $50 \mu\text{s}$



AVERAGE MOLECULE SPEED $\sim 500 \text{ m/s}$

AVERAGE VOLUME PER MOLECULE \sim A CUBE 3.3 nm ON A SIDE

AVERAGE DISTANCE BETWEEN COLLISIONS $\sim 60 \text{ nm}$ ~ 18 OF THE LITTLE CUBES

DURING ONE PERIOD, A MOLECULE MAKES

~ 417000 COLLISIONS AND ON AVERAGE

MOVES $\sim 40 \mu\text{m}$ ($\sim \frac{1}{20}$ THE THICKNESS) OF THE BOX