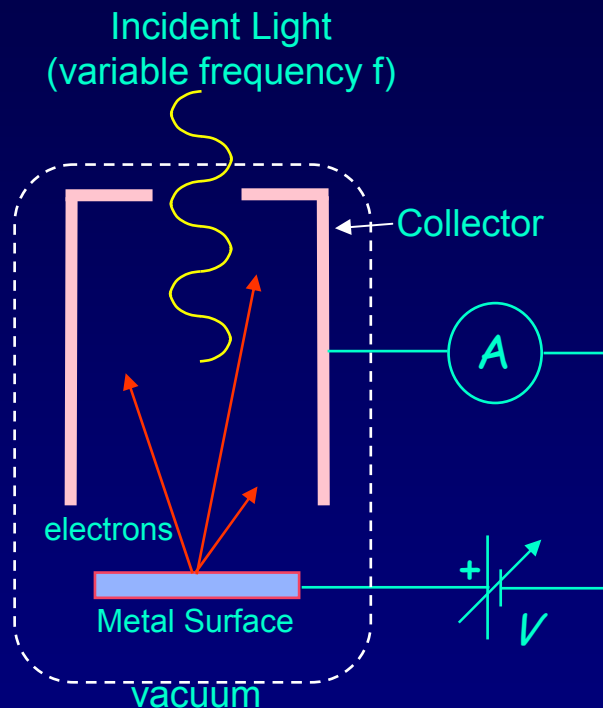


Photoelectric Effect (2)

Experiment 1: Measure the maximum energy (KE_{\max}) of ejected electrons



Bias the collector with a negative voltage to repel ejected electrons.

Increase bias voltage until flow of ejected electrons decreases to zero.

Current = 0 at $V = V_{\text{stop}}$. (the definition of V_{stop})

V_{stop} tells us the maximum kinetic energy:

$$KE_{\max} = eV_{\text{stop}}$$

The result:

The stopping voltage is independent of light intensity.

Therefore, increasing the intensity does not increase the electron's KE!