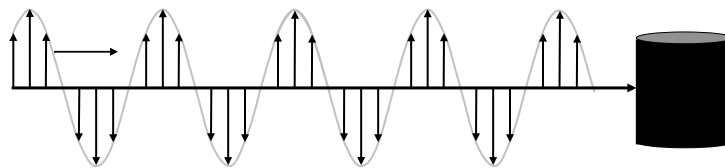


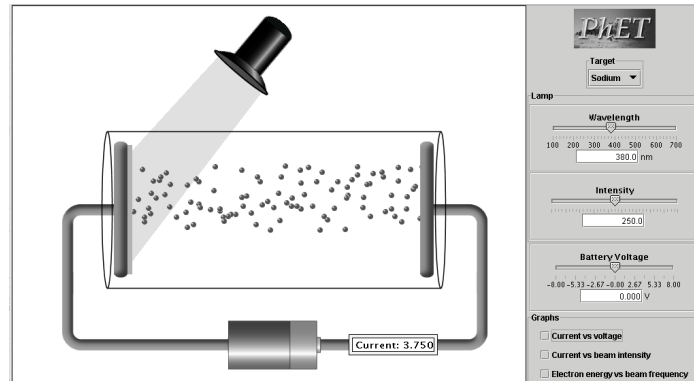
3.1.2 The photoelectric effect

Electromagnetic waves carry energy:



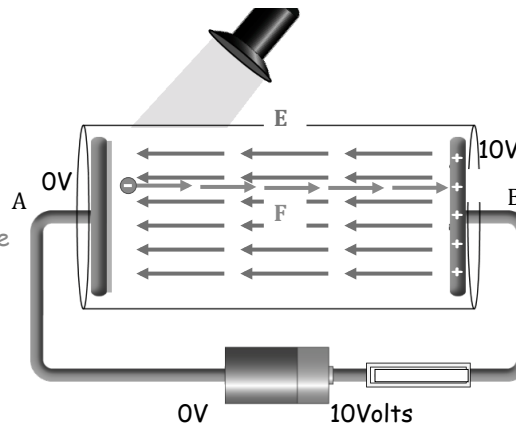
It takes time to build up energy!

The photoelectric effect

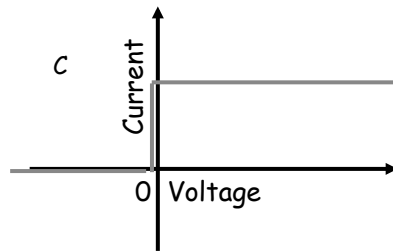


Uniform E-field
between plates

Constant force
on electron →
constant
acceleration

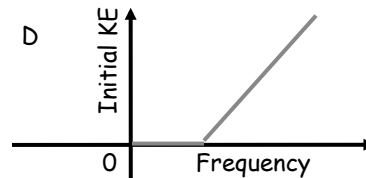
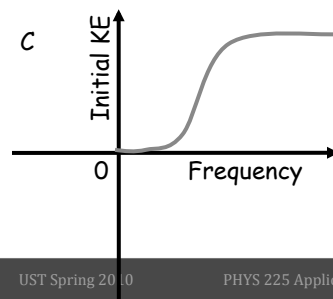
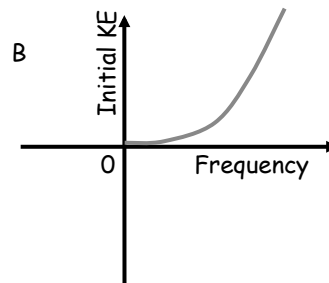
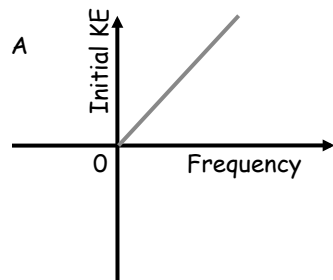


If light is a wave...



of electrons / sec = constant

Given the previous assumptions, predict what happens to the initial KE of the electrons as the *frequency* of light changes? (intensity is constant)



There is a minimum frequency below which the light cannot kick out electrons... even if wait a long time

