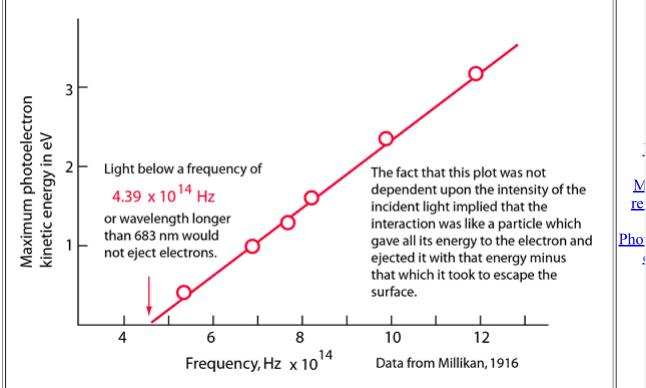
Early Photoelectric Effect Data

Electrons ejected from a sodium metal surface were measured as an <u>electric current</u>. Finding the opposing voltage it took to stop all the electrons gave a measure of the maximum kinetic energy of the electrons in electron volts.



The minimum energy required to eject an electron from the surface is called the photoelectric work function. The threshold for this element corresponds to a wavelength of 683 nm. Using this wavelength in the <u>Planck relationship</u> gives a photon energy of 1.82 eV.

Further analysis

Table of photoelectric effect work functions

HyperPhysics***** Quantum Physics

R Nave

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Early Photoelectric Effect Data

Energy of electrons ejected from sodium metal

 $h = \frac{\Delta E}{\Delta v} = 4.1 \times 10^{-15} \, eV \cdot s$

 $\Delta E = 1.25 eV$

Index to **HyperPhysics**



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