

1. What is the ratio of the kinetic energies K_1 and K_2 ?
2. What is the work function of the metal in eV ?
3. What is the maximum wavelength (in nm) that will produce photoelectrons?

4. Suppose tungsten x-rays are used in a Compton effect experiment with an energy 69.3182keV . Electrons are observed to recoil with a speed of $v = 0.2c$. What is the energy of the scattered x-rays?
5. At what angle (with respect to the direction of the incident x-rays) was the x-ray detector placed to detect the scattered x-rays?