Photoelectron Pre-lab

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Electron Configurations

- a) H: 1s1
  - H+: 1s0
  - He: 1s2
- b) Ca: [Ar] 4s2
  - Ca2+: [Ar]
- c) Sc: [Ar] 4s2 3d1
  - Sc2+: [Ar] 4s1
- d) F: 1s2 2s2 2p5
  - F-: [Ne] or 1s2 2s2 2p6
- e) Fe: [Ar] 4s2 3d6
  - Fe2+: [Ar] 4s2 3d4
- f) P: [Ne] 3s2 3p3
  - P3-: [Ne] 3s2 3p6 or [Ar]

Questions

1. $\Delta E = \frac{hc}{\lambda}$
   - $h = 6.262 * 10^{-34}$ js-1
   - $c = 3 * 10^{9}$ m/s
2. Wavelength is inversely related to energy. A larger wavelength has a lower energy, and vice versa.