

What You Should Know from “the Spectroscope Lab”!

- 1.) If you look at a discharge tube through diffraction grating glasses, what kind of spectrum do you see?
- 2.) What kind of spectrum do we get from the sun?
- 3.) Why are some spectral lines brighter than others?
- 4.) What is the name of the piece of equipment that allows you to determine which wavelengths are present from light from a discharge tube?
- 5.) Let's say you determine that a particular color of light coming from a discharge tube is equal to 4860 angstroms.
 - a.) What is the light's frequency?
 - b.) How much energy is wrapped up in the light's photon? (You'd be given Planck's constant for this.)
 - c.) How is this photon energy value related to the orbital energy configuration of the atom's inner structure?

6.) Be able to identify an emission spectra, versus an absorption spectra, from sight. That is, if I give you a picture of a spectrum, be able to tell the difference between an emission spectra and an absorption spectra.

7.) Why are both kinds of spectra important in astronomy?