

Spectroscopy

Turn in one copy of this answer packet with each group member's printed name and signature. By signing, you certify that you have actively participated in the exercise and have put forth effort in equal share to your fellow group members.

Printed Name

Signature

Part 1: Lab Spectra

Wavelength: Read the wavelength in nanometers from your spectroscope

Table 1: Hydrogen Calibration

<p>Hydrogen, Observed</p>	
<p>Hydrogen, Calibration</p>	

Table 2: Hydrogen Wavelengths & Frequencies

Color	Wavelength	Frequency

(Note: There are four lines, but one is really faint. If you can't see it, that's ok!)

Table 3: Observed Spectra

Blackbody	
Fluorescent	

Table 4: Emission Line Spectra

Mercury	
Neon	
Mystery Gas	

1. How many colors are actually in a blackbody spectrum?

2. Do you think any of the gases you observed (H, He, Ne, Mystery Gas) are in the fluorescent light? If so, which one(s)?

3. What is the mystery gas?

Part 2: Stellar Spectra

Table 4

Star	λ_{max} (nm)	Color	T_{surface} (K)	Spectral Class
The Sun			5,800 K	
Vega			11,000 K	