

PHYS1120

Summer 2025

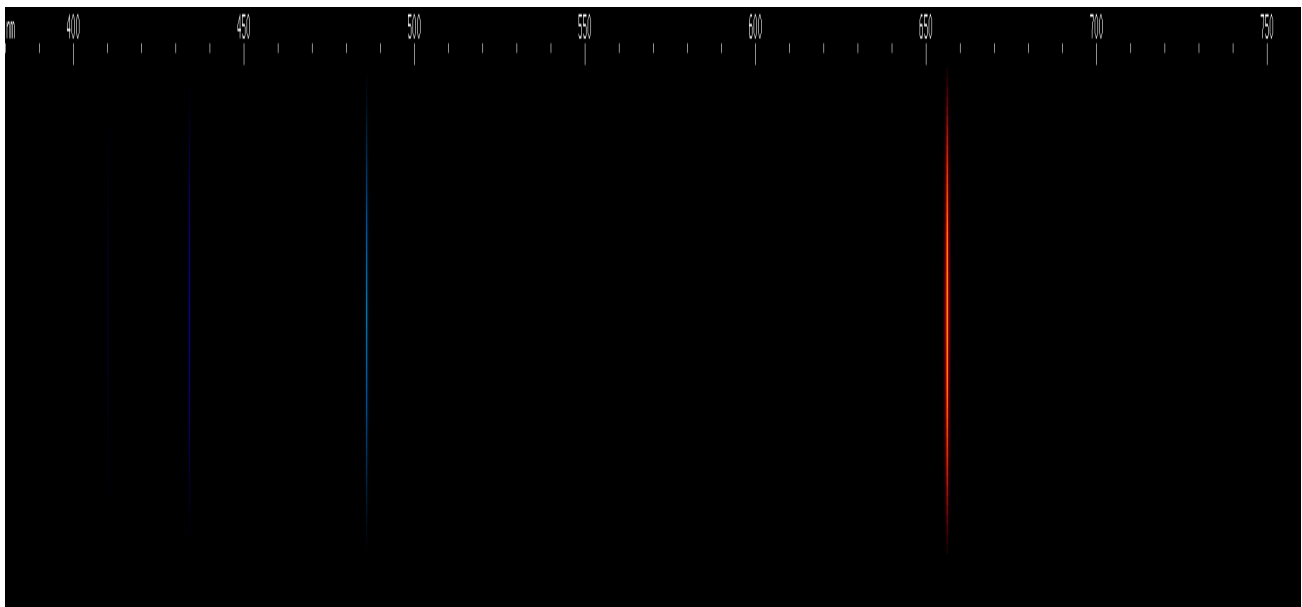
### 1. Goal(s)

- Determine the identity of 6 unknown gasses using spectroscopy.

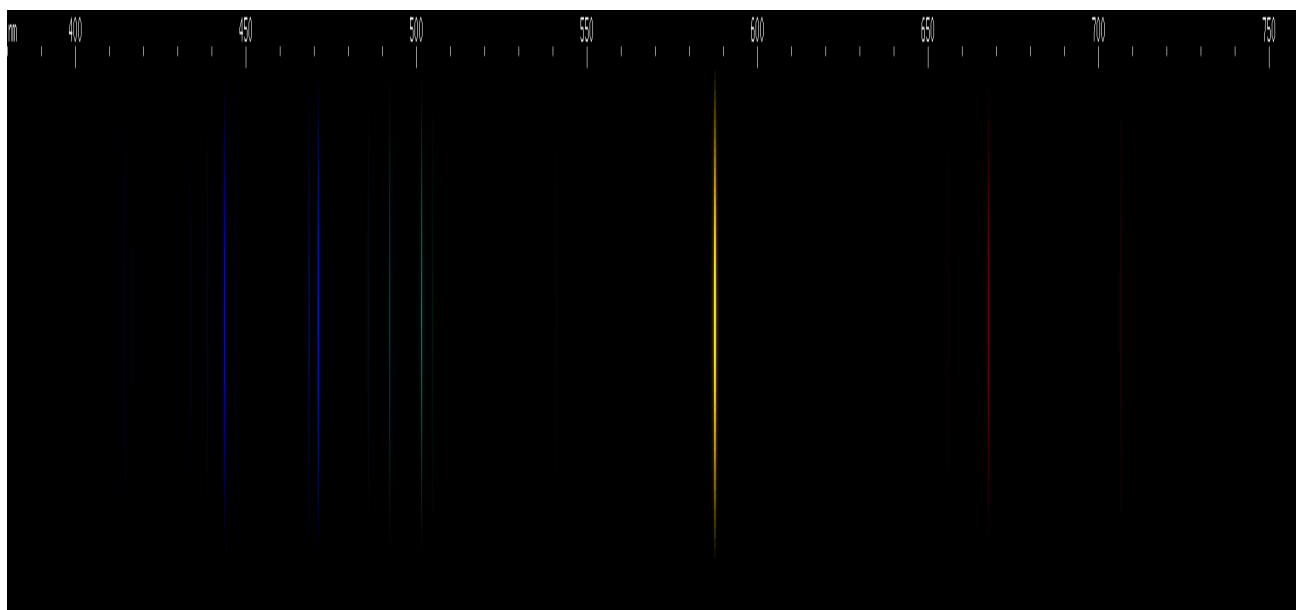
### 2. Materials

- 6 gas tubes
- Diffraction gratings

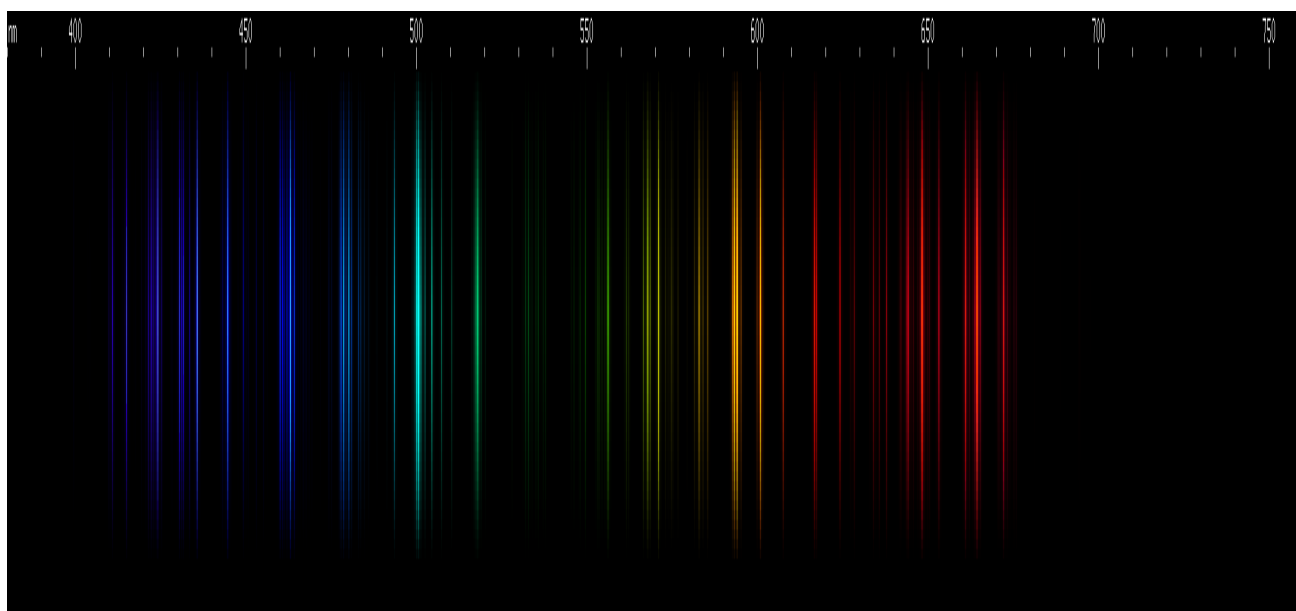
### 3. Equation(s)



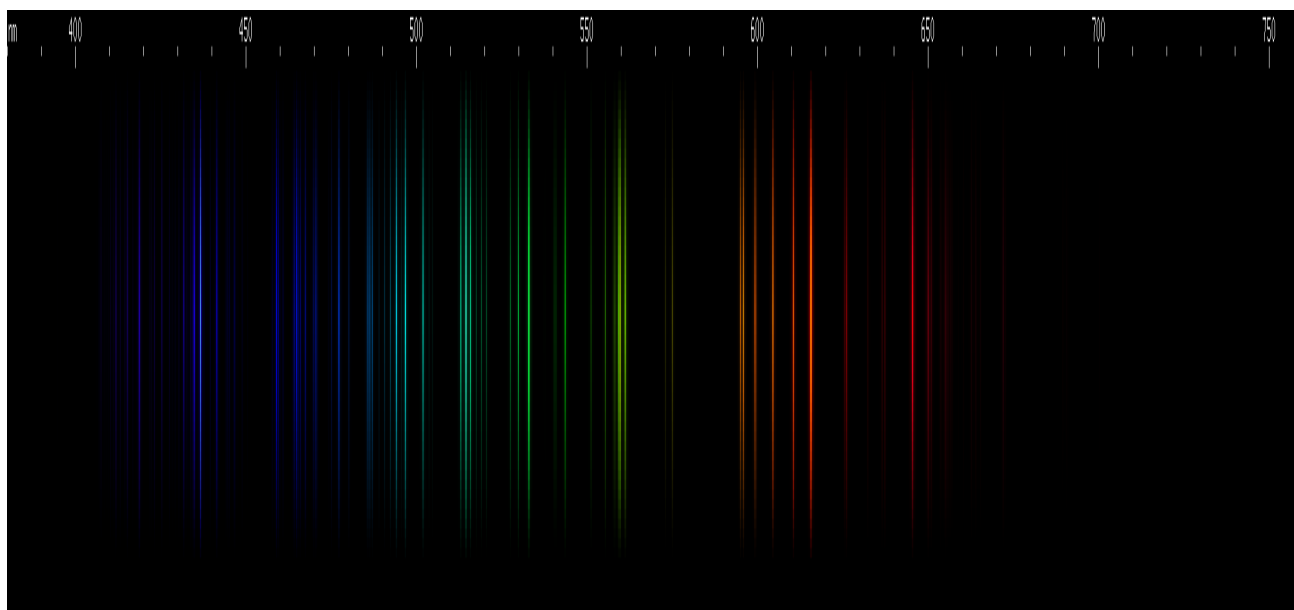
Hydrogen (H)



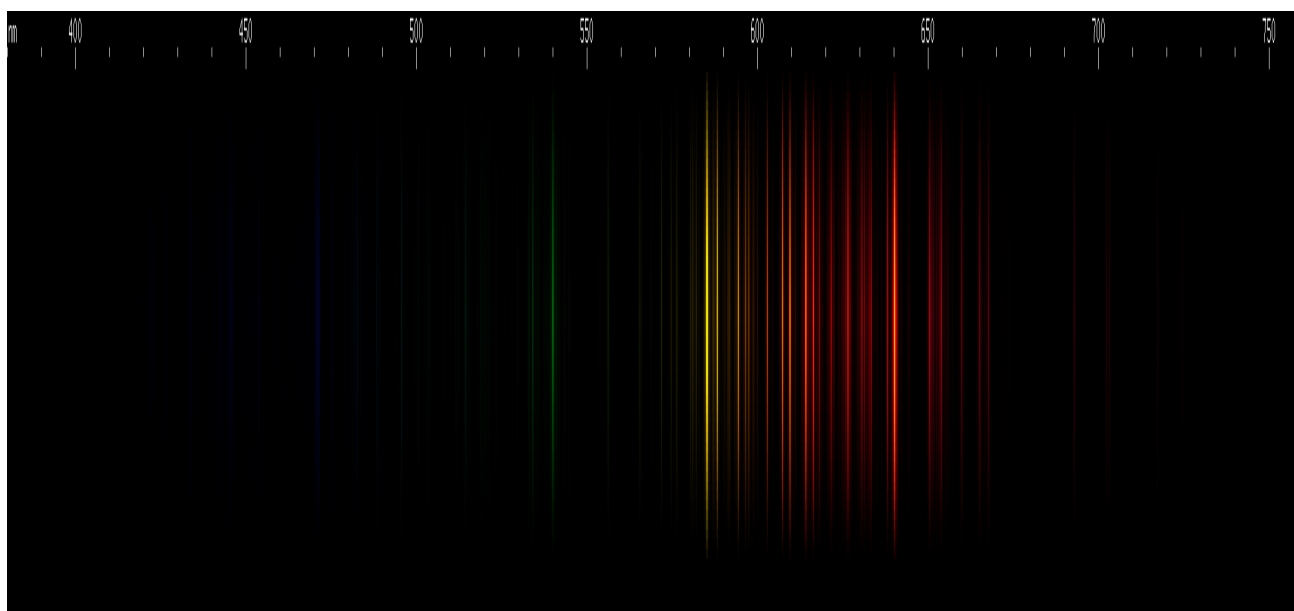
Helium (He)



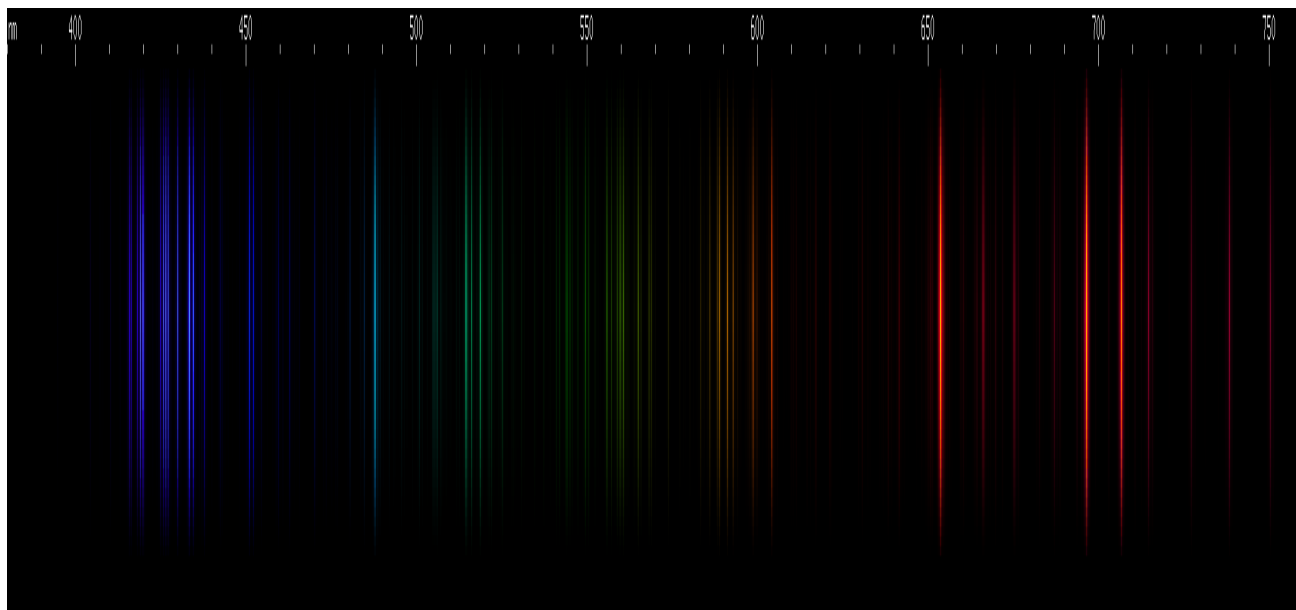
Nitrogen (N)



Oxygen (O)



Neon (Ne)



## Argon (Ar)

### 4. Methods

- a) Use the diffraction grating to examine the spectral lines of each lamp.
- b) Compare with the emission spectra on the first couple of pages and keep track of the identity of each lamp.

---

### 5. Results

Lamp 1:\_\_\_\_\_

Lamp 2:\_\_\_\_\_

Lamp 3:\_\_\_\_\_

Lamp 4:\_\_\_\_\_

Lamp 5:\_\_\_\_\_

Lamp 6:\_\_\_\_\_