Guess The Spectra!

Beginner

Mystery #1

M57: The Ring Nebula

Mystery #2

Blue Star: Rigel

Mystery #3

HII Gas Cloud: Eta Carinae

The Sun

Spiral Galaxy

Advanced
### Guess The Spectra!

**Beginner**

If you guessed a combination of Hydrogen and Sodium spectra then you are **CORRECT**!

If you guessed a combination of Hydrogen and Helium spectra then you are **CORRECT**!

If you guessed a combination of Helium and Mercury spectra then you are **CORRECT**!

**Advanced**

Planetary Nebula have emission lines due to energy emitted from the central star. The Ring Nebula has spectral lines from Hydrogen, Helium, and Oxygen!

Rigel is made of mostly Hydrogen and Helium like the Sun, but is a different color! The color difference is due to temperature. Rigel is 2x as hot as the Sun so it appears blue!

HII Clouds are mostly made of Hydrogen and emit spectra when nearby stars transfer energy to them. Like planetary nebula, these clouds may also contain Helium and Oxygen.

Galaxies are made of billions of stars, gas clouds, and nebulae. Therefore the spectra of a galaxy is the combination of all of these pieces! Can you see how they fit together?

Since the Sun is so hot, its spectra is a continuous rainbow with black absorption lines marking different elements. The Sun is made of mostly Hydrogen and Helium.