

PHY100S – The Magic of Physics – Pre-Class Quiz #8

When a dilute gas is heated until it glows, when the emitted light is directed through a thin slit and then a prism we observe:

- A. A continuous spectrum like a rainbow.
- B. A line spectrum of distinct colors. **CORRECT**
- C. An interference pattern.
- D. A standing wave.

The center of Bohr's coat of arms features:

- A. The yin-yang symbol. **CORRECT**
- B. A photograph of his wife.
- C. A drawing of the Bohr model of the Hydrogen atom.
- D. The atomic spectrum of Hydrogen.

The half-life is:

- A. When the probability associated with the psi field is 50%.
- B. The quantum state of a daughter nucleus.
- C. The time for one-half of a sample of radioactive nuclei to decay. **CORRECT**
- D. The ratio of the charge of a beta particle to the charge of an alpha particle.