



**Title:** Tracing Spectra

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**Abstract:**

Over centuries of human research, atomic spectra have become a key tool in the identification of molecules and scientific exploration, from astronomy to organic chemistry to physics. Starting from an ignorant fascination with rainbows and the light patterns that shine through glass, humans have come to understand both the nature and the origin of light spectra. My thesis is an exploration of atomic spectra within the context of an atomic spectroscopy lab. In my lab I examined some of the key discoveries necessary to our modern understanding of spectra, testing experimentally the validity of projections based on the Bohr Model of hydrogen. Using a diffraction grating and spectrometer, the wavelengths of light emitted from hydrogen and other atoms were measured, and then compared to theoretical predictions.