Measuring the wavelengths of a mercury lamp using a spectrometer

This experiment will determine the wavelengths of coloured light using high energy mercury in a discharge tube. Using a 400 lines per millimetre diffraction grating and an optical spectrometer, the ...

In this experiment a spectrometer equipped with a diffraction grating is used to identify spe-cific wavelengths from the emission spectrum of mercury, to measure these wave-lengths precisely, ...

See also: 7B10.20 in Astronomy. The mercury spectrum should be set up as shown. The mercury source will take at least 5 minutes warm-up. The wavelengths of the main lines of mercury ...

The experiment used a sodium lamp, which emitted a yellow light at 589 nm, and a mercury lamp, which emitted light at several distinct wavelengths in the visible spectrum.

In this lab, you will use a spectrometer to study diffraction from a grating and measure the wavelengths of certain lines in the spectrum of different lamps including a mercury arc lamp.

The mercury vapor lamp emits light at specific wavelengths corresponding to electronic transitions in mercury atoms. These wavelengths appear as distinct spectral lines, such as violet (404.7 nm), blue ...

Observe the diffracted light on the screen and identify the spectral lines of mercury light. Measure the angle between the incident light and the diffracted light for a particular spectral line. Use ...

In this lab you will apply what you learned to measure the wavelengths of light in the visible bright line spectrum of some elements. You will use a diffraction grating mounted on a ...

Determine mercury light wavelength using a diffraction grating. Includes spectrometer setup, procedure, and error analysis. College-level physics.

The mercury lamp is a gas discharge lamp that uses an electric arc through vaporized mercury to produce light. The spectrum of mercury is shown in Figure 3. The filter wheel is used to pick out the ...

Lab experiment to determine mercury light wavelength using diffraction grating. Includes procedure, theory, calculations, and observations.

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