Using a Spectrometer to Observe Sunspots

In this challenge, you"ll study images of the Sun to estimate the number of sunspots in a region and then compare your number to the official count by NASA researchers.

In 1860, German physicist Gustav Kirchhoff became the first person to use spectroscopy to identify an element in the Sun when he found the spectral signature of sodium gas. In the years that followed, ...

How to safely observe the Sun, what equipment you need and what you can see? Our complete guide to safe solar observing.

You can use the Spectrum Constructor to explore the three types of spectra and how they appear through a diffraction grating when the brightness of each wavelength is measured with a spectrometer.

Light enters the spectrometer from a clear slit in the transparency. The thin beam of light travels the length of the housing until it reaches a lens, which collimates the beam (or focuses it to infinity).

? TL;DR - How the Sun "Identifies Itself" The Sun doesn"t *literally* "identify" itself like a human, but astronomers and solar observers use **spectroscopy, filters, telescopes, and data analysis** to study ...

Observe the spectrum of each tube and sketch the pattern observed, remembering that each tube contains a distinct gas and thus emits a distinct spectrum. Use the color pencils provided to draw ...

In order to view and measure the dispersion of the glass being manufactured, Fraunhofer developed a measuring device, which he called a "spectroscope".

The utmost safety precaution when using any sunspot viewer is to never look directly at the sun through the pinhole or any other aperture. The viewer is designed for indirect observation, meaning you look ...

Spectrophotometer Science Project: Build a simple cell phone spectrophotometer and investigate the absorption of visible light in differently colored solutions using food colors.

In this engaging video, we will guide you through the process of creating a sunspot viewer, a safe and fun way to see sunspots without looking directly at the Sun.

Using the light from the quasar PKS 0405-123, located 7 billion to 8 billion light-years away, Hubble"s Cosmic Origins Spectrograph (COS) probed a string of gas clouds residing along the ...

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