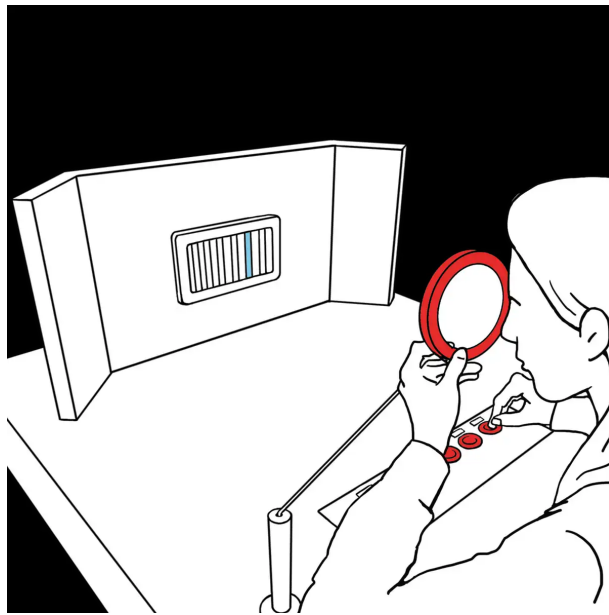


# Glowing Gases

What colour do different gases have?



Hold the “Neon” button down so that the gas begins to glow. What colour is it?

What do you notice, when you observe the glowing neon gas through the optical grating.

Try the same with the other gases and compare your observations.

Gases can be made to glow by passing an electric current through them. They each emit a characteristic colour. This light generally consists of a set of wavelengths of light, which together result in the particular colour impression that you see.

If the light is passed through the grooves of an optical grating, it is spread out, i.e. diffracted. The angle through which any light is diffracted depends on its wavelength, and since each wavelength is seen as a different colour, the light is separated out into its spectral colours.

The spectrum of each gas is just as unique as a human fingerprint. Thus astronomers, for example, can investigate the spectrum of light from stars and determine what gases are in their outer layers.