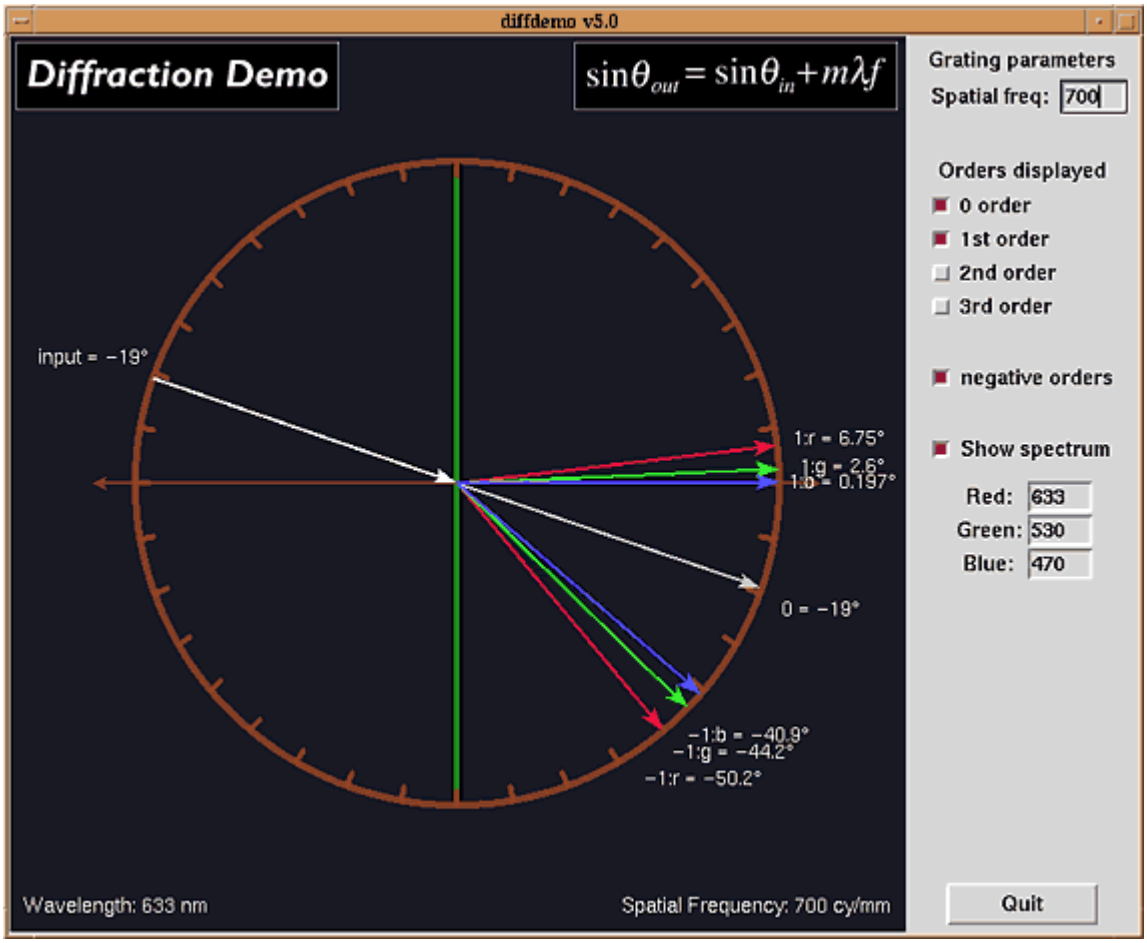
diffdemo MAS450

Summary

Diffdemo is a program that helps explain how a diffraction grating of constant spatial frequency bends light into different directions.



Using diffdemo

The diffdemo window consists of two parts: the image on the left and the control panel on the right. The image shows a ray of light (white) approaching a diffractive plate (green). Out of the plate to the right emerges several rays of light; these rays are the diffracted orders.

To adjust the angle of the input beam, click and drag the mouse in the image window. The input beam will follow the mouse (within the left half of the image). All other parameters of diffraction are controlled from the control panel. The "Spatial freq" control changes the spatial frequency of the grating. The "orders displayed" control changes which orders are displayed. By default, both positive and negative orders (m >= 0, m <=0) are displayed, but the negative orders can be removed by unchecking the "negative orders" box.

Also by default, diffdemo's light consists of only a single wavelength. This wavelength can be changed by typing in a value and pressing return. A spectral range of three different wavelength can

be displayed by clicking the "show spectrum" button.