

Dispersion of White Light



Purpose: To demonstrate the dispersion of white light into a color spectrum using a collimated white light source and a prism.

Location: room 146, shelf P2

First project the white light source onto the screen in the front of the room (ceiling lights off) and students will see a white image of the hot filaments of the light source. Next, place the prism stand between the light source and the screen (left photo) aligned and oriented such that a dispersed spectrum of the filament image shows on the screen (right photo). (Students in the rear of the room may need to come closer to see the color spectrum clearly).

This can also be done using the overhead projector and pieces of cardboard with a slit between them. Follow the above procedure replacing the white light source with this setup.