Improvements on Schlieren Imaging

Dolinar, Matthew (School: American Fork High School)

Schlieren imaging is used to show gradients in the temperature and density of air, water, and other materials. It does so by sending light through the test area and filtering out the light that gets refracted, causing either a shadow or bright spot to appear where the light gets refracted. My research is focused on creating a non expensive yet sensitive schlieren imaging setup for use in schools and research. In my research I used a z-type schlieren imaging system to isolate the distance light travels from the test area to the cutoff. I did this to study the effect of that distance on the sensitivity of the image. I found that distance between the test area and the cutoff point does increase sensitivity.

Awards Won: