

EE 119 Lab 7: Interferometry

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Michelson Interferometer

1. Identify the components of the Michelson Interferometer that is set up in the lab. Do you see fringes? If so, what can you say about the orientation of the mirrors assuming the incident light beam is very close to plane-wave? With ideal plane wave illumination, do you think you can still see fringes if the two mirrors are perfectly aligned (perfectly perpendicular to the incident beam)?
2. If you put your hand underneath one of the beam path with your warm palm facing up, what happens to the fringes? What does that tell you about the sensitivity of Michelson Interferometer?

Other Interferometry Fun

1. Turn on the white light source and look at the diffraction grating. In what direction is the grating blazed? How can you tell?
2. Look at the mirrors of the interferometer. Do they reflect all colors equally? What type of material is on these mirrors?
3. Take two microscope slides and press them together. Do you see Newton's rings forming?