Hi,

I messed up your interferometer -- sorry about that! I only touched the knobs on mirror 2 (M2) and the second beamsplitter (BS2) though.

Best,

Your Favorite Labmate

Realign M2 and BS2 to achieve an interference pattern with vertical lines on the screen as indicated.

Hint: After the beamsplitter, light from both paths should be nearly perfectly parallel. Adjust the two beams without the lens. When parallel, put the lens back to enlarge the fringes. You can use the card provided to examine the beams at different locations.

Remember, the wavelength of this light is ~630 nm... it will be hard to see the interference when the optics are being touched/vibrating.

Questions/Challenges:

1. What's the physical explanation for the fringes and their orientation?
2. Use the alignment to rotate the fringes from vertical to horizontal or even slanted.
3. Based on this, comment on why fiber or waveguide based interferometers are attractive. What advantages do they have over such "freespace" interferometers and why is this important to technology development.