

PHY 202/182 Lab Instructor notes  
Lab 10: Properties of Lenses  
Spring 2004

- The optics components are stored in the marked drawer. Be careful when you open the drawer so the lenses don't slide around too much. The spherometers scratch the lenses: try to pick lenses that already have spherometer scratches or other damage.
- There are two working spherometers.
- Students also need calipers which are found in the marked drawer.
- You should be aware that the plotting program chooses its boundaries based on the points given. Thus, it does not always have the  $x$  and  $y$  axes on the plot.
- Students should also determine the focal length by focusing on a distant object (through the window of the lab) on a piece of white paper.
- You should mention at the beginning of class:
  - Some of the light bulbs are powered by the adjustable output of the power supply. They should be set to 12 V.
  - For best results, measure distances— $d_o$  and  $d_i$ —with respect to the center of the lens.
- Collect the lenses at the end of class.
- I don't have any replacement 12 V light bulbs for the optics tracks.
- It would be good to replace the spherometers with something that is more gentle on the lenses.