PHY180F ASSIGNMENT 3 2004

Due: Thursday, October 7

1. Here is another problem to help you get ready for ERRTST. The thin lens formula $\frac{1}{f} = \frac{1}{s} + \frac{1}{s'}$ gives the focal length f in terms of the object distance s and the image distance s'. In the laboratory you have measured the object and image distances to be $s = 30.0 \pm 0.2$ cm and $s' = 20.0 \pm 0.1$ cm. What is the value of f and the associated uncertainty in f?

2. Chapter 4 problem 70.

3. Chapter 5 problem 58.

4. Chapter 10 problem 60.