

Physics 2060/4060

Observing Exercise 3

Perform the following activities.

1. **Main Telescope Quick Alignment and Focus.** Perform the one star alignment and focusing procedure as outlined in the “concise telescope instructions”
2. **Meade DSI PRO II CCD Camera focusing.** Use the Meade Imaging Software to focus. Find a bright star and center it in the field of view. Highlight a box around it by left clicking and holding while dragging the cursor over the star. Use the “Magic Eye Focus” to determine the best focus. To do this, maximize the size of the triangles in the Magic Eye Focus box. Proceed to a dimmer star (4th or 5th magnitude) that requires at least a one second exposure to obtain a sufficient amount of light. Use the “Magic Eye Focus” method as described above. AN alternative to using the Magic Eye Focus method is to minimize the apparent size of the image of the star and maximize the value of the maximum pixel.
3. **CCD camera imaging.** (Copy your images to your personal directory)
 - a. Image Saturn. Obtain Red, Green, Blue and Clear Images.
 - b. Image Mars. Obtain Red, Green, Blue and Clear Images.
 - c. Image a Nebula (preferably high in the sky). Obtain Red, Green, Blue and Clear Images.
4. **Image Processing.** (Store your images in your personal directory) Using MAXIM DL, process the images obtained in the earlier step. Use color processing to obtain color images for planets and nebulae. Compile the processed images in a Word document for submission.