

STL-1001E CCD CAMERA CHECKLIST - MOON/C8

A. SETTING UP

1. **In the Telescope Control room, BPB 230, turn on the control computer. Get the camera case, take it to the dome and follow 2 below.**
2. **Telescope setup:**
 - **Set up the “old” telescope on the black cart in the store room. Use the pier nearest the dome to the east with the wedge on the pier.**
 - **Attach the counterweights that are on the black cart.**
 - **Plug in the cart cord to the extension cord from the dome.**
3. **In the dome:**
 - **Wheel the cart with the monitor keyboard and mouse out near the pier with the telescope.**
 - **Make sure the 2 neutral density filters are attached to the camera.**
 - **FIRST connect the CCD extender cable to the USB connector on the camera.**
 - **THEN connect the camera head to the black STL-1001E power supply, plug in the power supply to a plug on the black cart and attach the camera head to the telescope. MAKE SURE THE SET SCREWS ARE TIGHT!**
 - **Turn on the monitor.**
4. **Computer:**
 - a. **On the desktop, click on CAMERA, then type “camera” as the password. To start CCDOPS, double-click on the CCDOPS icon on the desktop.**
 - b. **After the CCDOPS screen appears, click Camera/Establish COM Link; the camera name, temperature, etc. appear in the status bar at the bottom of the screen.**
 - c. **Click on “Filters” and choose Blue.**

B. TAKING IMAGES

1. **FOCUSING**: Focus the camera on the Moon.
 - a. Locate the Moon using the locator or finder scope; it should then be in the camera field
 - b. Click the **Focus** button in the camera operations box; use the 0.15-sec exposure time. Use the Full frame, move the telescope to center the image and use the focus knob on the telescope to get the sharpest image.
 - c. To get out of focus mode, click on the Focus button again. You may have to click several times.
 - d. Use the “Grab” button to check on the focus and tweak the focus if necessary.

2. **IMAGES**: Click on the Grab button; choose ‘none’ for a light frame, and check that the exposure time is 0.15 sec. Remember to always save as a FITS file.
 - a. Make a test exposure to check that the image is centered; if it is OK, then save the frame. Click ‘File/Save/Save FITS’ or click the Save button and save as secno.fits, etc. in the appropriate folder. You can just type in the file name; CCDOPS will supply the extension as *.fits. The time is recorded on the file.

C. SHUTTING DOWN

1. **CAMERA**:
 - a. Click Camera/Shutdown to disconnect the link.

2. **SHUT DOWN**:
 - a. Exit CCDOPS; unplug the power supply.
 - b. Remove camera from telescope; disconnect power supply and USB cable from camera. Return camera to the case.
 - c. Return equipment to the dome and store room; make sure the doors are locked.
 - d. Leave the camera in the dome if other groups will use it, or return camera case to BPB 230.
 - e. In BPB 230, transfer data files to USB data storage device. Turn off Telescope Control computer; lock door.