21 July 2002 SFR
TROUBLESHOOTING:

I. YOU HAVE TROUBLE ACQUIRING THE SUN:

ACTION-
You have sent the heliostat to the sun in step #5 of the start up instructions but have failed to acquire the sun on mirror #3 (M3, on the column).

SOLUTION-
Try moving the heliostat to the South. This seems to be where the sun is often hiding.

If you fail to place the sun on M3 after a reasonable effort you probably need to perform a HARD STOW.
- 01. You should shut down the heliostat using ALT+Z.
- 02. Get out of TCS. DOUBLE CHECK THE SOFT STOW MIRROR POSITION.
- 03. Re-enter TCS but DON’T OBSERVE THE SUN. Instead SEND THE HELIOSTAT TO HARD STOW (under the MOVE MENU). This will take several minutes to accomplish. Wait for the monitor to return to its “normal” appearance.
- 04. Visually CONFIRM that the heliostat is hard stow by looking up the column (you should see blue sky).
- 05. Shut down the heliostat using ALT+Z and exit TCS.
- 06. Visually confirm normal (soft) stow position.
- 07. Re-enter TCS and send the heliostat to the sun. The image should now fall on M3.

II. THE HELIOSTAT HAS RUN INTO A LIMIT CONDITION (or THE POLE IS DISABLED)

ACTION-
The heliostat is dead! So, time to go to the roof, correct?? NOT NECESSARILY!!

SOLUTION-
If the heliostat has been disabled, YOU CAN GET OUT OF THE “LIMIT/DISABLED” CONDITION BY CONTINUOUSLY HOLDING DOWN THE “F10” KEY AND SIMULTANEOUSLY HOLDING DOWN A DIRECTIONAL BUTTON (N, S, E, or W) TO BACK THE HELIOSTAT OUT OF A DISABLED CONDITION. Try this before going onto the roof. If this solution fails you will need to shut down the computer and turn off the power supply to manually reposition the heliostat.

III. THE HELIOSTAT WILL NOT TRACK PROPERLY

ACTION-
The heliostat doesn’t track the sun when the biases are activated (ALT+B).

SOLUTION-
Check the bias rate values! They “magically” change sometimes for unknown reasons. Use the startup document created by Chris Wilkinson to verify the SIGNS and NUMERICAL values of the biases. If they need changing go to the RATES menu (or CRTL+B) and select “Bias”. Type in the correct numbers and signs for RA and Dec. Enable the biases with ALT+B.
If you have trouble acquiring the sun with the heliostat you might try this:

1. On the monitor look toward the bottom right hand corner at the toolbar. If a large exclamation point is displayed double click on it.

2. A window will pop up that will allow you to select an option to synchronize the black clock on top of the monitor with the computer's clock.

3. Select the option that reads something like: “synchronize computer clock every 2 minutes” or something to that effect, I cannot remember the exact wording.

4. After this option is selected click ok. A large question mark should appear in the toolbar where the exclamation point was located.

5. You should now have no problem finding the sun!