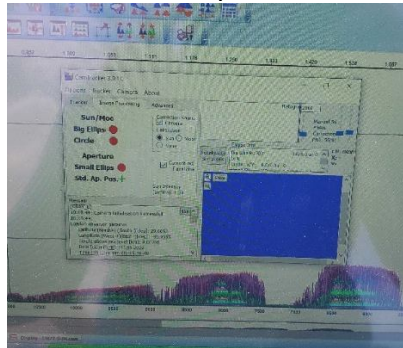


ISSUE

CamTracker camera preview is completely white or blue.

Blue screen example:



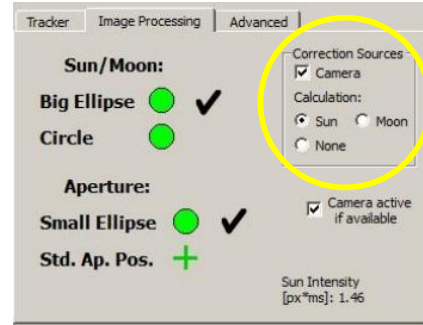
RECOMMENDATIONS

Suggestion 1:

1. Laptops can easily overheat due to high ambient temperatures and excessive incident light. If the laptop is hot to the touch, move it into the shade if possible.
 - a. If there is no shade available, consider shutting the laptop down and leaving it in an air-conditioned building until it has cooled off before continuing.

Suggestion 2:

2. Check the “Camera” box in the “Correction Sources” box under the “Image Processing” tab in CamTracker.
3. Wait for the motors to stop moving.
4. If the camera preview changes back to black, check the “Camera” box again, make any necessary motor adjustments, and continue taking data.



Suggestion 3:

5. Uncheck the box labeled “Camera active if available”
6. Wait up to a minute to see if the camera preview changes.
7. Recheck the box.

Suggestion 4:

8. If this does not help, put the tracker back in park position.
9. Restart CamTracker.
10. Make the tracker track the sun (see main Manual Operation procedure for more details).

Suggestion 5:

11. If the camera preview is still white or blue, halt data collection.
12. Put the tracker in park.
13. Restart the computer.
14. Follow the steps for operating OPUS and CamTracker to begin taking data again (see the main Manual Operation procedure).

ISSUE

CamTracker quality checks are not all green and the sun intensity is reading low values or 'nan.'

RECOMMENDATIONS**Suggestion 1:**

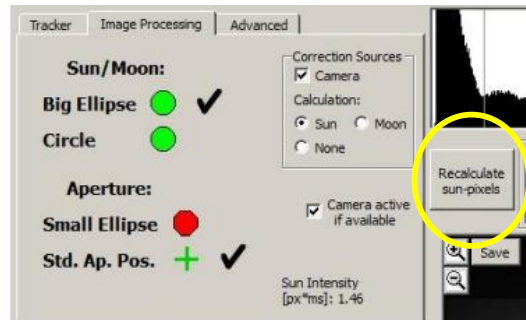
1. The sky may not be clear enough for data collection. Even cirrus clouds (thin clouds in the picture on the right) or relatively slow-moving cumulus clouds (smaller clouds in the foreground of the picture) can keep the EM27 from being able to track properly. Wait for more favorable sky conditions before re-aligning the mirrors and continuing to take data.

**Suggestion 2:**

2. If the sky is clear, the mirrors might not be aligned perfectly. Make sure all sun hitting the first mirror is being transferred to the second mirror.
3. Adjust the motor positions if necessary.
4. Make sure all sun hitting the third mirror is going into the lens in a crisp, full circle of light by looking at the reflection on the lens. See the main Manual Operation procedure for more details and example pictures.
5. Adjust the motor positions if necessary.

Suggestion 3:

6. If the mirrors appear to be aligned properly and the issue persists, click the "Recalculate sun pixels" button in CamTracker.

**Suggestion 4:**

7. Restart the alignment process by putting the mirrors back in park position and realigning.

ISSUE	RECOMMENDATIONS
<u>Continued: CamTracker quality checks are not all green and the sun intensity is reading low values or ‘nan.’</u>	Suggestion 5: 8. If the issue persists, document the issue and how you tried to fix it. There may be an issue with the EM27 that needs to be addressed by a Bruker technician.
<u>CamTracker quality checks are not all green and the sun intensity is displaying values much larger than previously.</u>	Suggestion 1: 1. Check the “Camera” box in the “Correction Sources” box under the “Image Processing” tab in CamTracker. 2. If the motors move, continue to Step 3. If they do not move, skip to Suggestion 2. 3. Wait for the motors to completely stop moving. This may take around a minute or longer as the motors will be moving very slowly. 4. Click on the “Camera” box again. 5. Make any necessary motor adjustments to realign the mirrors. Suggestion 2: 6. Put the tracker into park position. 7. Restart CamTracker and realign mirrors.