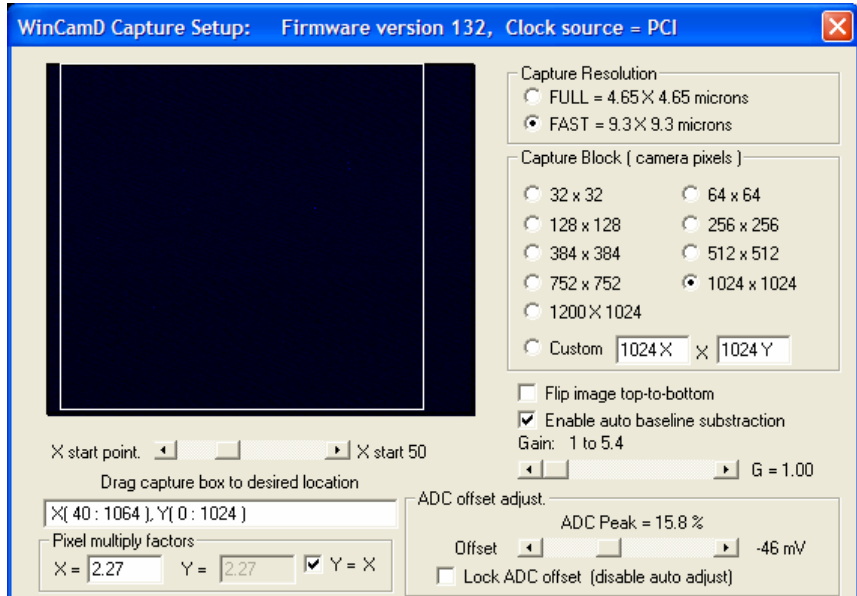


# Use of Compensation Files with TaperCamD series

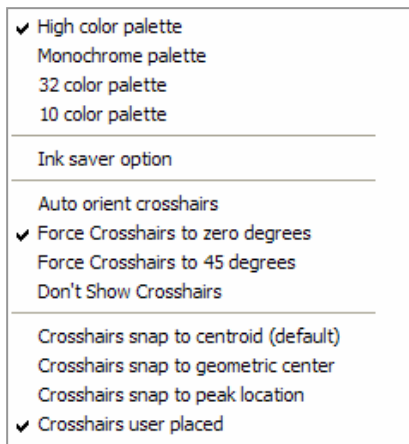
## Applies to:

- WinCamD series: TaperCamD, TaperCamD20/15
- Software versions 5.00R and higher.

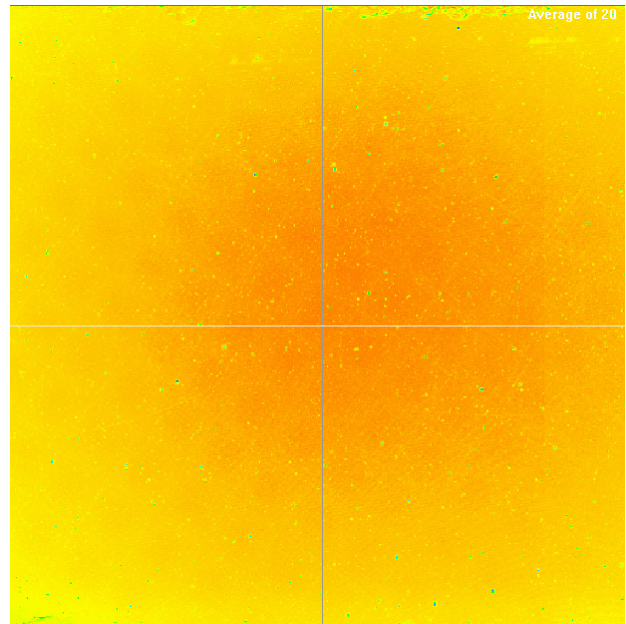
- 1) Go **File, Load defaults**. This sets Fast mode and a 1024 x 1024 Capture Block in the position shown. [If you will be working in **Full** resolution mode, select that option.]
- 2) In the Setup pull-down menu choose **Capture setup dialog [ALT S]**. Set the **Pixel multiply factors** if it should not be 1.0. E.g. = 2.27 for the TaperCamD. Click **OK**.



- 3) Right-click on the 2D image and choose **Force crosshairs to zero degrees & Crosshairs user placed**. Place the crosshairs in the approximate center of the image (not critical).



- 4) Remove the ND filter and attach a tube at least 100 mm long to the front of the camera.
- 5) Point the camera plus tube at an approximately Lambertian source. E.g. a ceiling or a wall with a non-glossy finish. Press the **Go** button. The illumination



level must be such enough that the **Exposure time** lies between **1.000 ms** and **99.00 ms**.

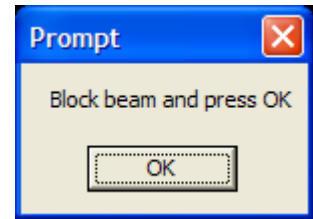
In the **Average** pull-down menu set **Average 20**. You will see an image something like that shown right. There will be some center to edge shading, plus individual bad pixels or small groups of bad pixels, corresponding to the (inevitable) broken and cracked fibers in the fiber optic taper. After Background subtraction, you will save this as the compensation file.

- 6) Press the background subtraction button.

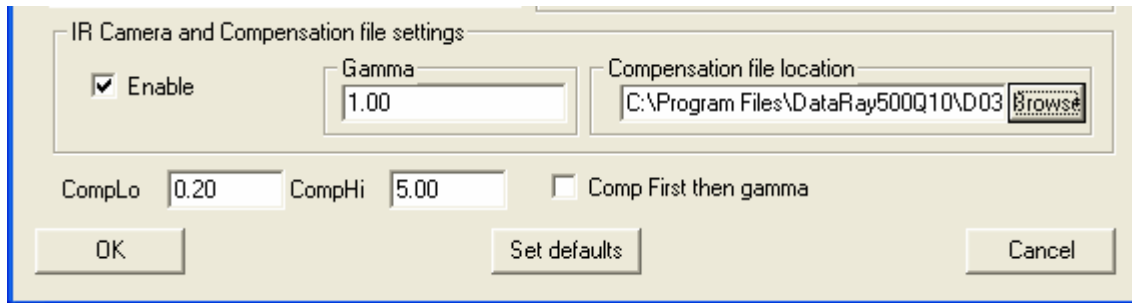


The prompt shown will appear.

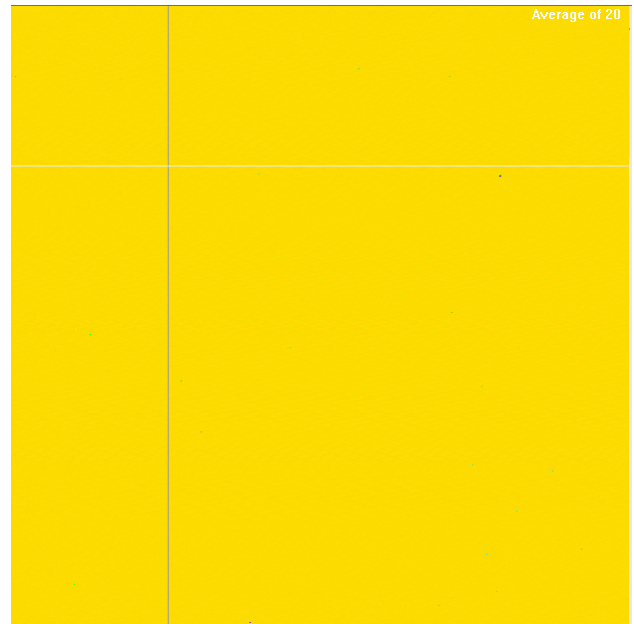
Block the open end of the tube (e.g, screw on the ND4.0 filter if you have a C-mount tube), and press **OK**. Unblock the tube, press the **Go** button, and let the Average grow to 20. Press the Stop button and Save this file as **DXXXX\_Default\_Comp.wcf**, where **DXXXX** is the **SN:** on the label on the back of the camera. As a default it will save in the **DataRay** directory, by default **c:\Program Files\DataRay**. It is good practice to back it up elsewhere. Press the button to the right of the background subtraction button in order to turn it off.



- 7) In the Setup pull-down menu choose **Capture setup dialog [ALT S]**. Click the **Enable** box and **Browse** to the file that you just saved. Click **OK**.

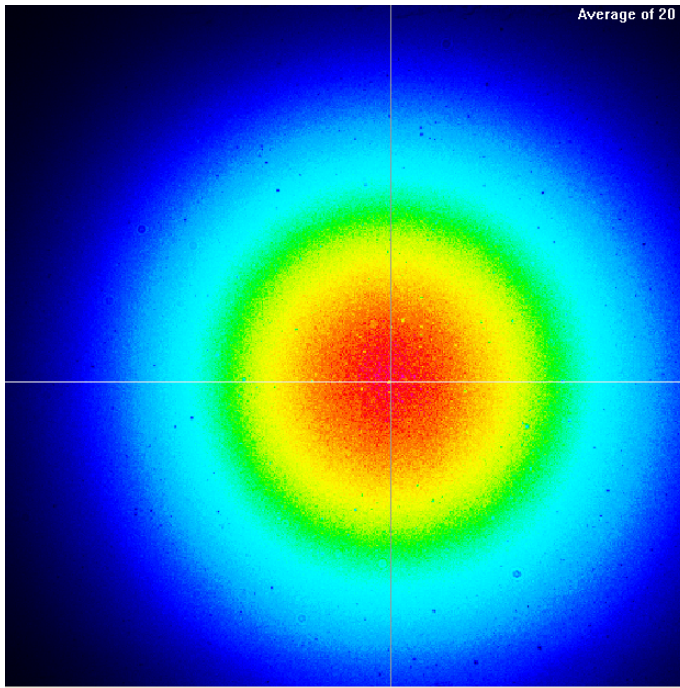


- 8) Press the **Go** button. The screen should appear flat if you are viewing the same scene that was used to take the compensation file.
- 9) If you view a different scene, the image will be compensated for array variations as long as you look at the same part of the array with the same resolution. Currently, if you change the Capture block you will need a correction file for that specific Capture Block. This will be corrected in a future release.



10) On an actual beam variations between 20% and 500% of the mean will be compensated.

**Uncompensated**



**Compensated**

