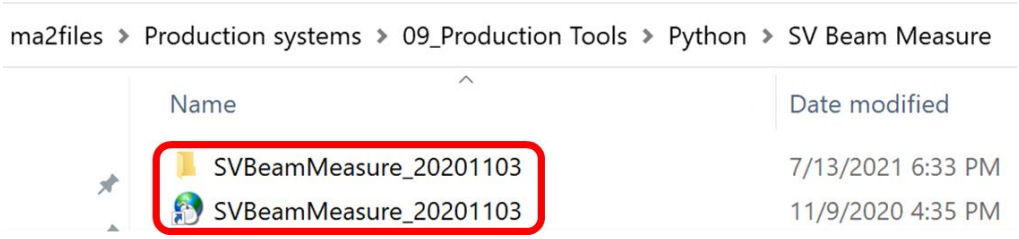
Revision History			
Revision	**Date**	**Name**	**Change Description**
01	08/20/2020	Yang Hyo Kim	New Document
02	08/23/2020	Yang Hyo Kim	Updated and added function
03	11/03/2020	Yang Hyo Kim	Updated

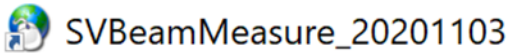
1. Purpose
    a. Analyze laser beam position in numbers
2. Scope
    a. Engineering/Manufacturing
3. Responsibility
    a. Engineering and Manufacturing is responsible in keeping this document updated
    b. Procedure must be followed by Engineering/Manufacturing
4. References
    a. List any References

Procedure

1. You should find a folder ‘SVPython’ and a shortcut 'SVBeamMeasure_20200823 - Shortcut' in the file server (\\MA2FILES\Production systems\Production Tools\Python).

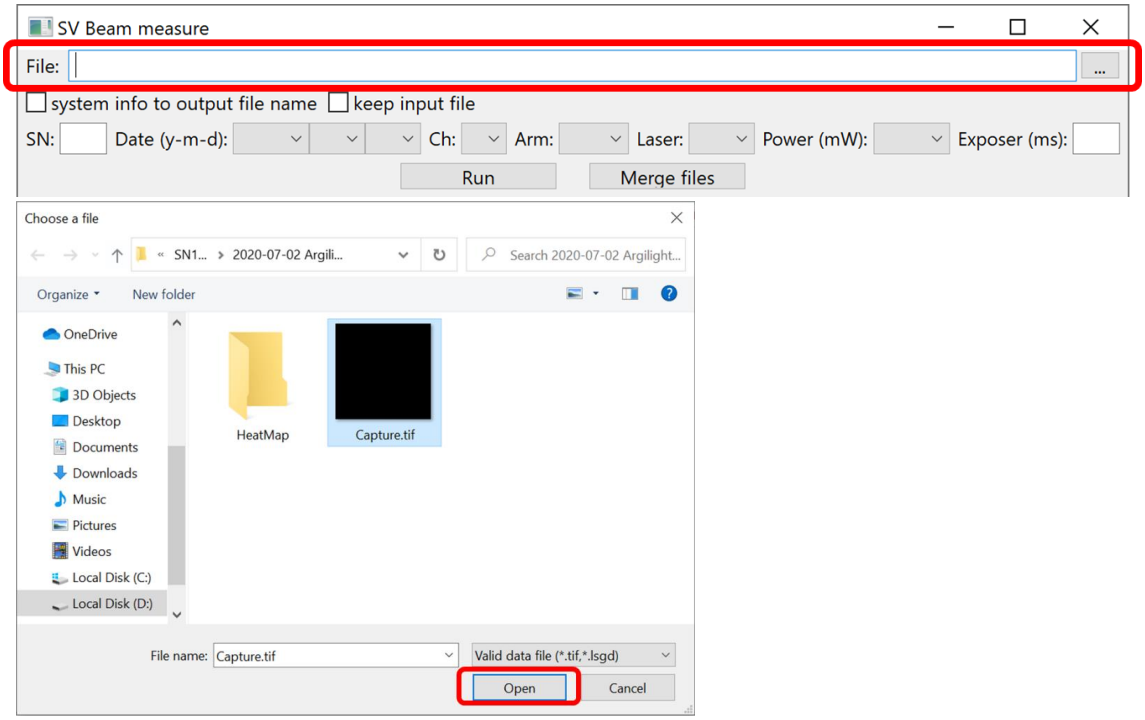


2. Run 'SVBeamMeasure_20201103' software by double-clicking the shortcut icon if you can access the server directly.

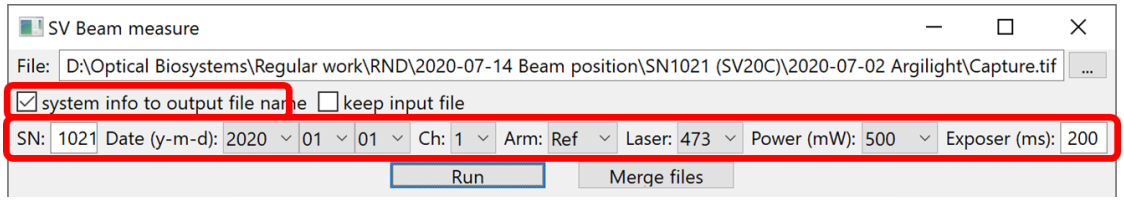


3. Enter the location where the data file is located by putting the file path in the text box. You can also click

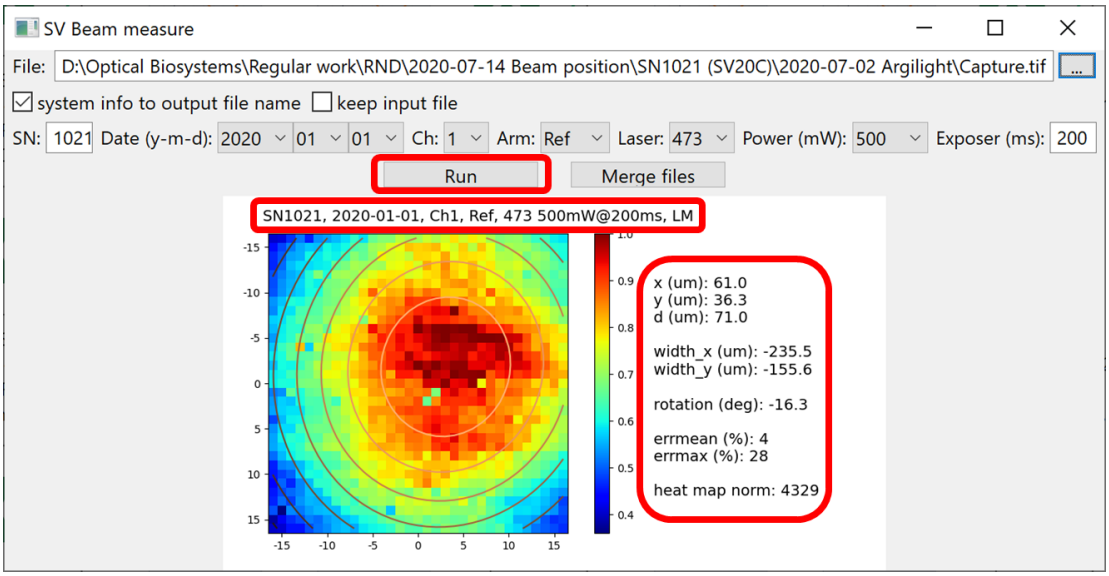
button to open file-choosing dialog, opens, click the data file, and push ‘Open’ button.



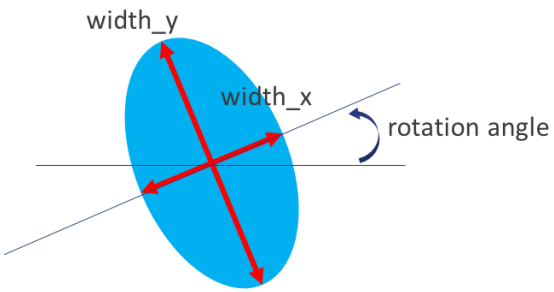
4. If you want to system information is included to the file name, check 'system info to file name' box and enter system info (SN, date, etc.).



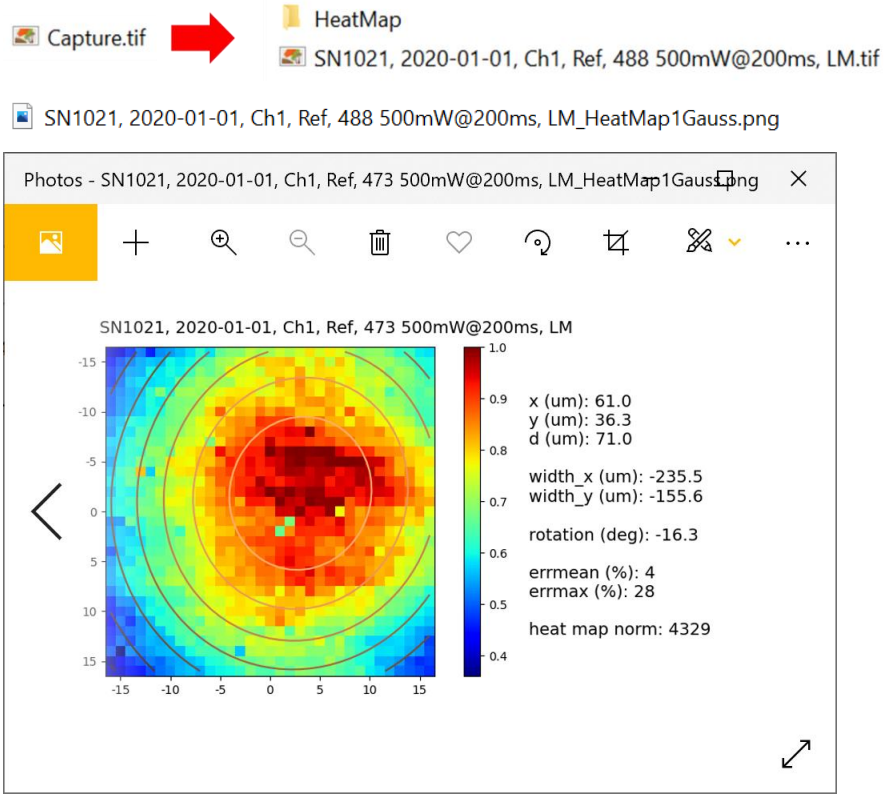
5. Click 'Run' button to analyze the data.



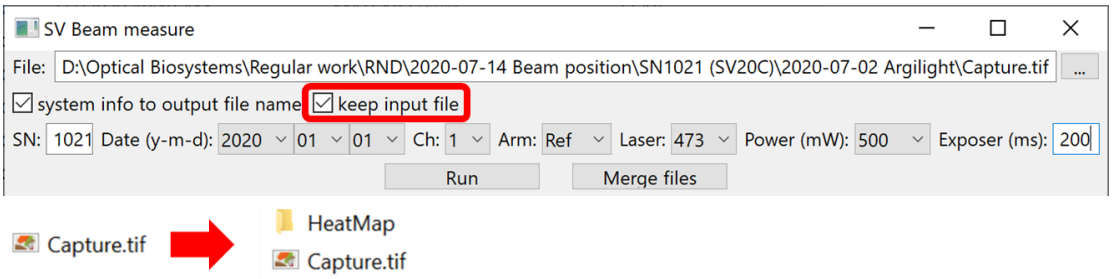
   a. You can find the system and slide information is included to the figure title.
   b. The heat map dot-matrix image is the actual data, while the contour lines are drawn with a 2D Gaussian fitting. From the 2D Gaussian fitting, information about the laser beam is supplied next to the figure.
   c. Laser beam information detail: x and y are beam position, width_x and width_y are beam width (FWHM) deviation from the design spec (1100 um), rotation is the rotation angle of the ellipse with counter-clock wise direction as a positive number, errmean and errmax are mean and max values of deviation from the ideal Gaussian beam shape. You have to note that width_x and width_y are horizontal and vertical width before the ellipse is rotated.



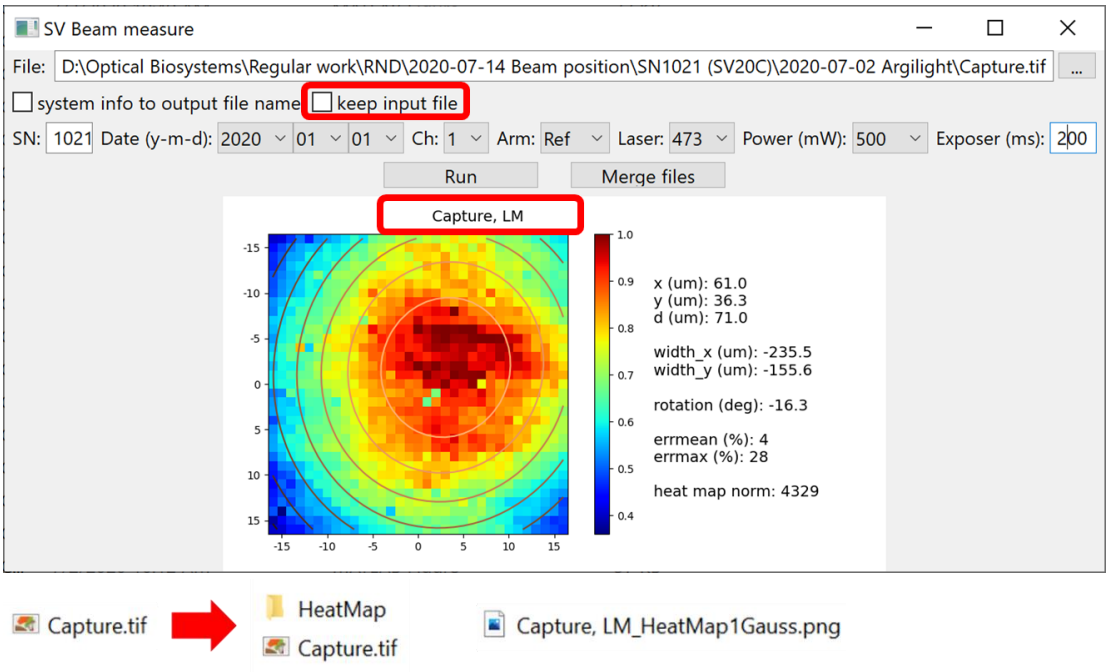
6. If you checked 'system info to file name' box, the software automatically changes the data file name so that it includes the system information. You can also find additional folder with a name of 'HeatMap' if not existed. The result figure is saved as a png file inside this 'HeatMap' folder.



7. If you keep the original data file, check 'keep input file' and it will be copied into a new file with the system info included file name.

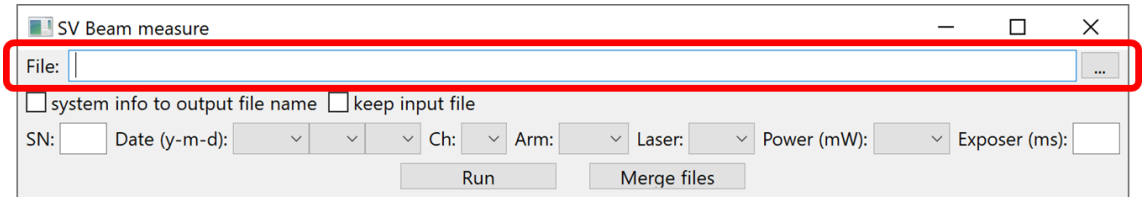


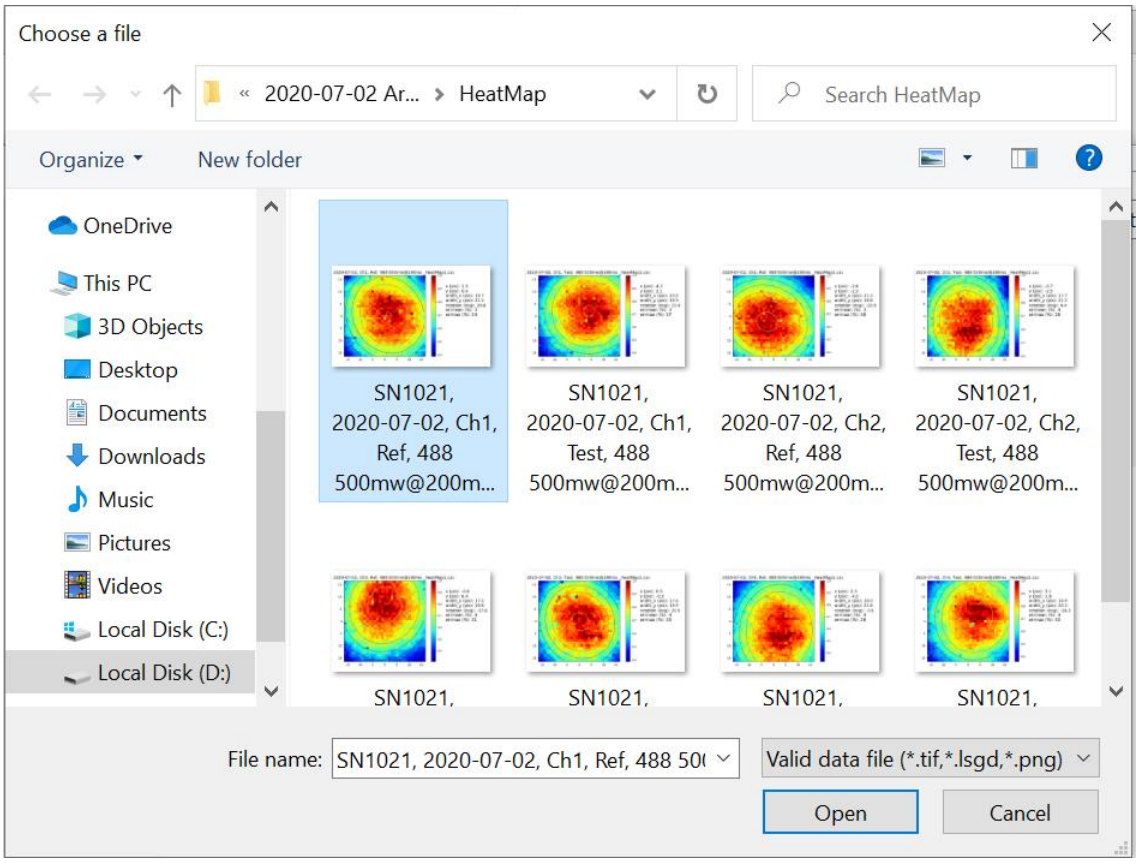
8. If you didn't check 'system info to file name' box, the software doesn't change the data file name and the result png file name doesn't include the system information either. Only slide information is included in the figure title.



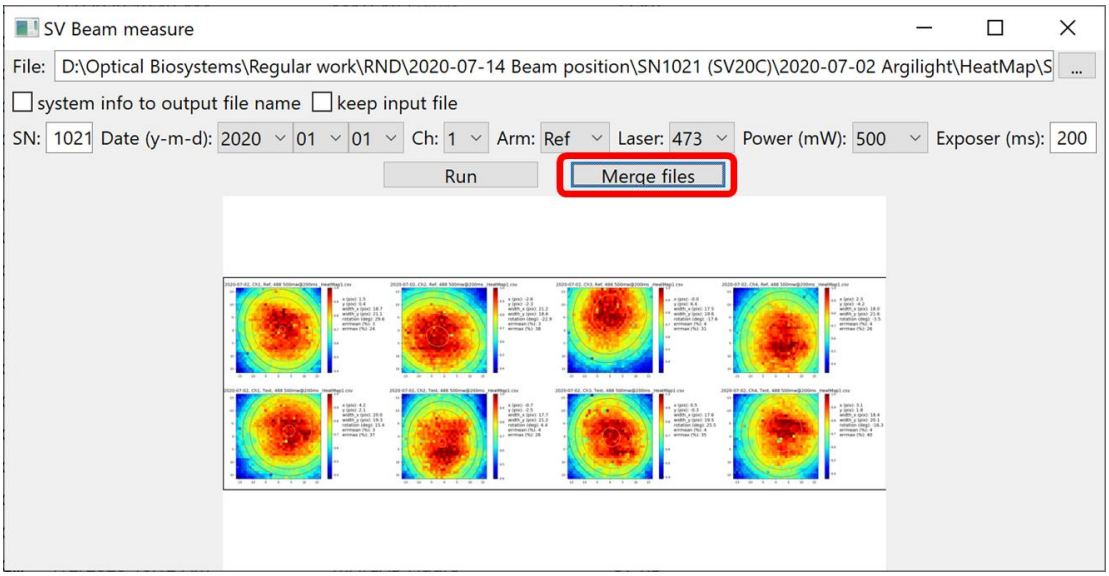
9. If your data file is lsgd file with multiple shots of images, you can find 4 output png files for each channel inside the 'HeatMap' folder.

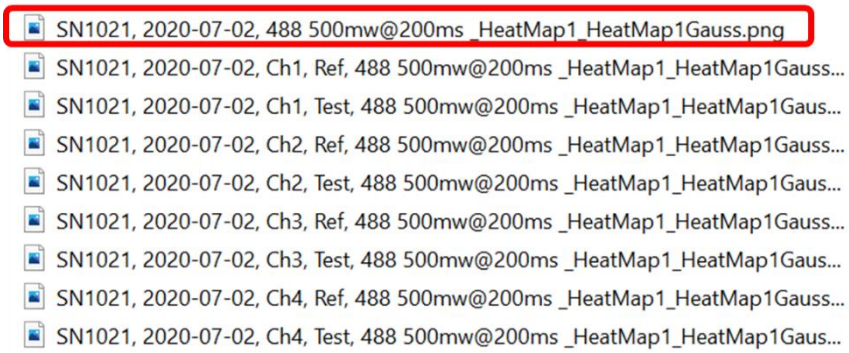
10. After you analyzed all input data files, enter the location where the result data file is located by putting the file path in the text box. You can also click button to open file-choosing dialog, opens, click the result data file, and push 'Open' button. You enter just one file location and software automatically will find and merger related files.



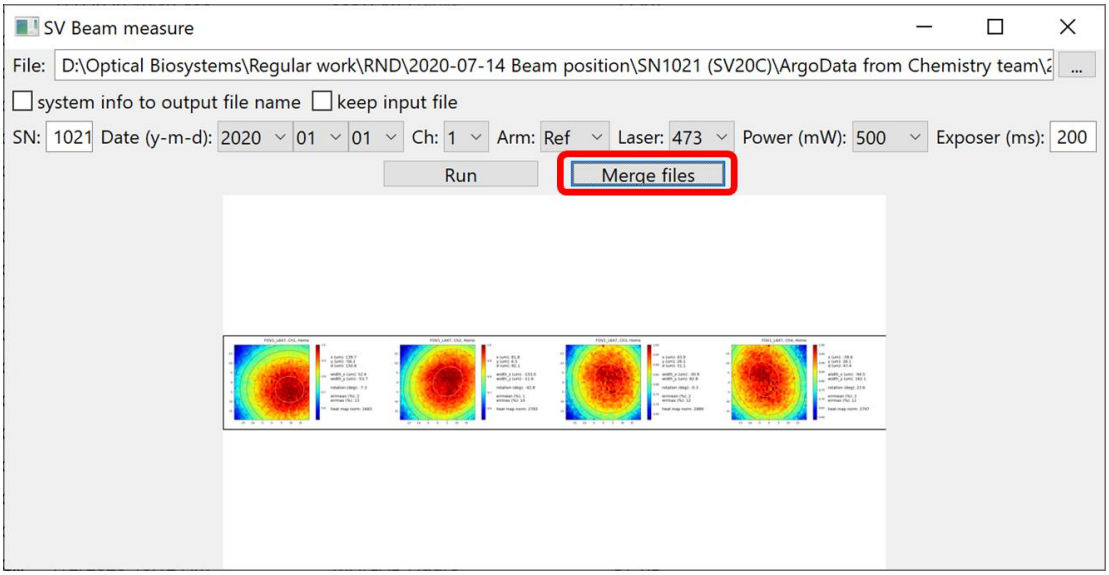


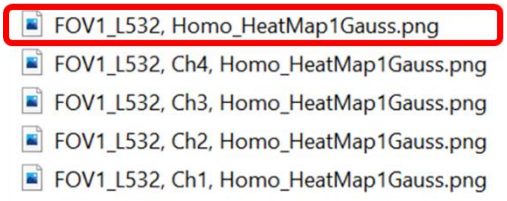
11. Click ‘Run’ button to merge image files into one. Repeat the procedure for other lasers.



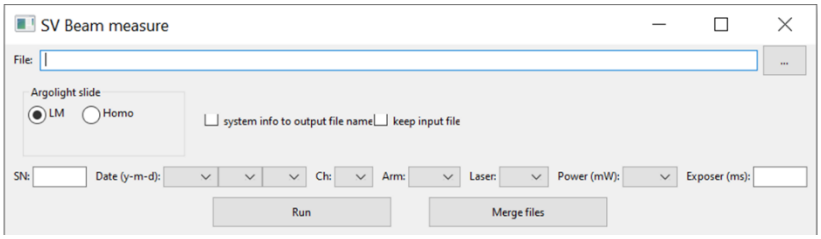


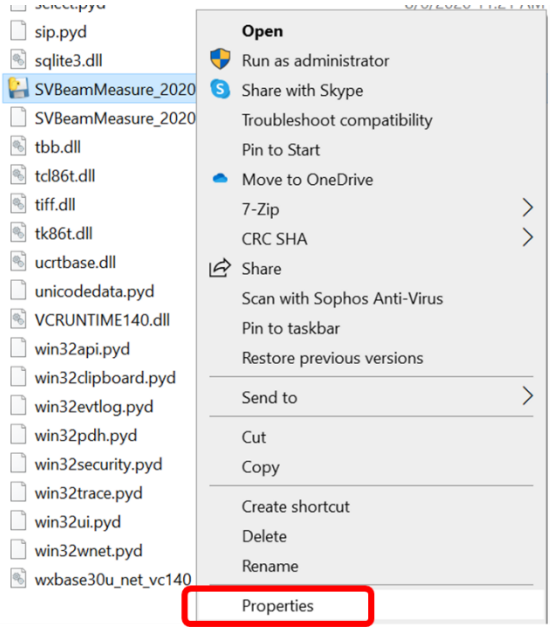
12. For ‘lsgd’ files, the procedure to merge output image files is the same.

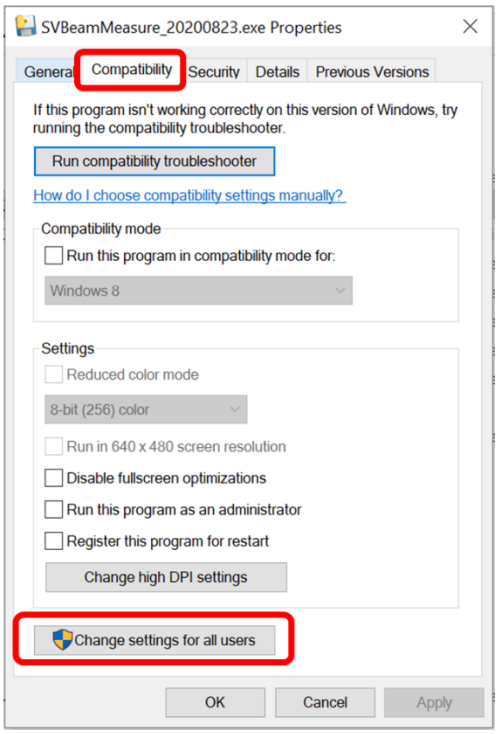


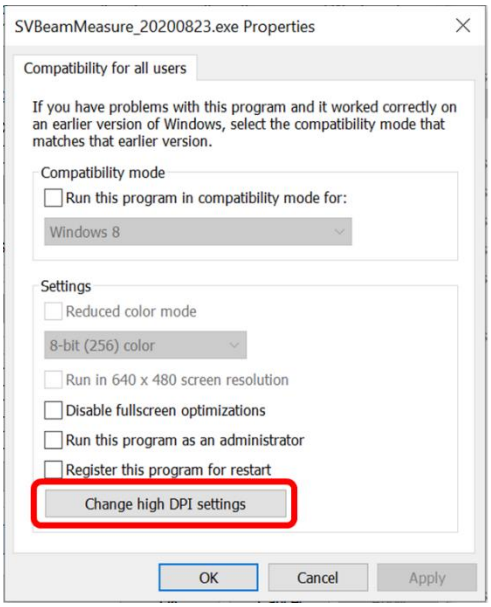


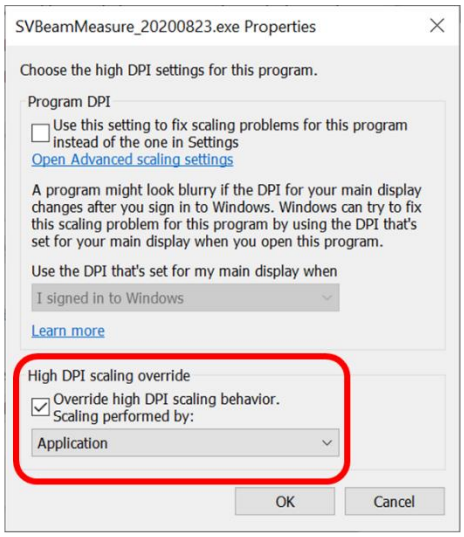
13. With a high-DPI monitor and a certain scaling option, the size of texts and controls may be uncomfortably small. In this case, right-click 'SVBeamMeasure_20201103.exe' file inside the 'SVPython' folder and click 'Properties'. Then change the tab in the top into 'Compatibility' and click 'Change settings for all users' in the bottom. After you click 'Change high DPI settings', you can find 'High DPI scaling override' box in the bottom. Make sure you check 'Override high DPI scaling behavior' and scaling performed by 'Application'. After that, keep select 'OK' button to close windows.

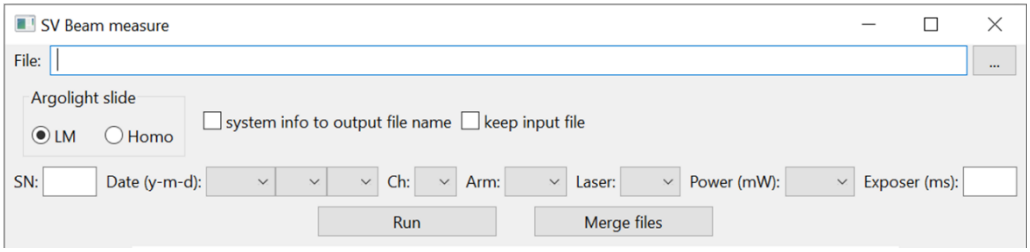







SVBeamMeasure_20200823.exe Properties
Compatibility for all users
If you have problems with this program and it worked correctly on an earlier version of Windows, select the compatibility mode that matches that earlier version.
Compatibility mode
Run this program in compatibility mode for:
Windows 8
Settings
Reduced color mode
8-bit (256) color
Run in 640 x 480 screen resolution
Disable fullscreen optimizations
Run this program as an administrator
Register this program for restart
Change high DPI settings
OK
Cancel
Apply


SVBeamMeasure_20200823.exe Properties
Choose the high DPI settings for this program.
Program DPI
Use this setting to fix scaling problems for this program instead of the one in Settings
Open Advanced scaling settings
A program might look blurry if the DPI for your main display changes after you sign in to Windows. Windows can try to fix this scaling problem for this program by using the DPI that's set for your main display when you open this program.
Use the DPI that's set for my main display when
I signed in to Windows
Learn more
High DPI scaling override
Override high DPI scaling behavior.
Scaling performed by:
Application
OK
Cancel


SV Beam measure
File:
...
Argolight slide
LM
Homo
system info to output file name
keep input file
SN:
Date (y-m-d):
Ch:
Arm:
Laser:
Power (mW):
Exposer (ms):
Run
Merge files