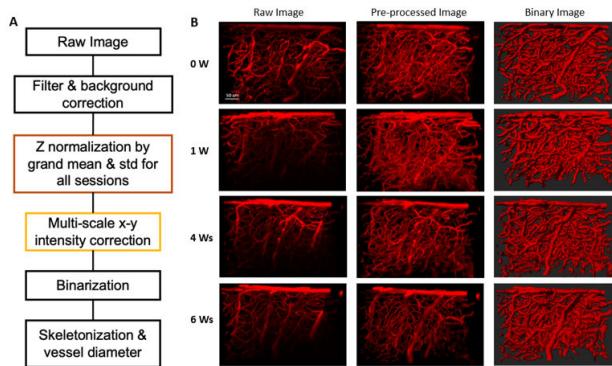


Processing Code for the 2P Data Set

For this code, it will do the Z crop, Z normalization, XY normalization to the well-arranged 2p dataset.

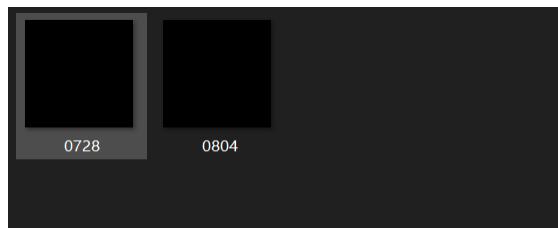
The General processing pipeline is similar like:



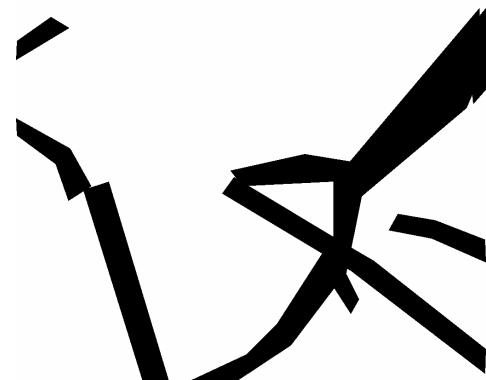
Run the Code:

In order to run the code properly, you need to make sure the input is in the following formate:

1. You should use imagej to do the 3D Guassian filter (sigma = 1), and background subtraction (radius = 50), image Subtraction (Channel 2 - Channel 1), before running this code.
2. Make sure there are three input folders in the directory with the **exactly same** name as 'C1','C2','Mask'.
For 'C1', it will contain the channel one only result from the raw image. For 'C2', it will contain the subtraction results calculated from previous step. For 'Mask', it should contain the big surface vessel and probe that may cause shadow to the deep layers. **All of these files should be .tif format**



Example. Order of the files in channel 1



Example. Mask (disregarded area - black region in figures should be 1, white region is 0)

3. When you run the code, it requires you to enter a directory. It should be the mother folder for the three folders I

mentioned above. You can also change the parameters for the XY normalization in the windows below.

Output from the code:

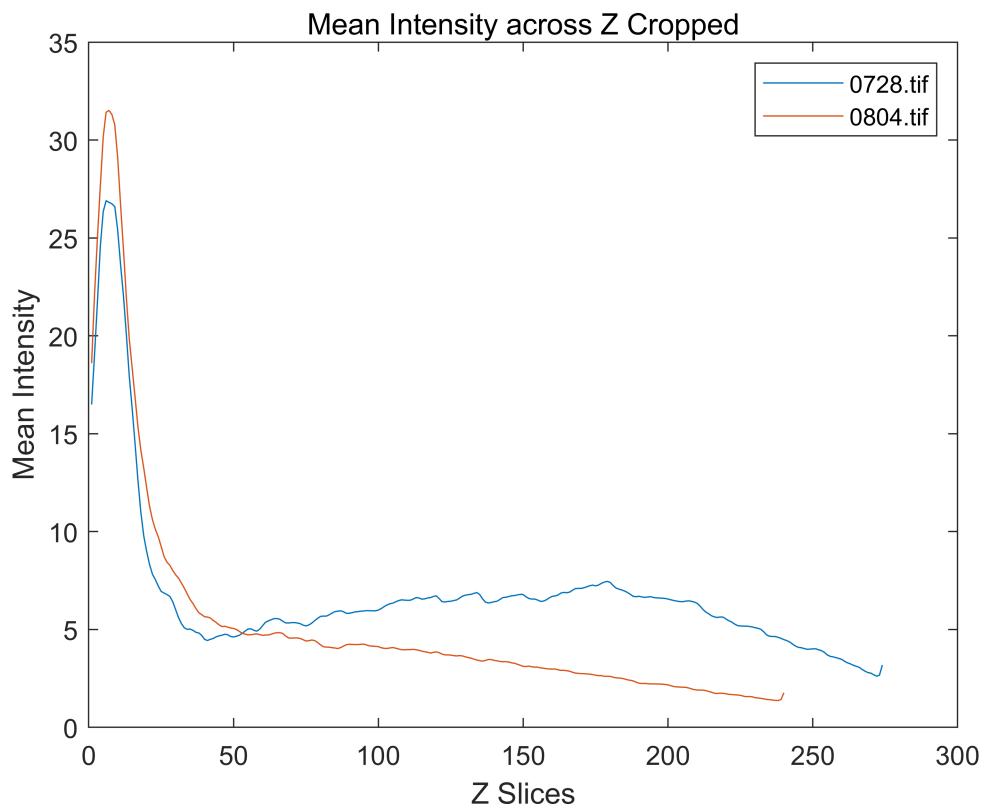
1. It will generate three folders that contains the result. 'Process' folder will contain the processed image stacks in the .tif format.

- Read files

Reading series #1

.....
.....
.....
.....

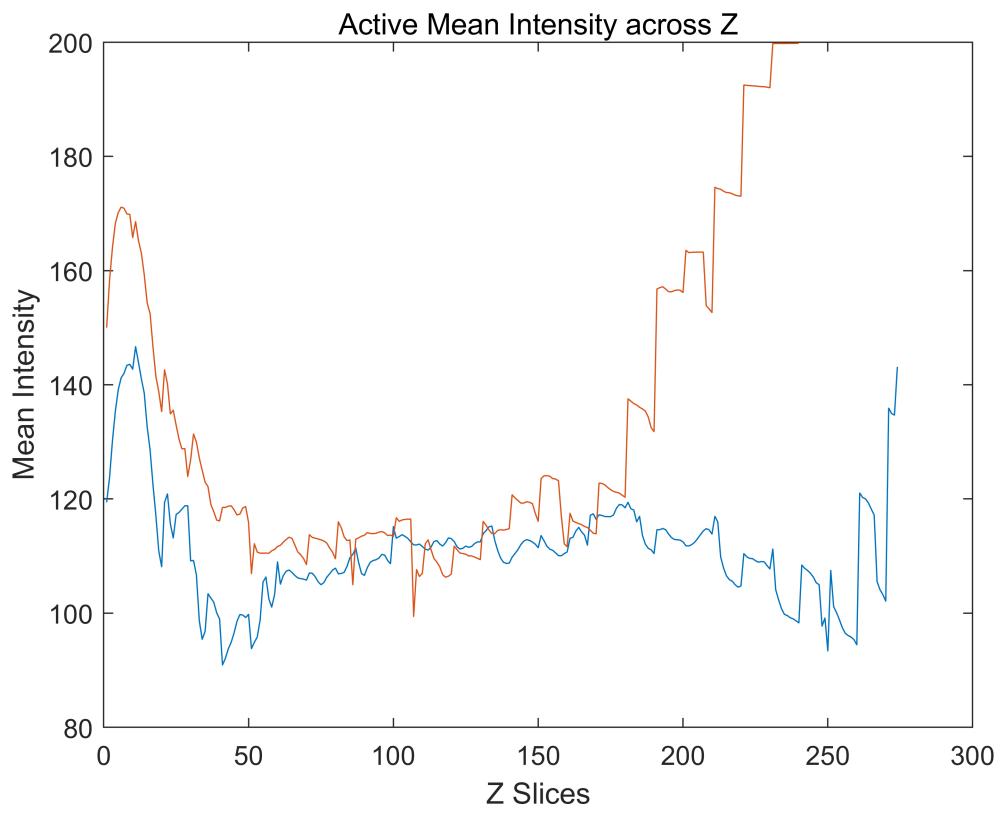
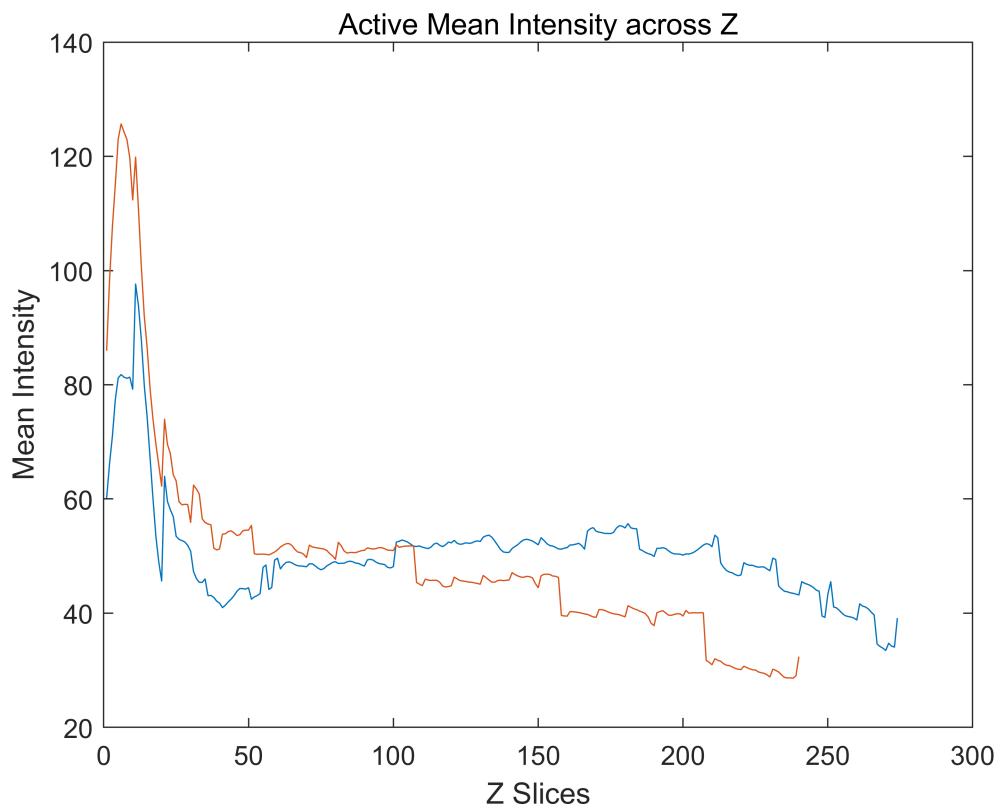
- Draw figures about the mean intensity distribution for the cropped Z results



Z normalization

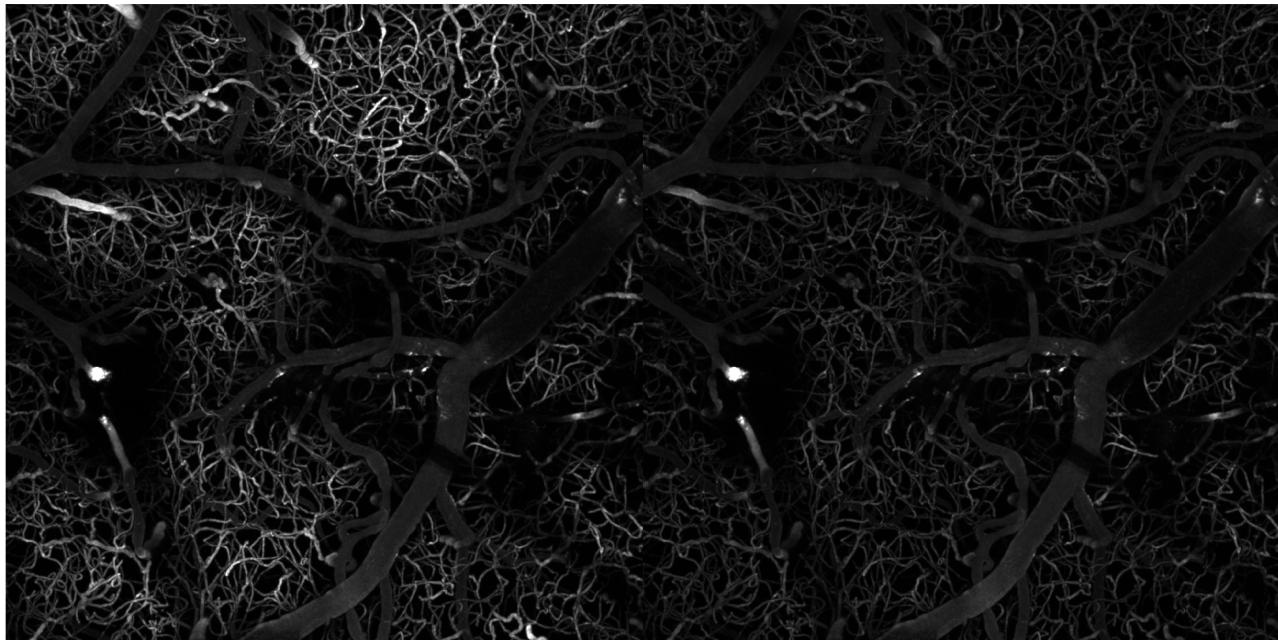
```
Reading series #1  
.  
Reading series #1  
.
```

- draw the active average intensity after Z normalization



Multi-scale x-y intensity correction

0728.tif



0804.tif

