Image 1        Image 2        Image 3
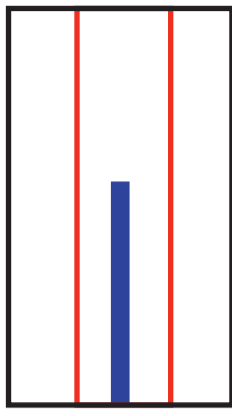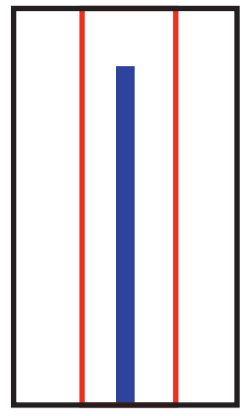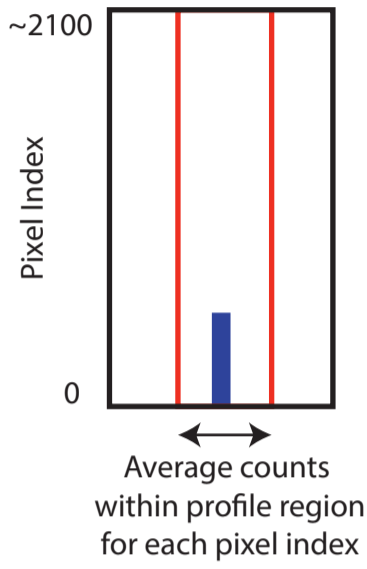
Red box represents the profile region chosen in profile_vs_file_index.ipynb
Blue represents water
Black represents sample

Step 1



~2100

Pixel Index
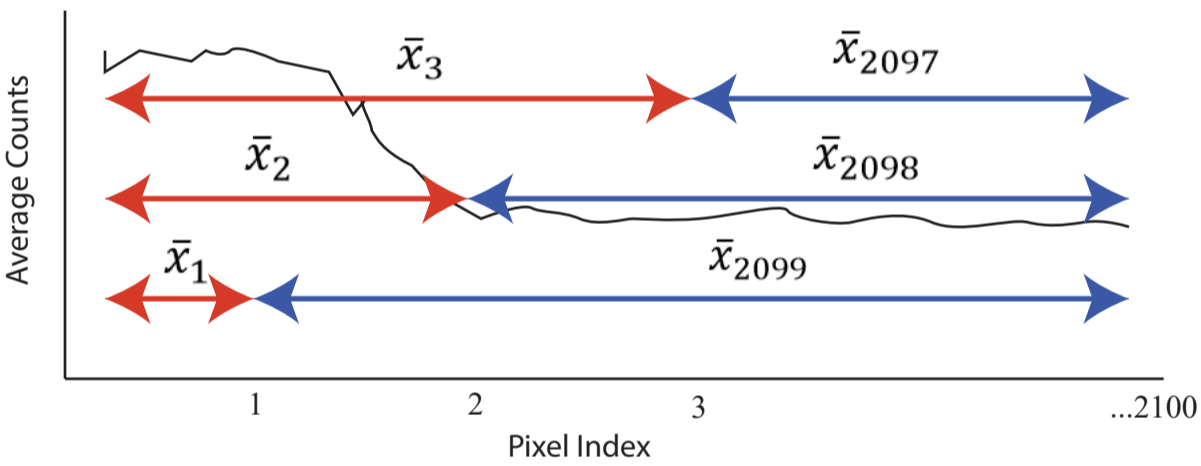
0

Average counts
within profile region
for each pixel index

Output the average counts over profile region versus pixel index with associated time stamp
for each image.

Step 2
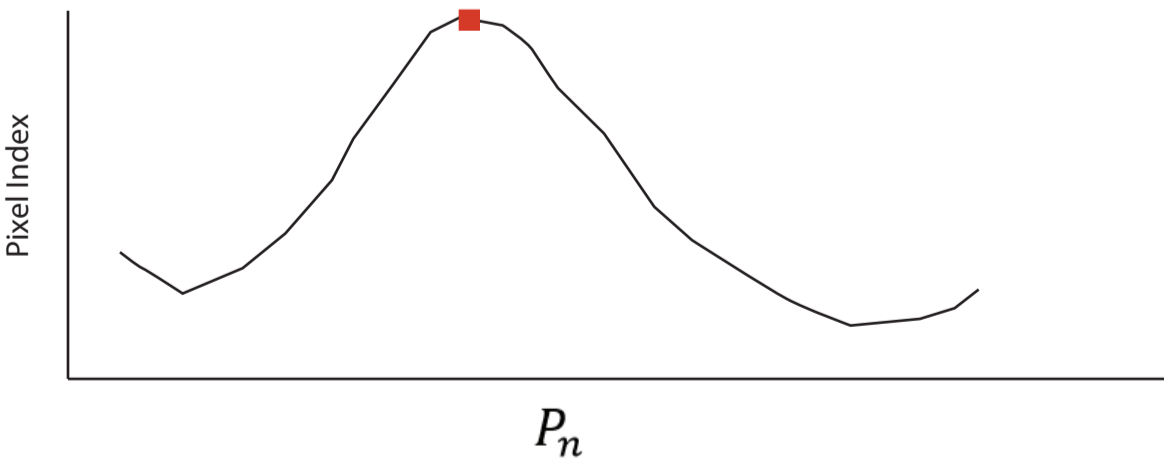For each image take a "sliding" average of the counts.



Where:

$$(\bar{x}_1 - \bar{x}_{2099})^2 = P_1$$

$$(\bar{x}_2 - \bar{x}_{2098})^2 = P_2$$

$$(\bar{x}_3 - \bar{x}_{2097})^2 = P_3$$

The Water Peak Height for each image is defined as the Pixel Index at which $P_n$ is the highest



$P_n$

| | Time Stamp | Pixel Index at highest $P_n$ |
|---|---|---|
| Image 1 | | |
| Image 2 | | |
| Image ... | | |