

Workspace

Base

Name	Value
activatedata	<56x1 cell>
maxis	<8x8 char>

Command Window

>>

This tutorial contains navigation buttons that enable you to move throughout the tutorial.

Please use the navigation buttons and not the page up/page down or arrow keys to navigate through the tutorials.

This is the 'Next' button. It takes you to the next frame or stop point.



This is the 'Previous' button. It takes you to the previous frame or stop point.



This is the 'Go to frame' button. It takes you to a specified frame.



This is the 'Go to URL' button. It takes you to a website link.



Press the 'Next' button below to start this tutorial.



3D Tools

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is box before
vie.

ice Movie

ice Movie

ice Movie

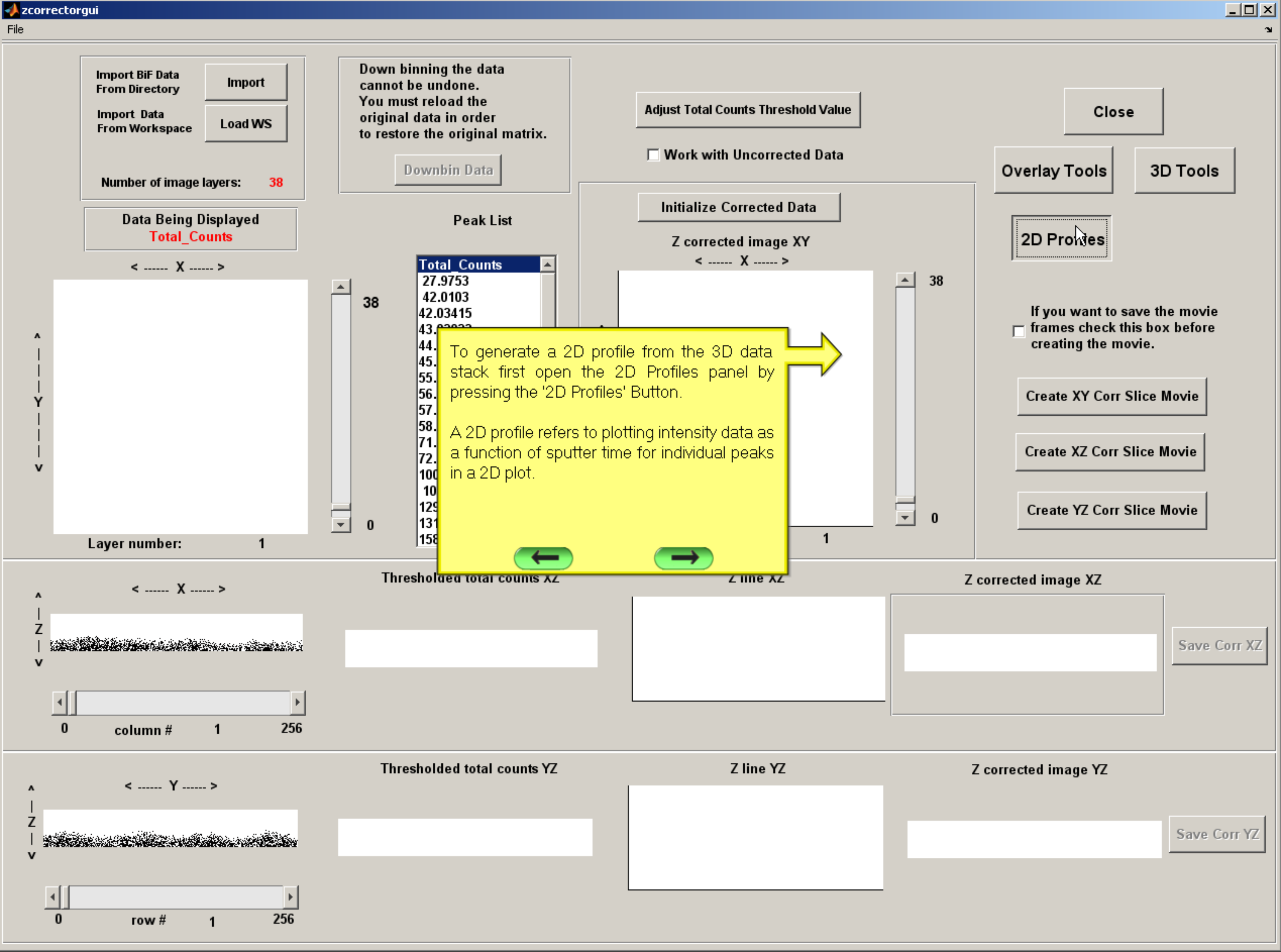
Save Corr XZ

Save Corr YZ

Command History

Start

OVR



Sputtertime/layer sec

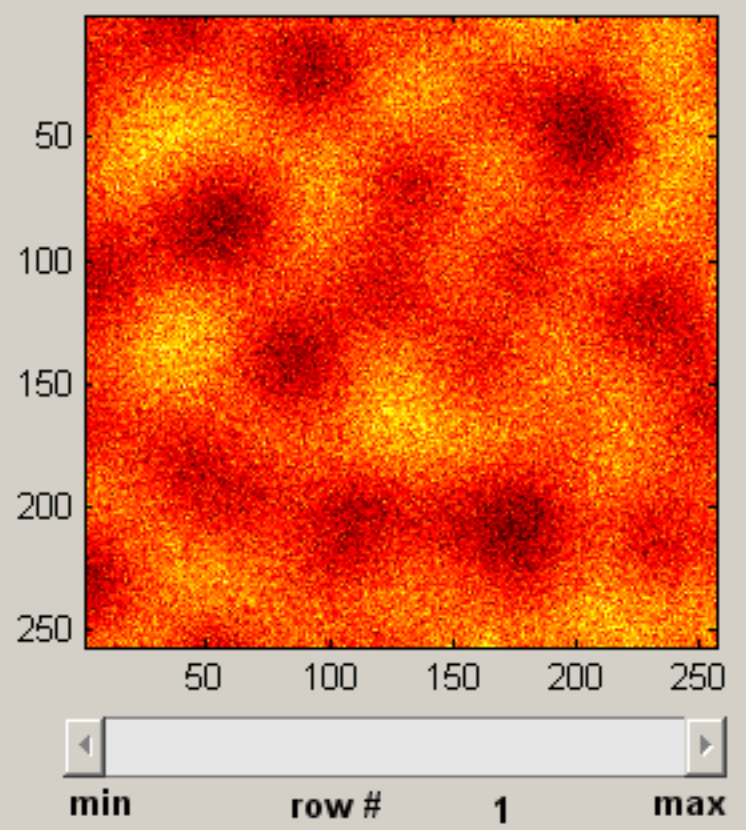
Choose Profile Type

Choose One

Set Start Point

Set ROI

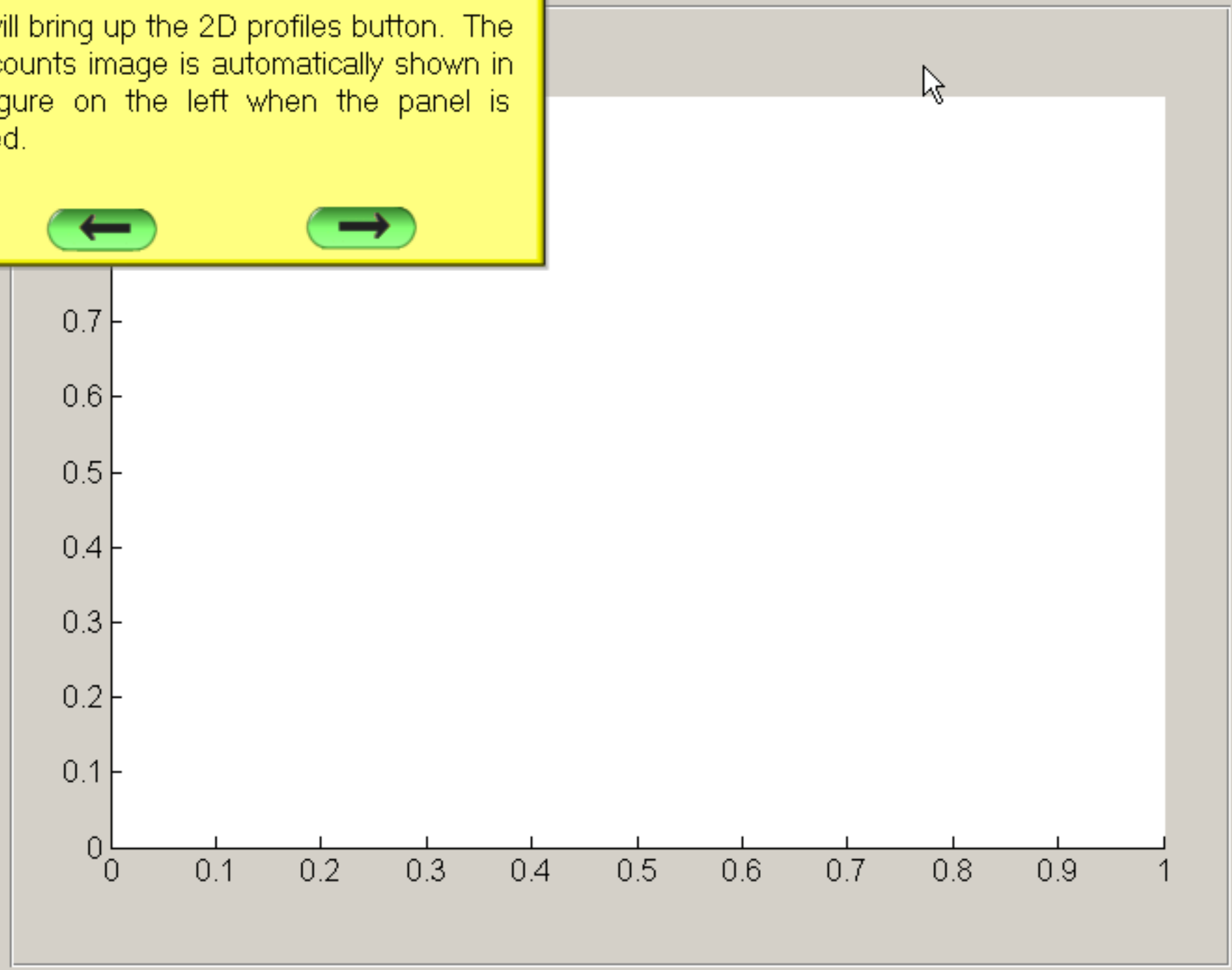
Close



Peaks

Total_Counts
27.9753
42.0103
42.03415
43.02023
44.04944
45.03426
55.01973
56.03308
57.03631
58.06652
71.07748
72.08701
100.0151
101.027
129.0256
131.0426
158.1276

This will bring up the 2D profiles button. The total counts image is automatically shown in the figure on the left when the panel is opened.



Save Plot

Ext Plot

Export Data

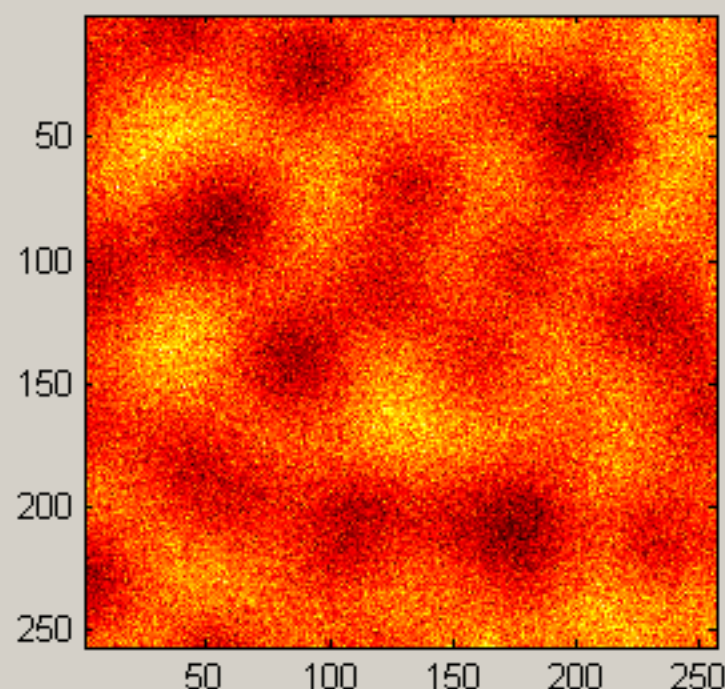
Sputtertime/layer sec

Choose Profile Type

Choose One

Set Start Point

Set ROI



max

row #
1

min

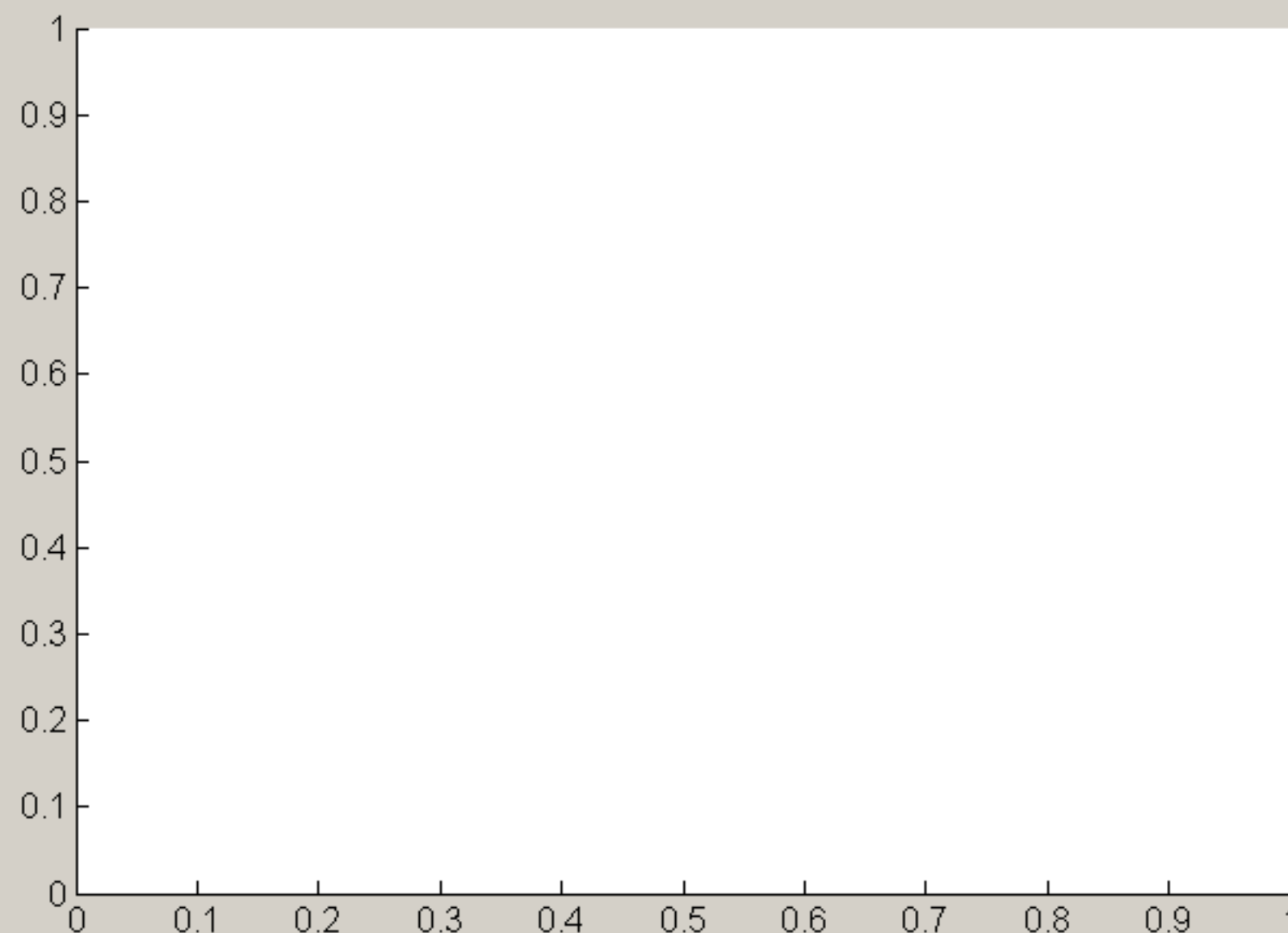
Peaks

Total_Counts

27.9753
42.0103
42.03415
43.02023
44.04944
45.03426
55.01973
56.03308
57.03631
58.06652
71.07748
72.08701
100.0151
101.027
129.0256
131.0426
158.1276

Enter the time sputter time per layer in seconds in this box.

Close



Save Plot

Ext Plot

Export Data

Sputtertime/layer sec

Close

Choose Profile Type

Choose One

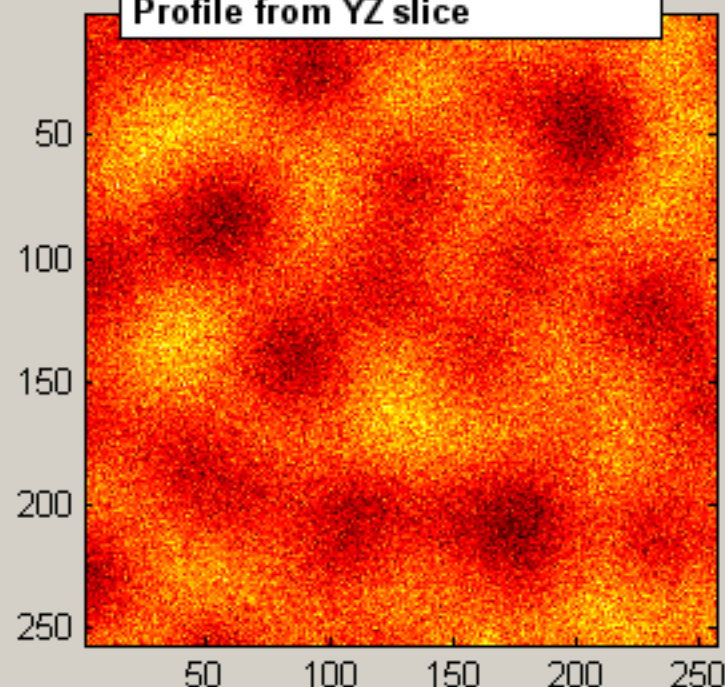
Choose One

Profile from full XY slices

Profile from ROI

Profile from XZ slice

Profile from YZ slice



Use this drop down menu to choose which type of profile you want to create.

You have a choice of:

Profile from Full XY Slices

This is the same as a standard 2D depth profile showing the peak intensities from the scanned area as a function of depth.

Profile from ROI

This allows you to generate a 2D profile from a selected region of interest. Only the data within the ROI is used to generate the profile.

Profile from XZ slice

This generates a 2D profile from only the selected XZ slice

Profile from YZ slice

This generates a 2D profile from only the selected YZ slice.



Save Plot

Ext Plot

Export Data

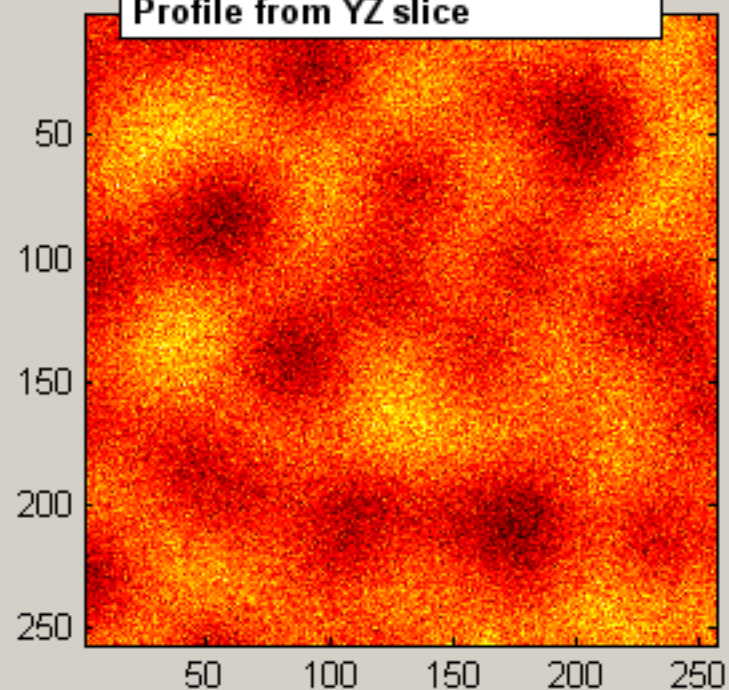
Sputtertime/layer 5 sec

Close

Choose Profile Type

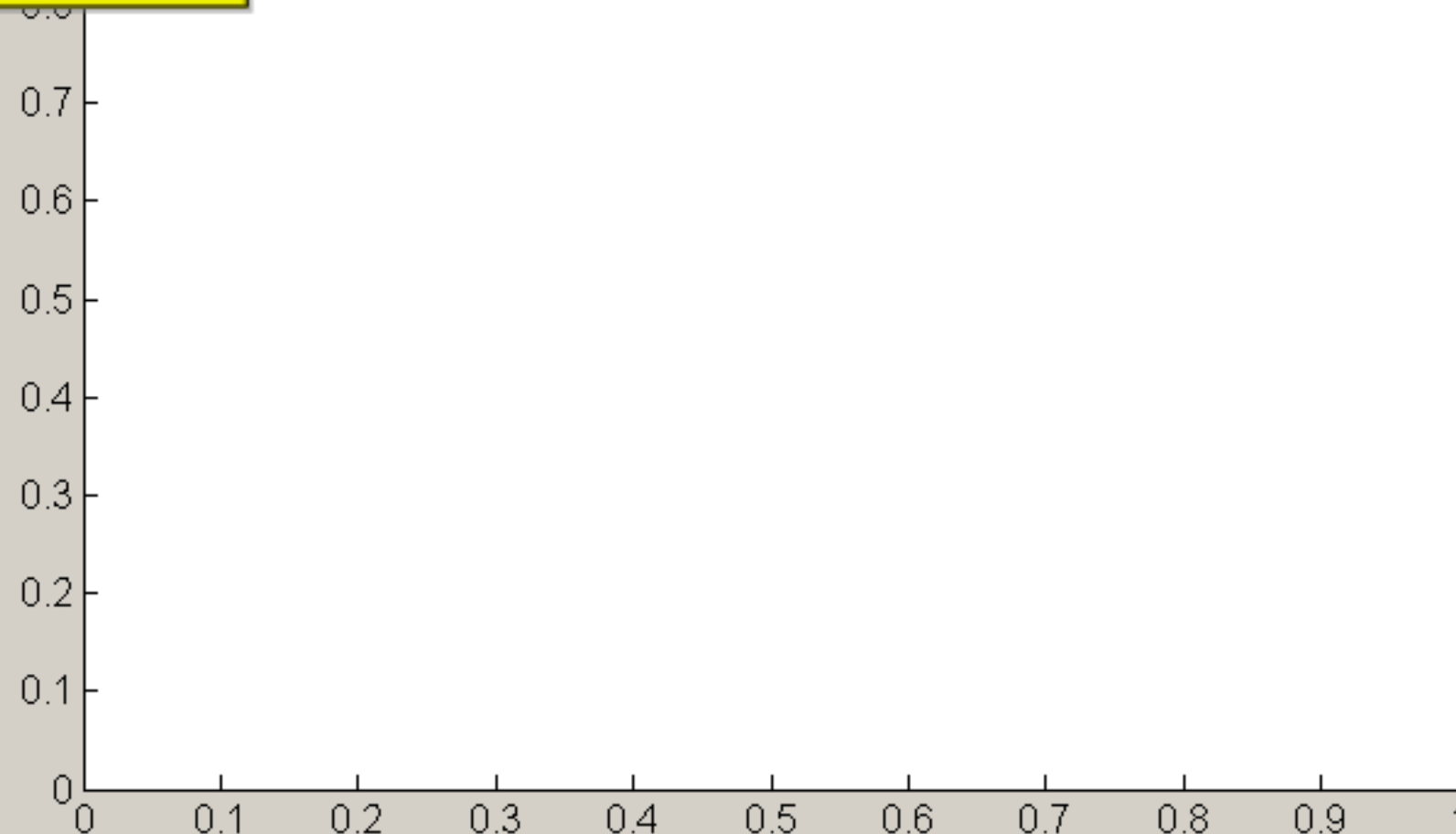
- Choose One
- Choose One
- Profile from full XY slices
- Profile from ROI
- Profile from XZ slice
- Profile from YZ slice

First let's look at a full XY slice profile.



row #
1

27.9753
42.0103
42.03415
43.02023
44.04944
45.03426
55.01973
56.03308
57.03631
58.06652
71.07748
72.08701
100.0151
101.027
129.0256
131.0426
158.1276



Save Plot

Ext Plot

Export Data

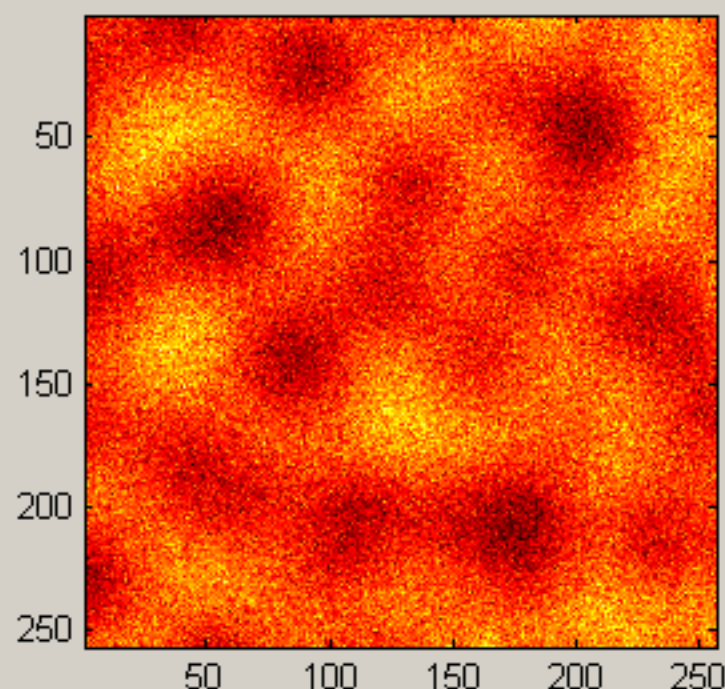
Sputtertime/layer sec

Choose Profile Type

Profile from full XY slices

Set Start Point

Set ROI



max
row #
1
min

Peaks	
Total	Counts
27.9753	
42.0103	
42.03415	
43.02023	
44.04944	
45.03426	
55.01973	
56.03308	
57.03631	
58.06652	
71.07748	
72.08701	
100.0151	
101.027	
129.0256	
131.0426	
158.1276	

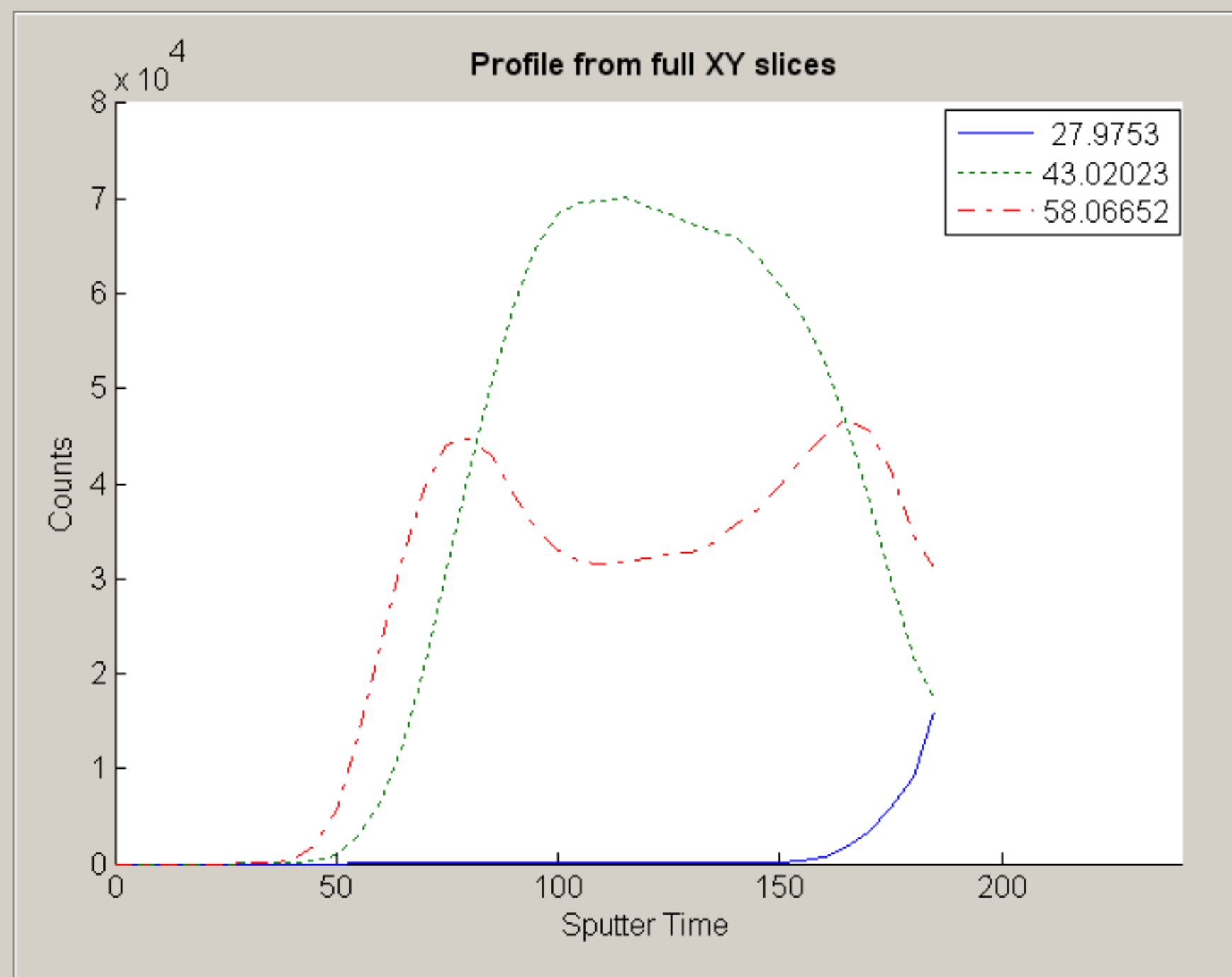
To create a profile plot, simply select the peaks you want in the plot. You can select multiple peaks using the 'ctrl' and 'shift' keys.

Selected peaks are automatically added to the plot and the legend is updated.

To remove a peak simply de-select it.



Close



Save Plot

Ext Plot

Export Data

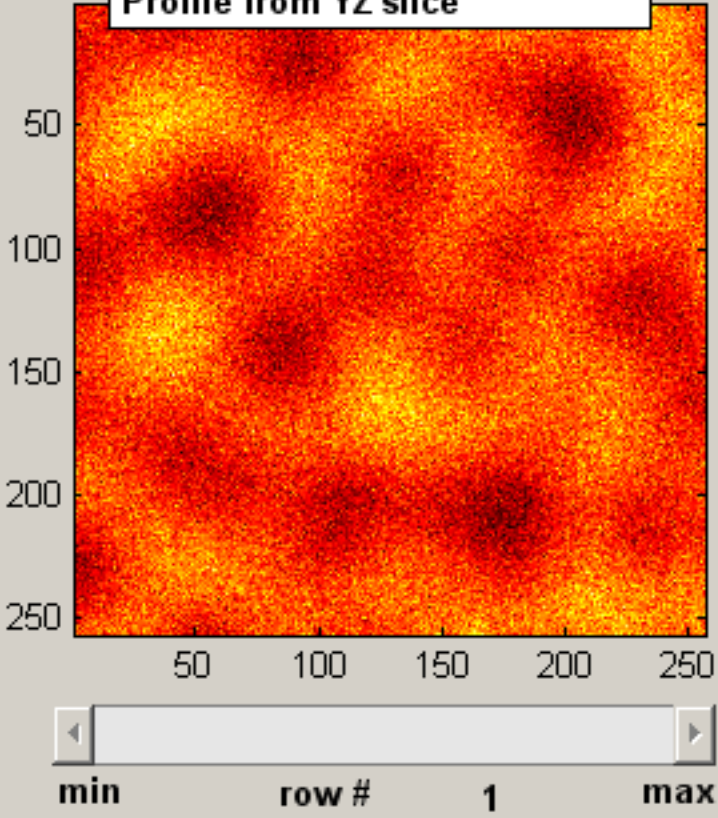
Sputtertime/layer 5 sec

Close

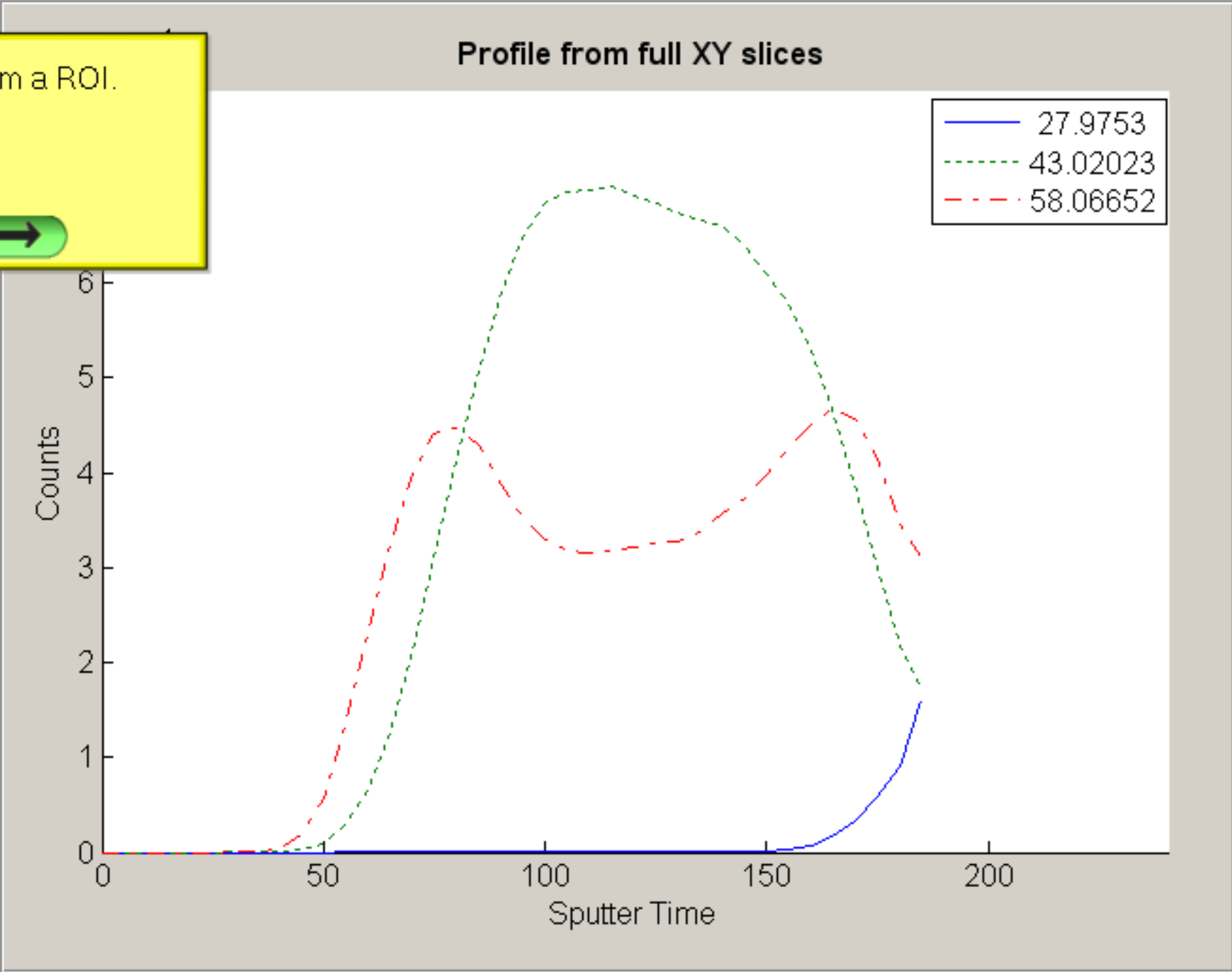
Choose Profile Type

- Profile from full XY slices
- Choose One
- Profile from full XY slices
- Profile from ROI
- Pofile from XZ slice
- Profile from YZ slice

Now let's create a profile plot from a ROI.



row #	42.0103
1	42.03415
	43.02023
	44.04944
	45.03426
	55.01973
	56.03308
	57.03631
	58.06652
	71.07748
	72.08701
	100.0151
	101.027
	129.0256
	131.0426
	158.1276



Save Plot

Ext Plot

Export Data

Sputtertime/layer sec

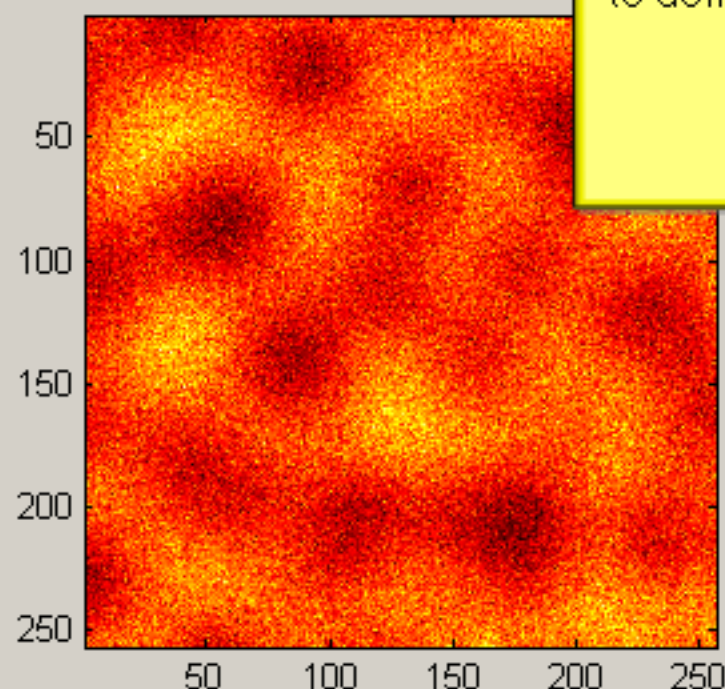
Close

Choose Profile Type

Profile from ROI

Set Start Point

After selecting 'Profile from ROI' in the drop down menu, press the 'Set Start Point' button to define where you want to start the ROI.

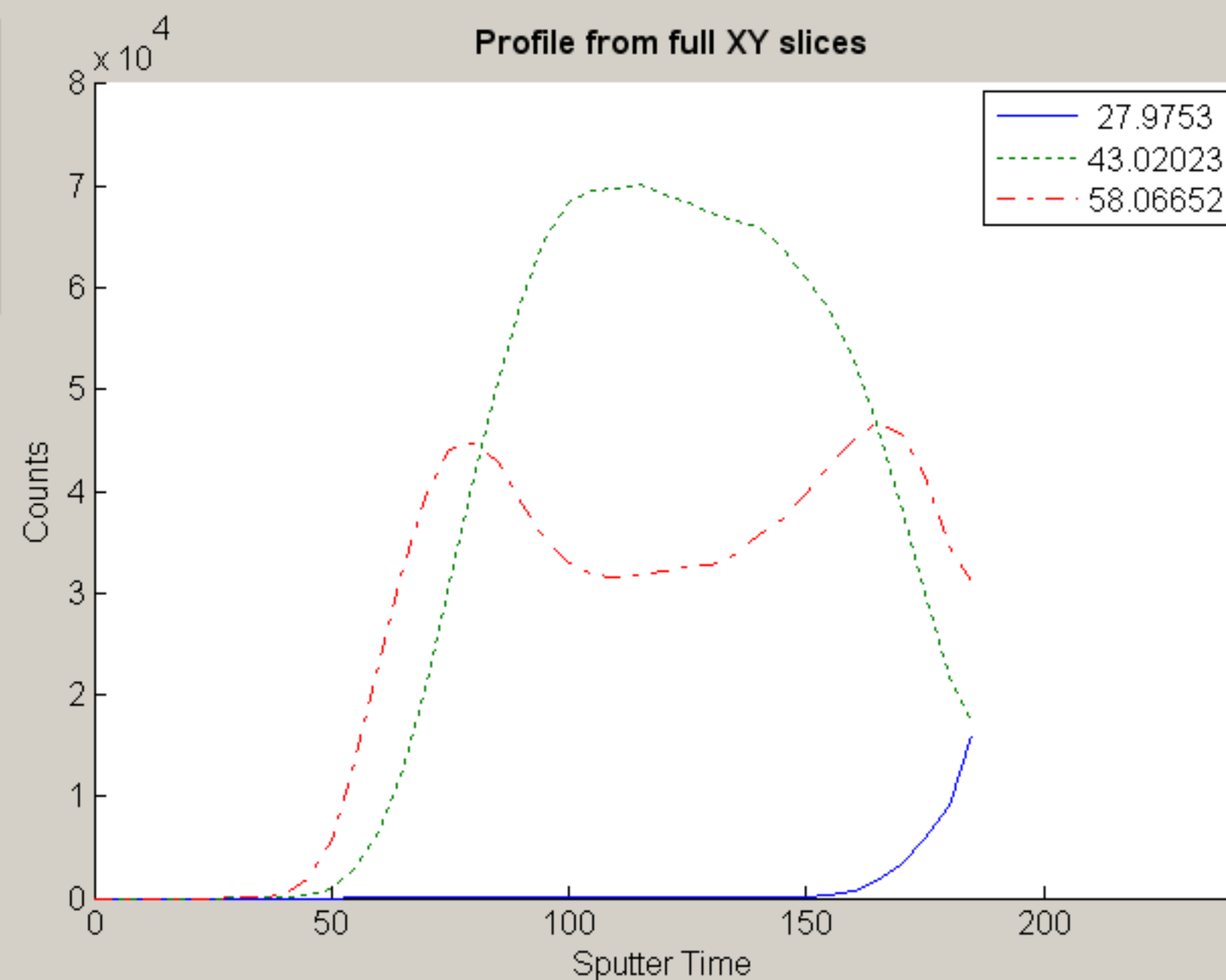


row #
1

42.03415
43.02023
44.04944
45.03426
55.01973
56.03308
57.03631
58.06652
71.07748
72.08701
100.0151
101.027
129.0256
131.0426
158.1276

min

min row # 1 max



Save Plot

Ext Plot

Export Data

Sputtertime/layer sec

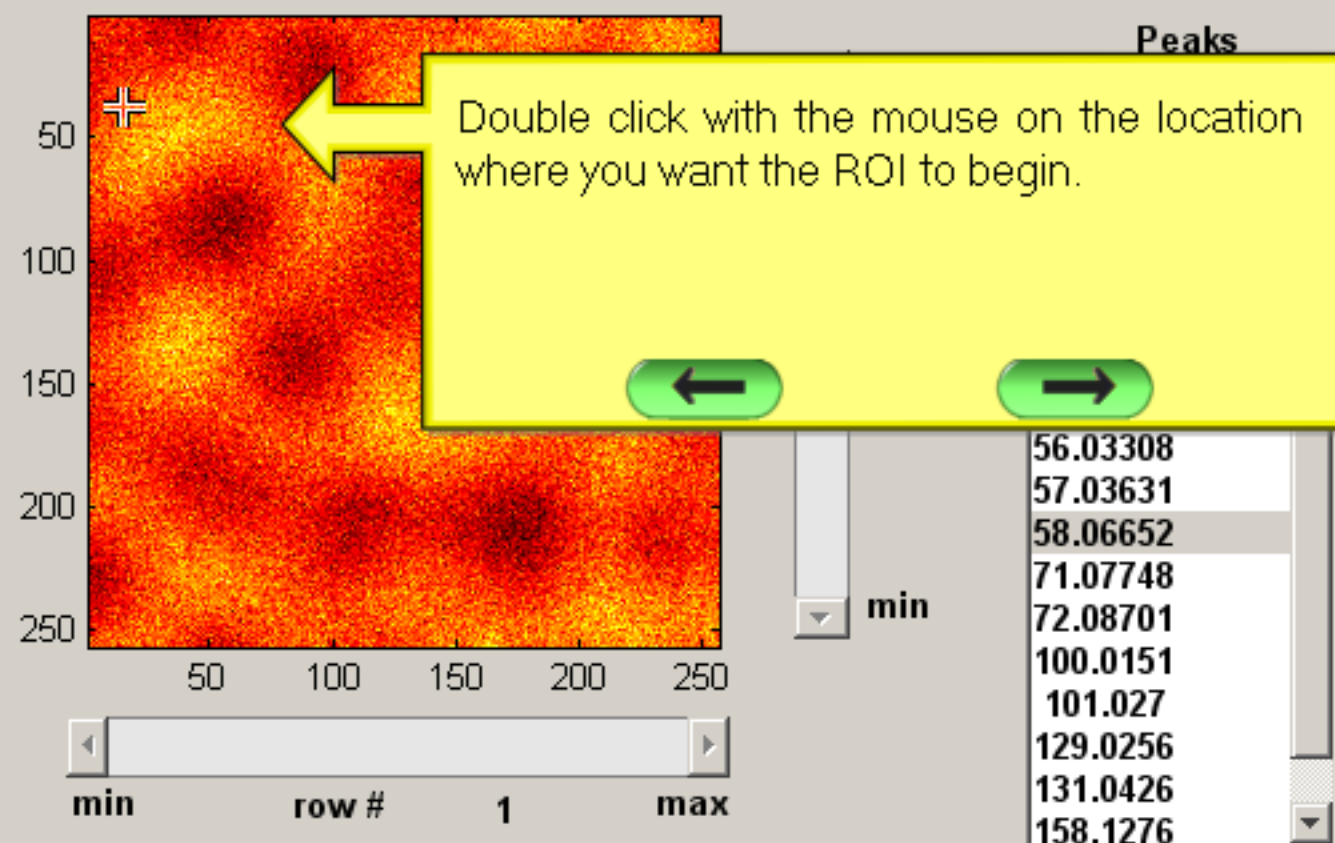
Choose Profile Type

Profile from ROI

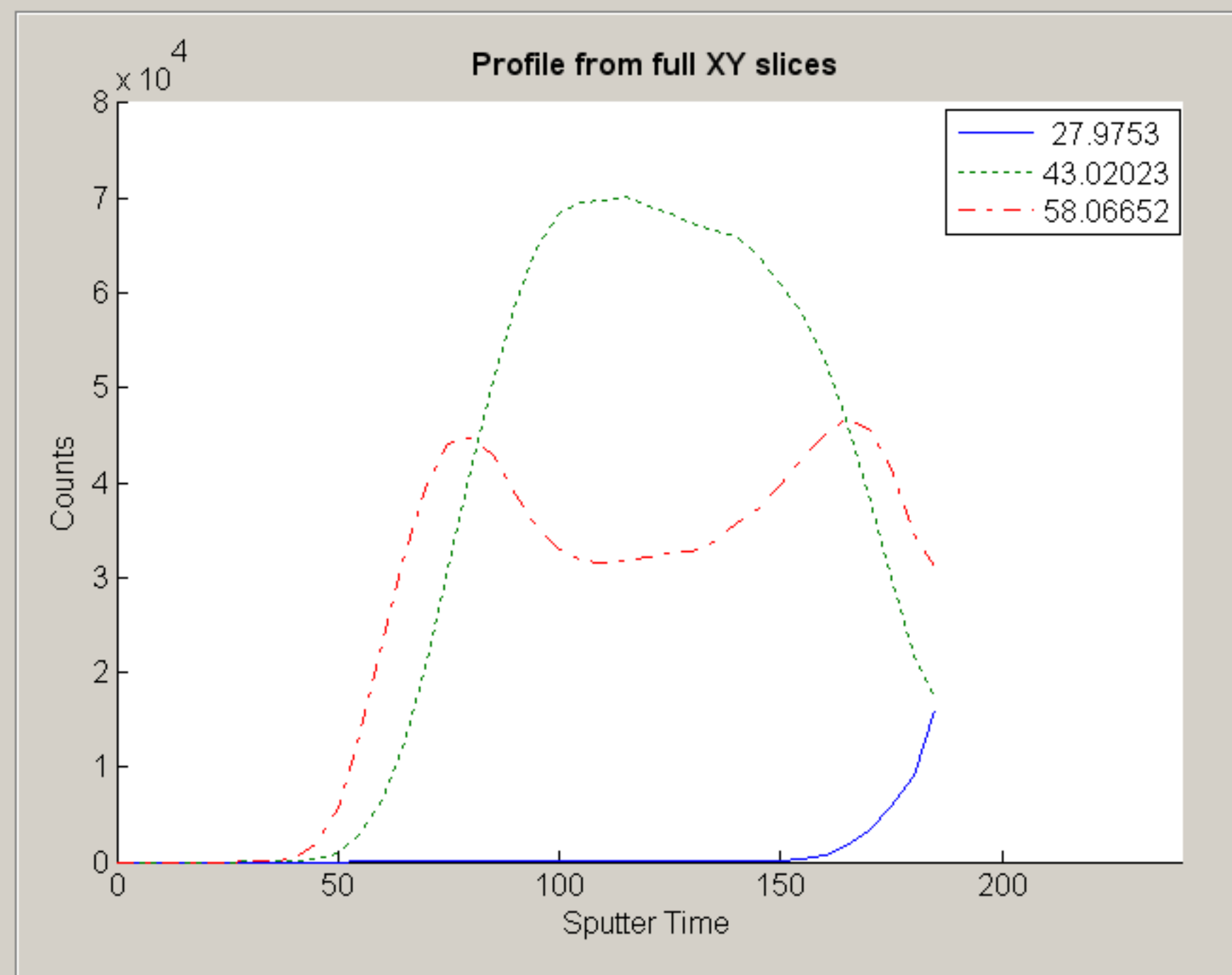
Set Start Point

Set ROI

Double click with LEFT mouse button



Close



Save Plot

Ext Plot

Export Data

Sputtertime/layer sec

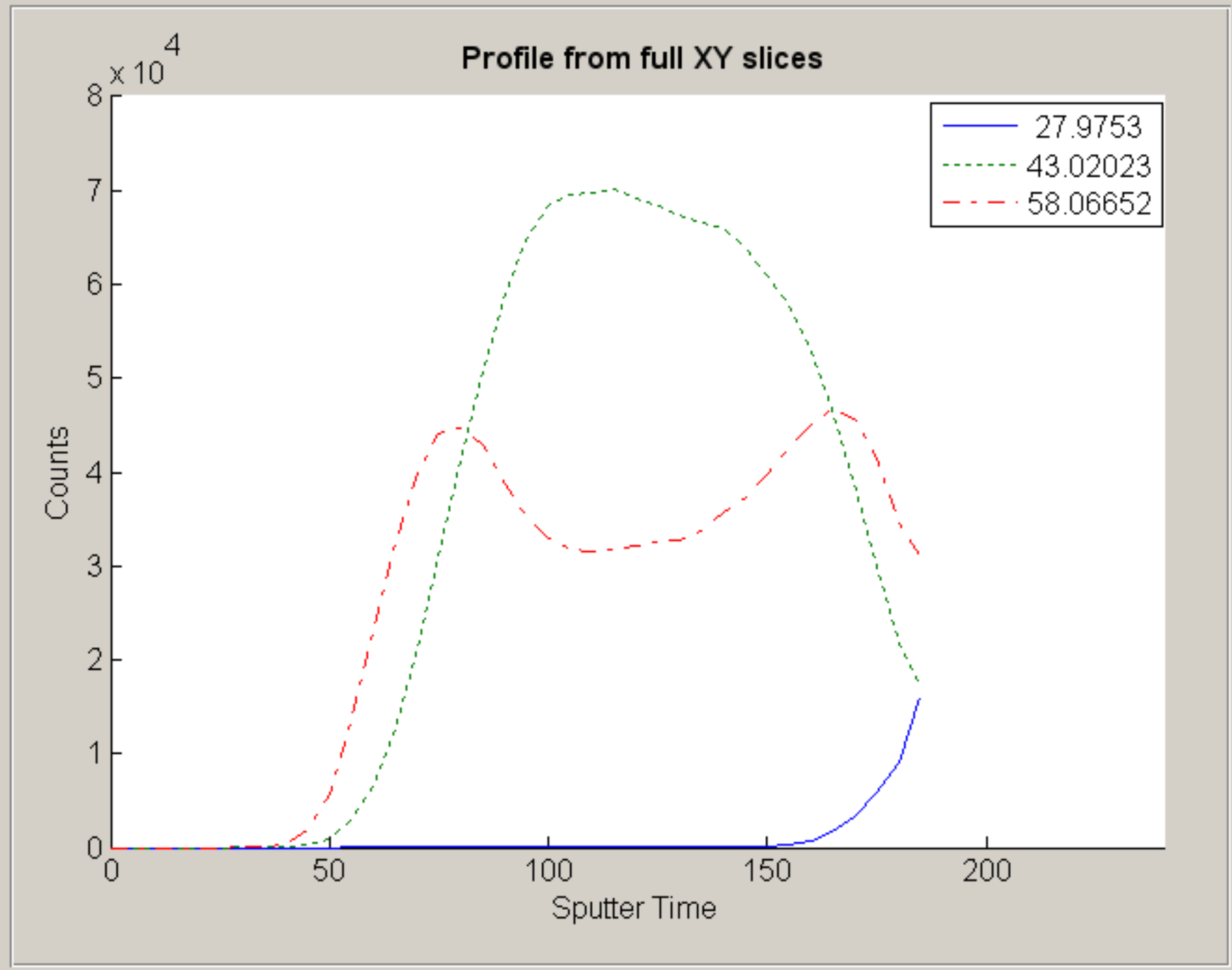
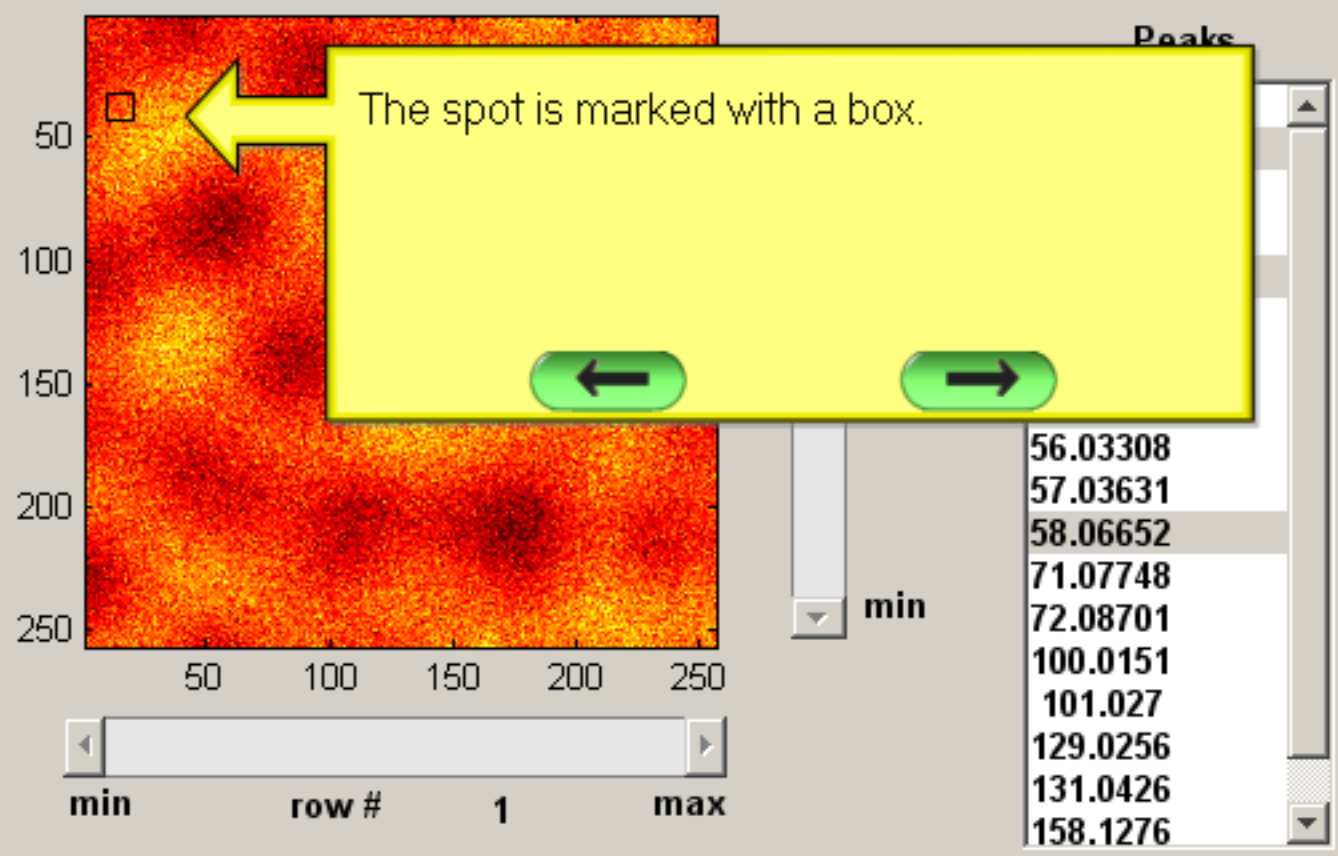
Close

Choose Profile Type

Profile from ROI

Set Start Point

Set ROI



Save Plot

Ext Plot

Export Data

Sputtertime/layer sec

Close

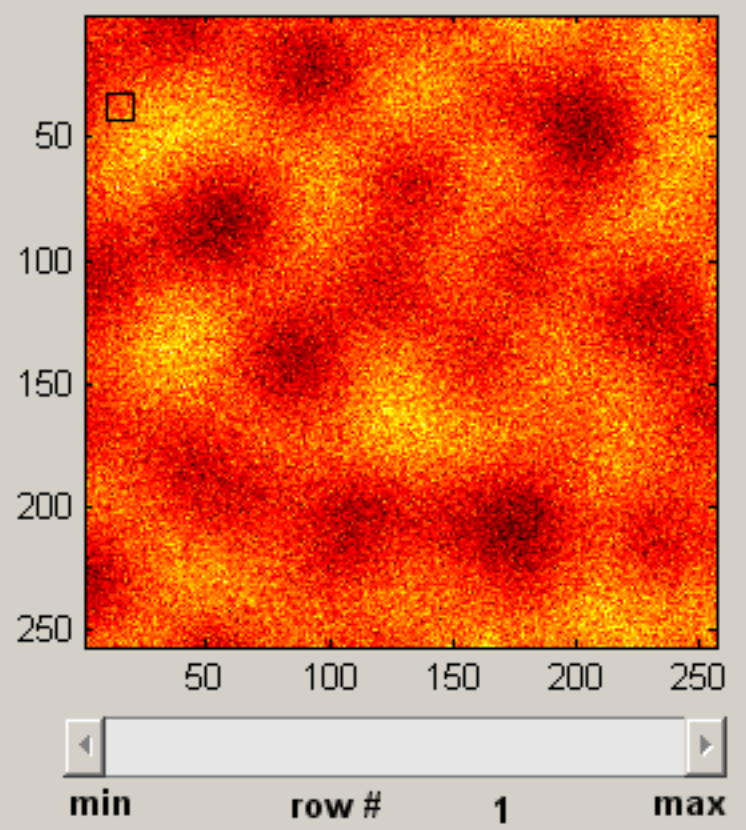
Choose Profile Type

Profile from ROI

Set Start Point

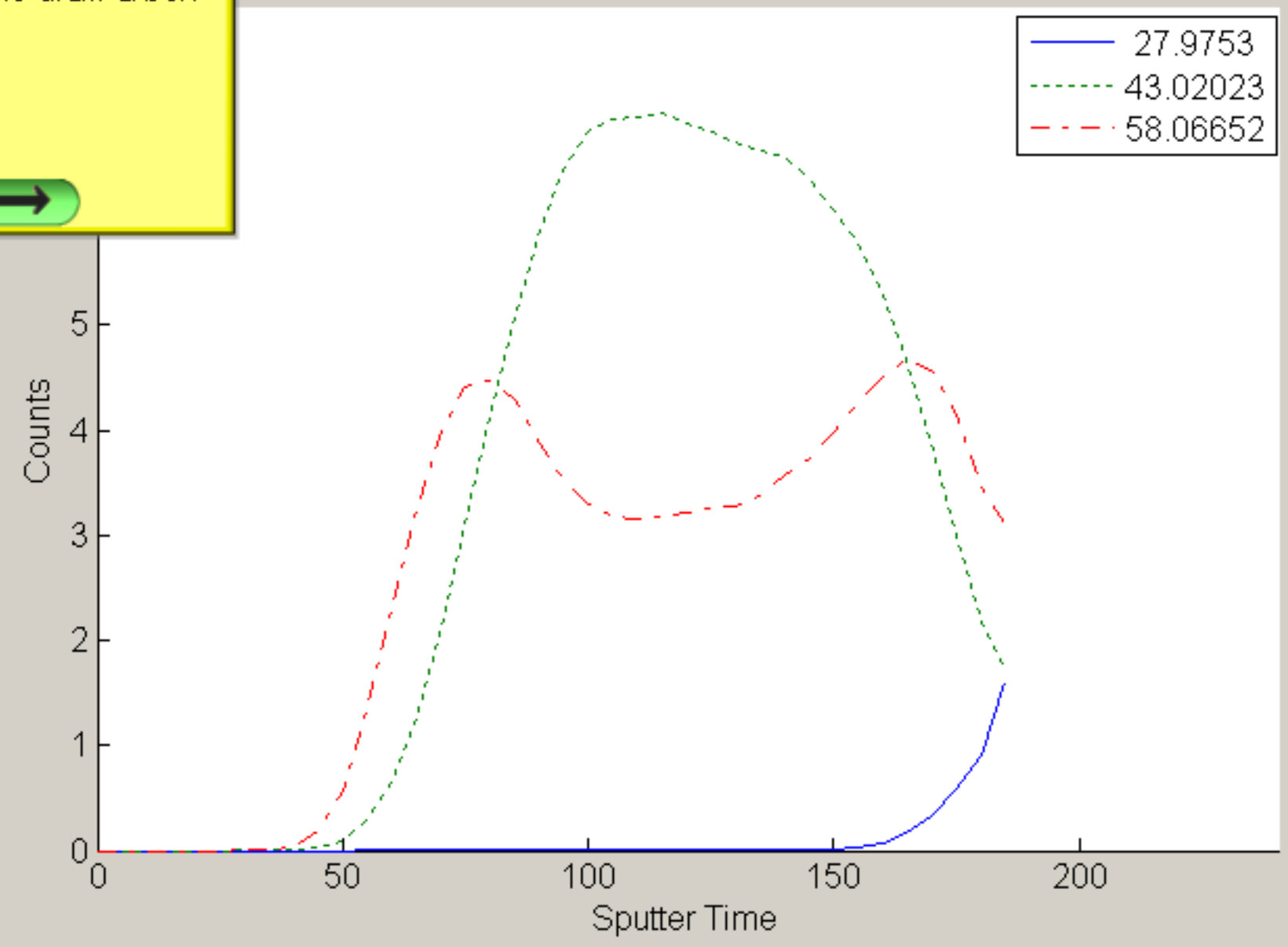
Set ROI

Now press the 'Set ROI' button to draw a box around the desired ROI.



row #	42.03415
1	43.02023
	44.04944
	45.03426
	55.01973
	56.03308
	57.03631
	58.06652
	71.07748
	72.08701
	100.0151
	101.027
	129.0256
	131.0426
	158.1276

Profile from full XY slices



Save Plot

Ext Plot

Export Data

Sputtertime/layer sec

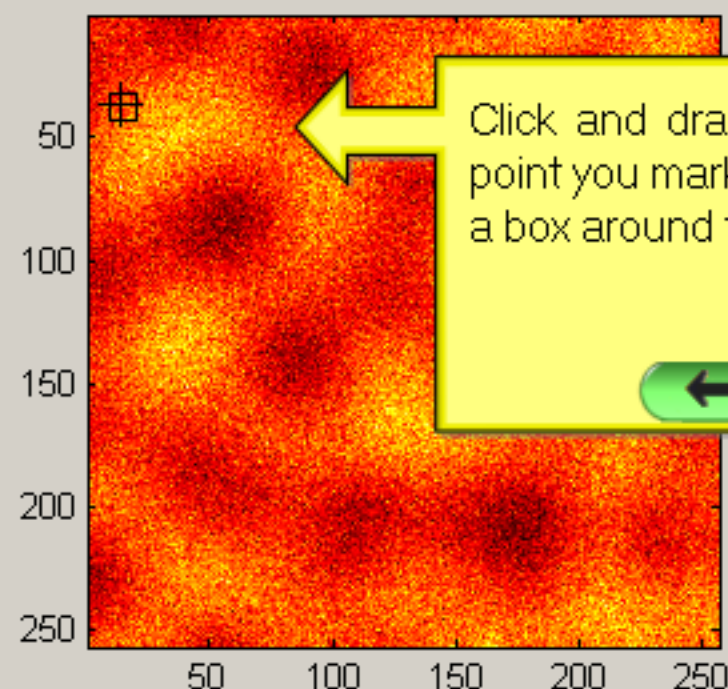
Choose Profile Type

Profile from ROI

Set Start Point

Set ROI

Click and drag with Right mouse button



Peaks

Click and drag on the image starting at the point you marked in the previous step to draw a box around the region you want for the ROI.

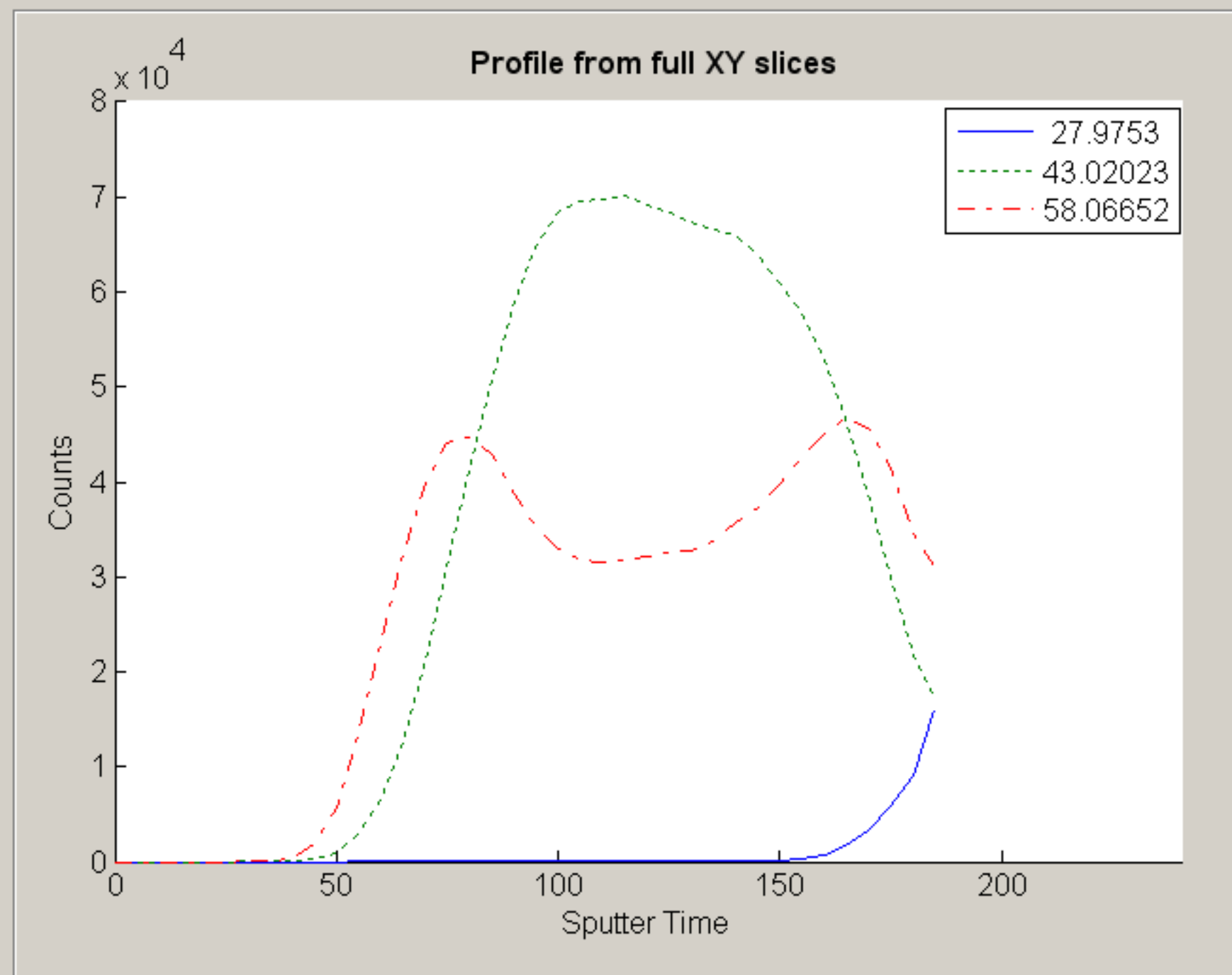


56.03308
57.03631
58.06652
71.07748
72.08701
100.0151
101.027
129.0256
131.0426
158.1276

min

min row # 1 max

Close



Save Plot

Ext Plot

Export Data

Sputtertime/layer sec

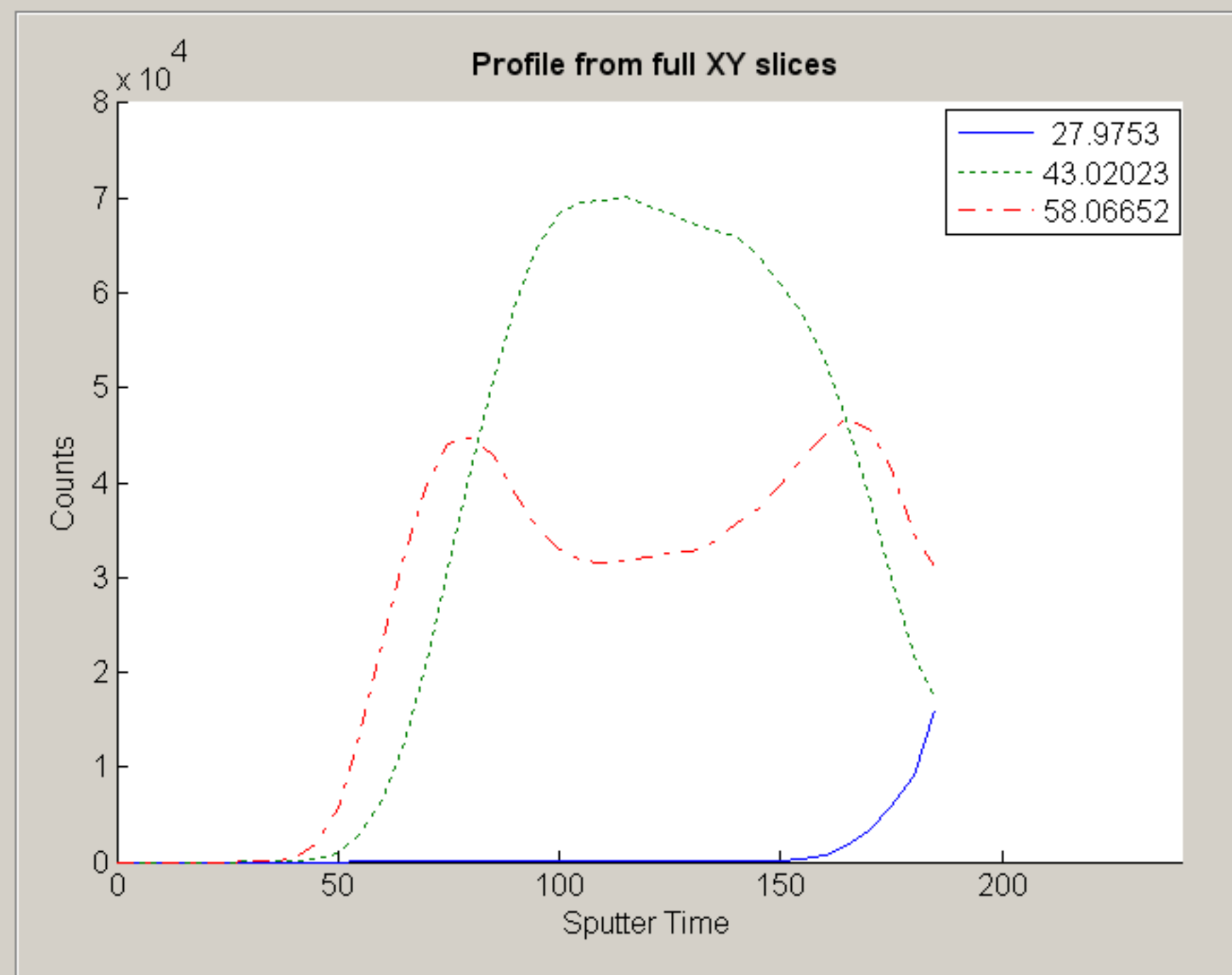
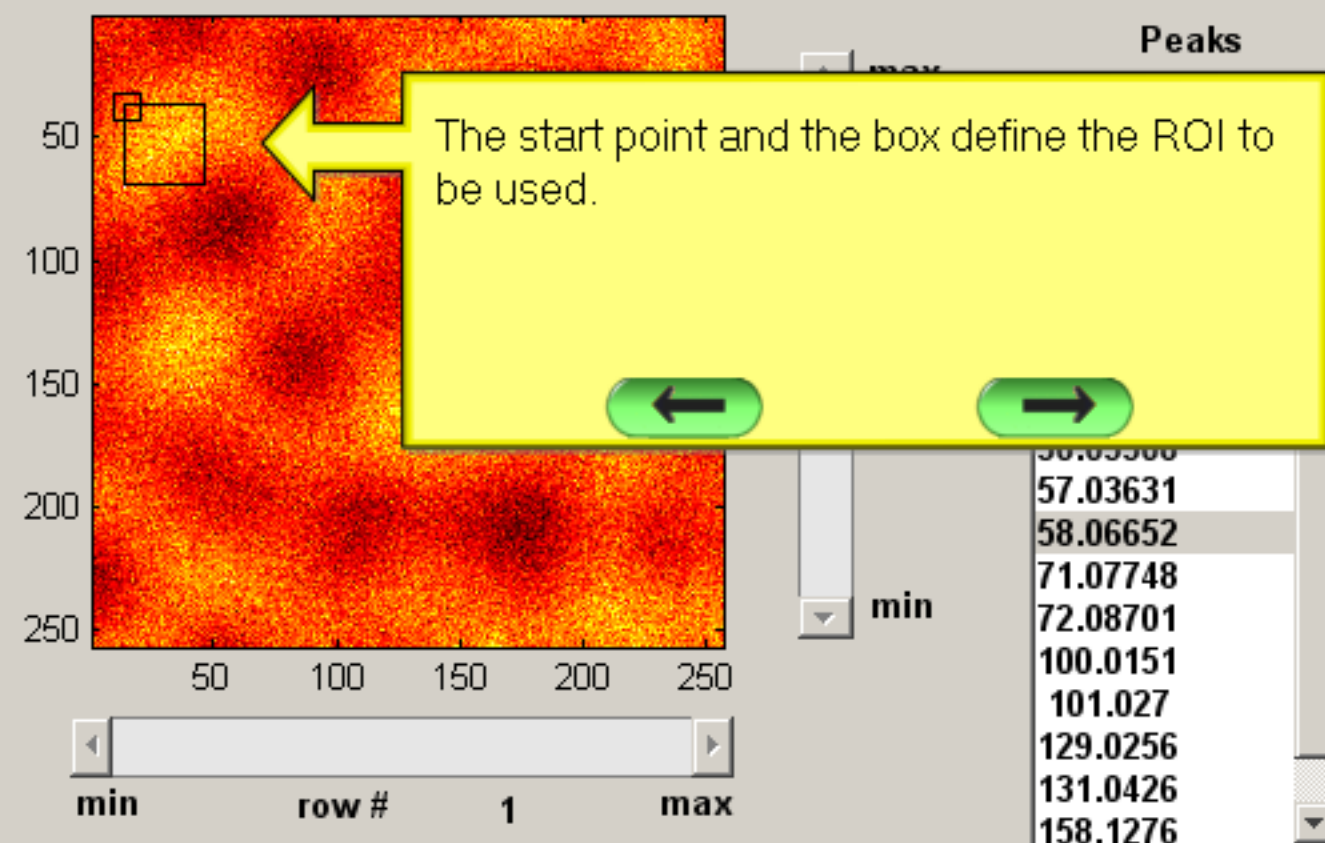
Choose Profile Type

Profile from ROI

Set Start Point

Set ROI

Close



Save Plot

Ext Plot

Export Data

Sputtertime/layer sec

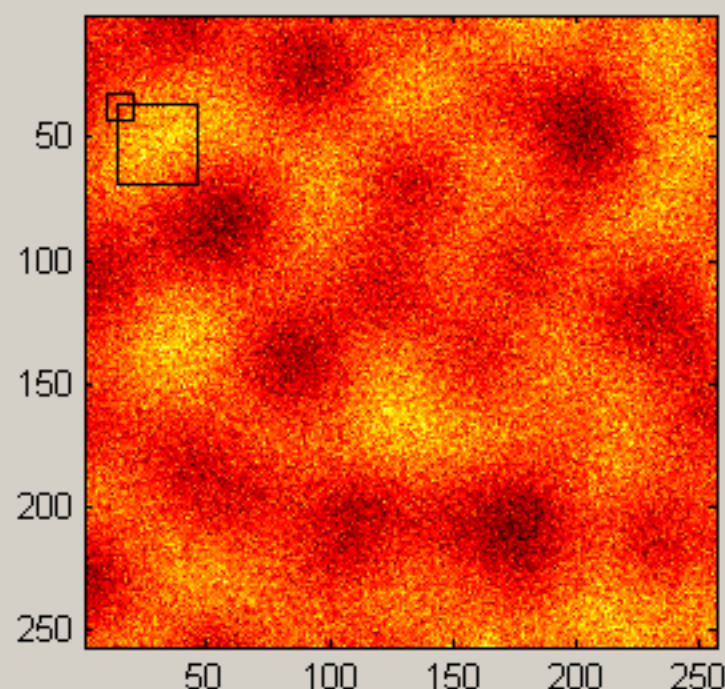
Close

Choose Profile Type

Profile from ROI

Set Start Point

Set ROI



max
row #
1
min

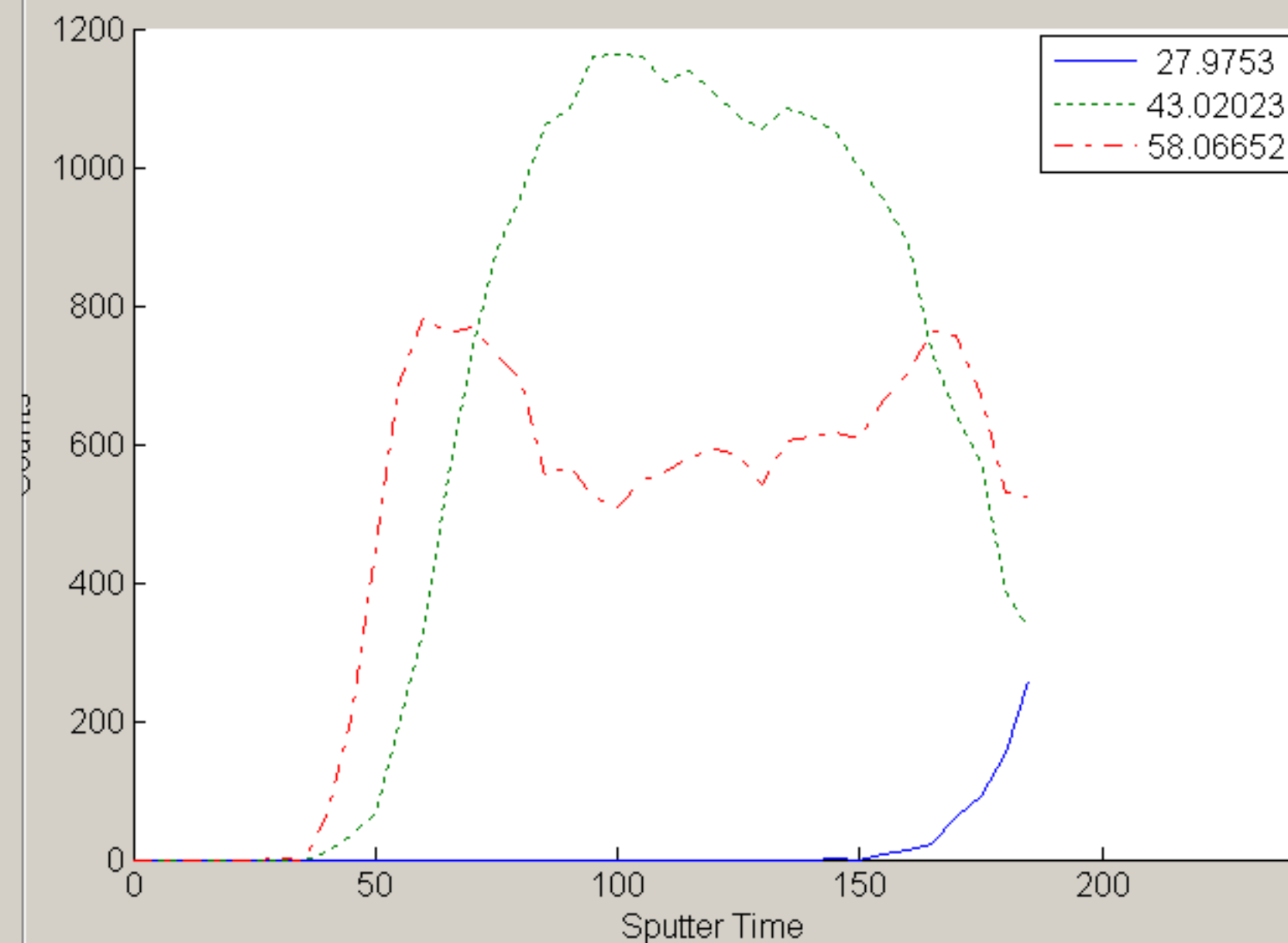
Peaks	
Total Counts	
27.9753	
42.0103	
42.03415	
43.02023	
44.04944	
45.03426	
55.01973	
56.03308	
57.03631	
58.06652	
71.07748	
72.08701	
100.0151	
101.027	
129.0256	
131.0426	
158.1276	

min row # 1 max

Now select the peaks you want in the profile and the profile plot is created as before.



Profile from ROI XY slices



Save Plot

Ext Plot

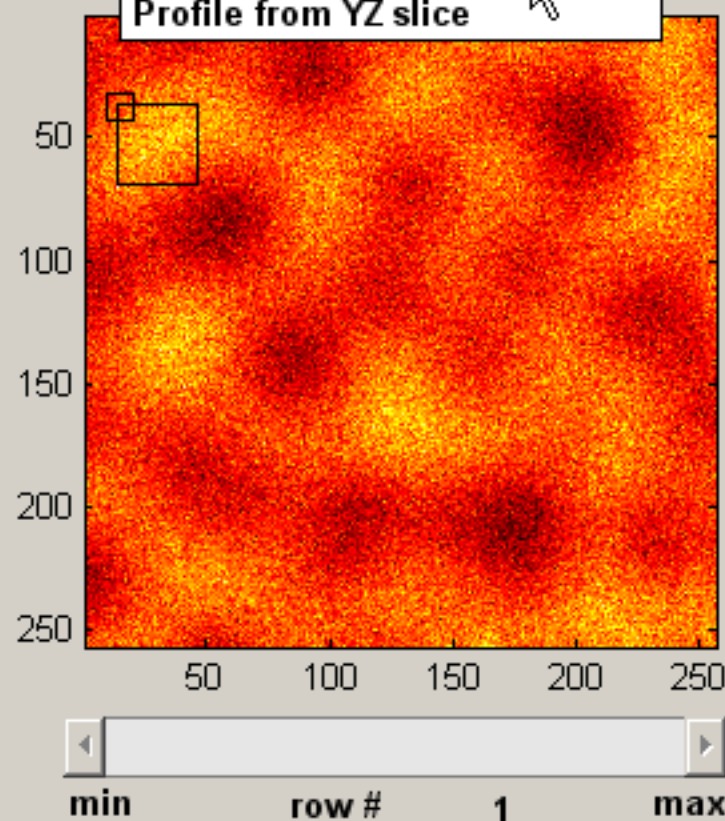
Export Data

Sputtertime/layer 5 sec

Close

Choose Profile Type

- Profile from ROI
- Choose One
- Profile from full XY slices
- Profile from ROI
- Profile from XZ slice
- Profile from YZ slice

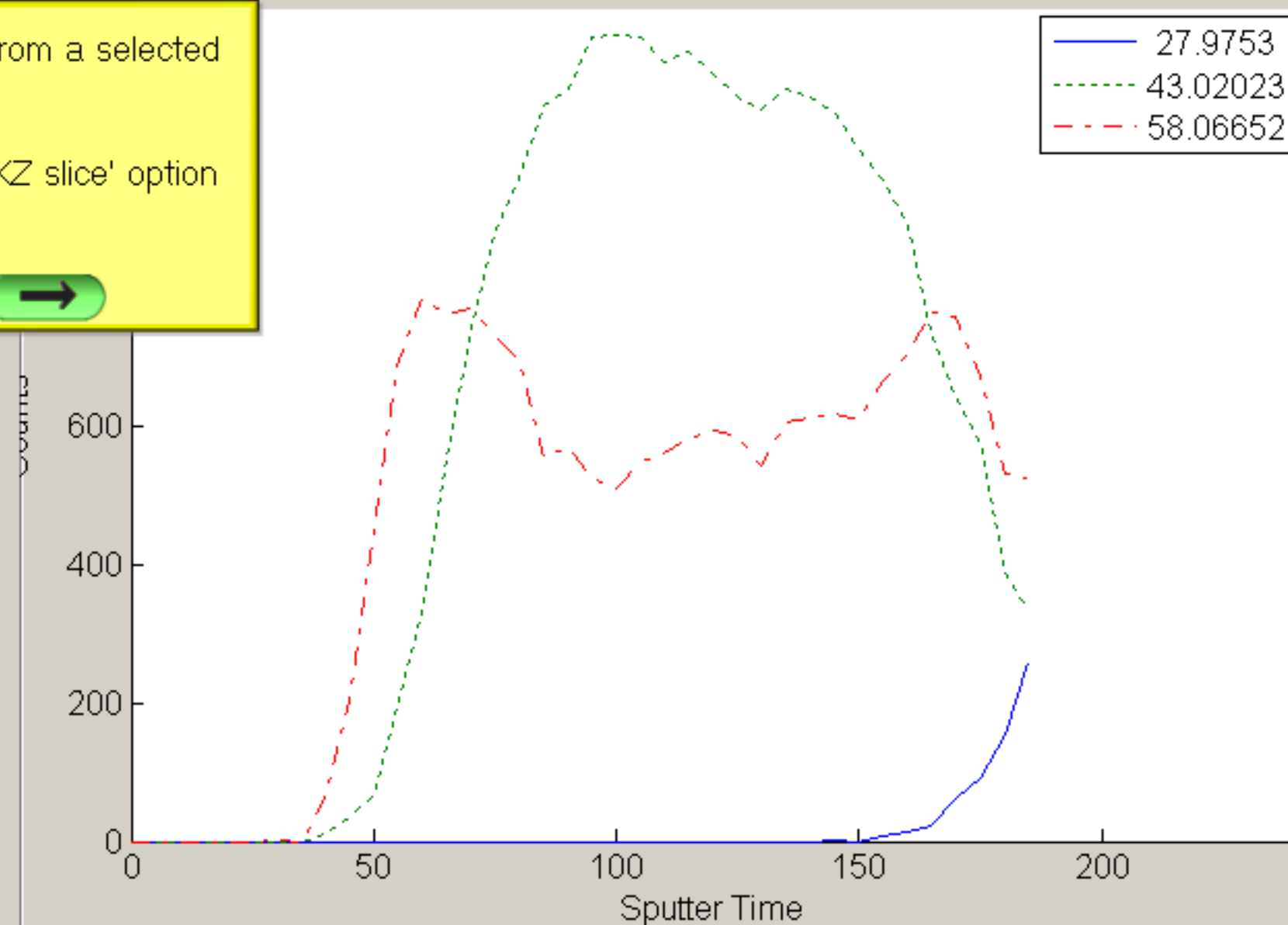


Now we will create a profile from a selected XZ slice.

First select the 'Profile from XZ slice' option from the drop down menu.

45.03426
55.01973
56.03308
57.03631
58.06652
71.07748
72.08701
100.0151
101.027
129.0256
131.0426
158.1276

Profile from ROI XY slices



Save Plot

Ext Plot

Export Data

Sputtertime/layer sec

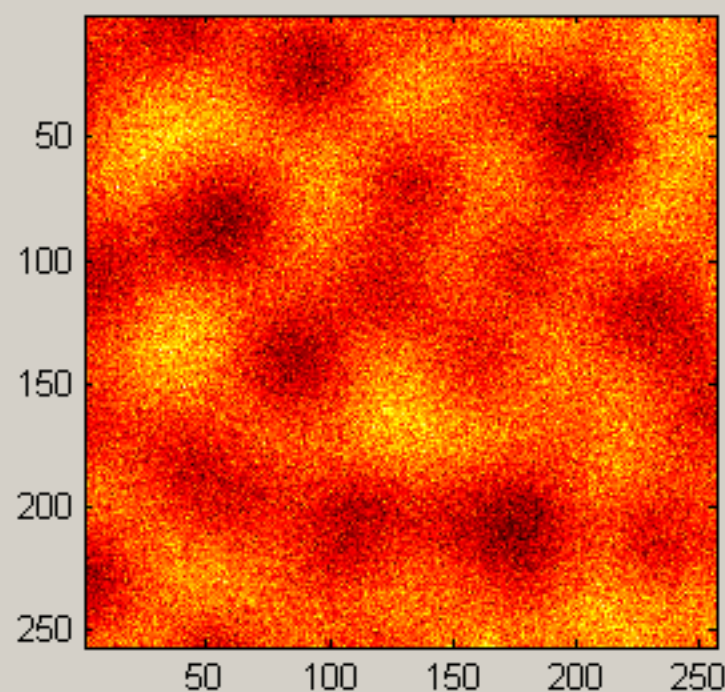
Close

Choose Profile Type

Profile from XZ slice

Set Start Point

Set ROI



max

row #
1

min

Peaks

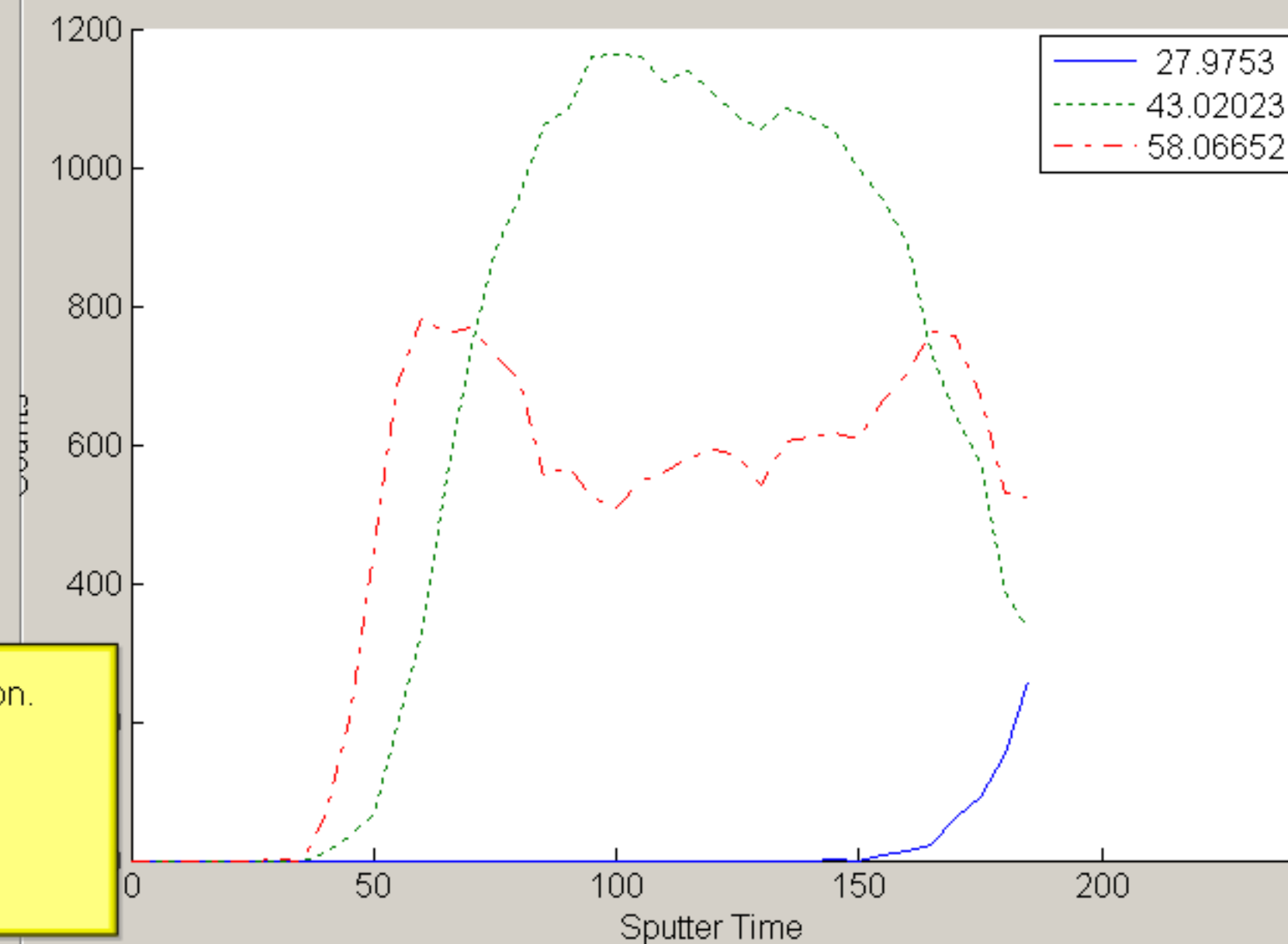
Total_Counts

27.9753
42.0103
42.03415
43.02023
44.04944
45.03426
55.01973
56.03308
57.03631
58.06652
71.07748
72.08701
100.0151
101.027

Move the XZ slider to the desired location.



Profile from ROI XY slices



Save Plot

Ext Plot

Export Data

Sputtertime/layer sec

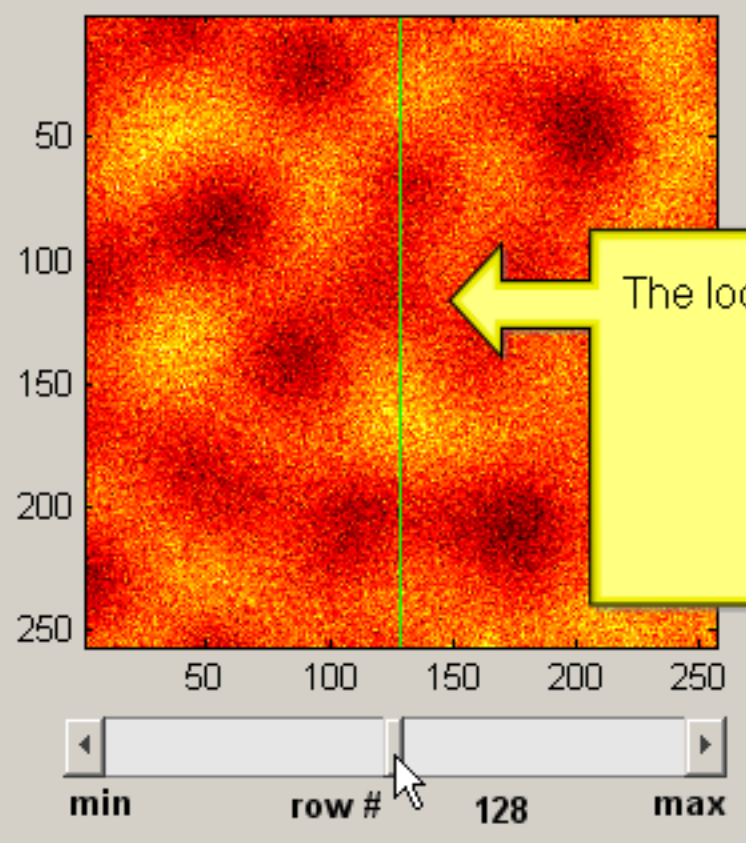
Close

Choose Profile Type

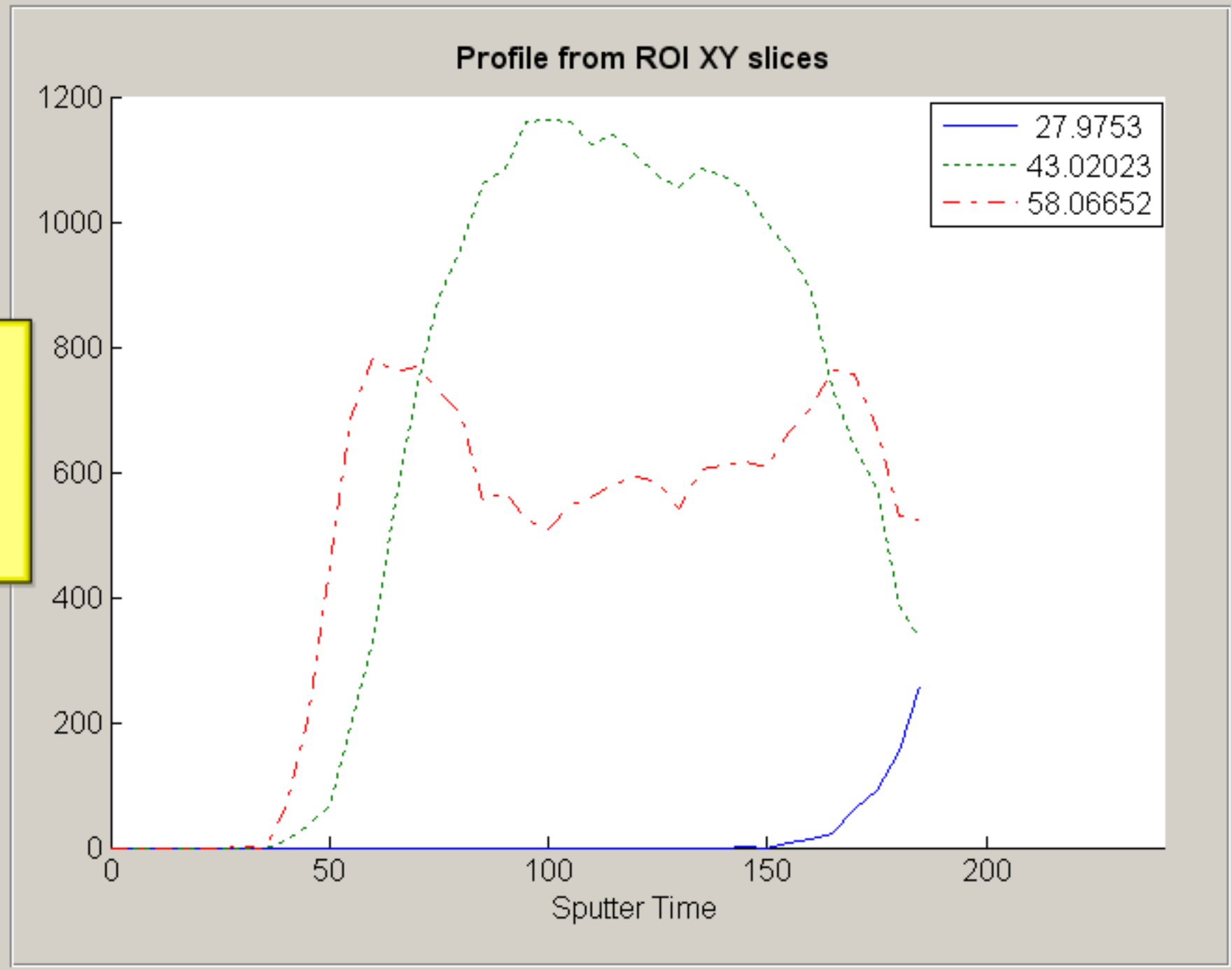
Profile from XZ slice

Set Start Point

Set ROI



Peaks	
Total_Counts	
27.9753	
42.0103	
43.02023	
58.06652	
72.08701	
100.0151	
101.027	
129.0256	
131.0426	
158.1276	



Save Plot

Ext Plot

Export Data

Sputtertime/layer sec

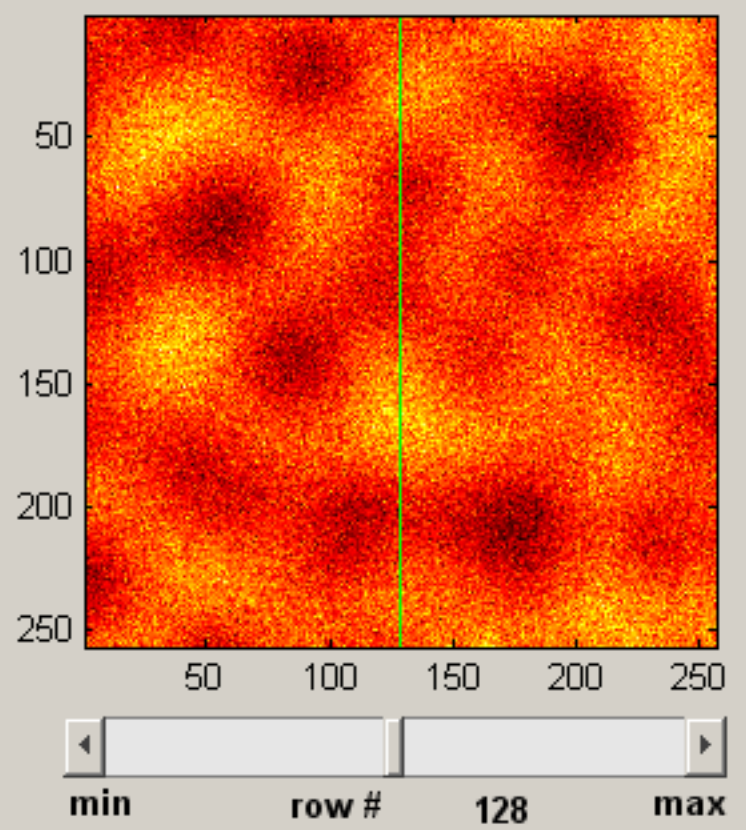
Close

Choose Profile Type

Profile from XZ slice

Set Start Point

Set ROI

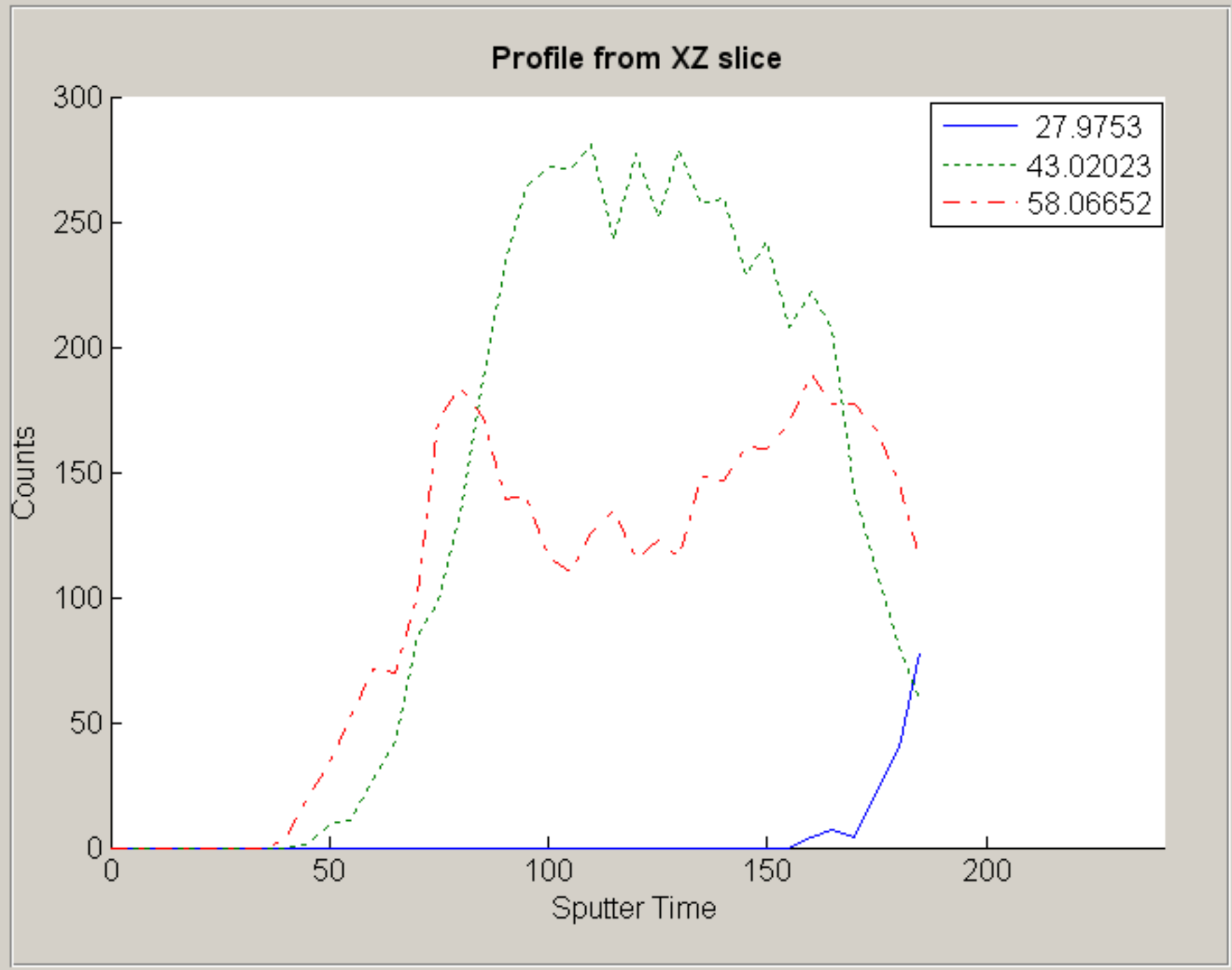


max
row #
1
min

Peaks	
Total	Counts
27.9753	
42.0103	
42.03415	
43.02023	
44.04944	
45.03426	
55.01973	
56.03308	
57.03631	
58.06652	
71.07748	
72.08701	
100.0151	
101.027	
129.0256	
131.0426	
158.1276	

Now select the peaks you want in the profile and the profile plot is created as before.

← →



Save Plot

Ext Plot

Export Data

Sputtertime/layer sec

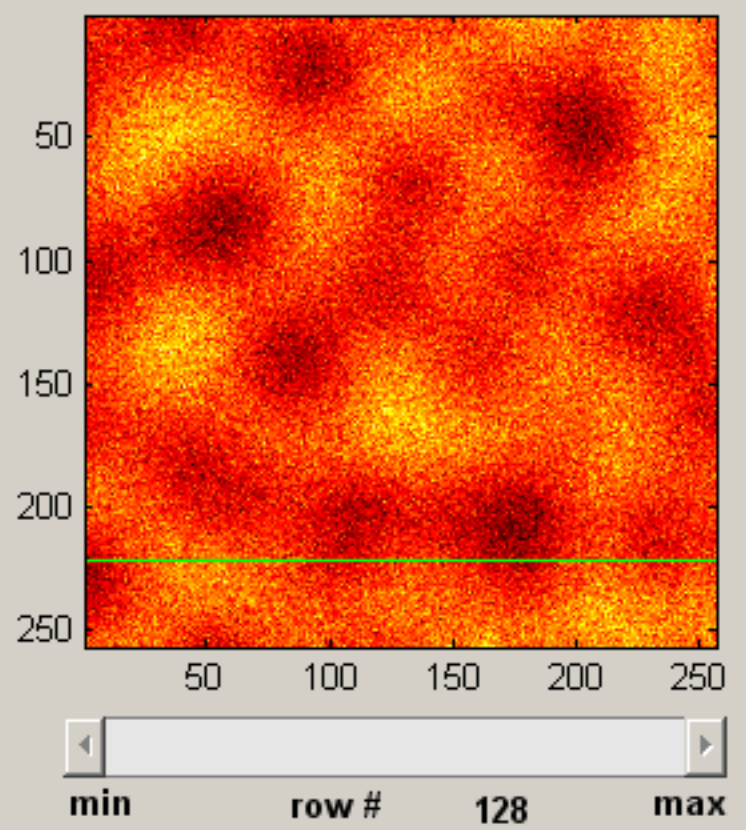
Close

Choose Profile Type

Profile from YZ slice

Set Start Point

Set ROI



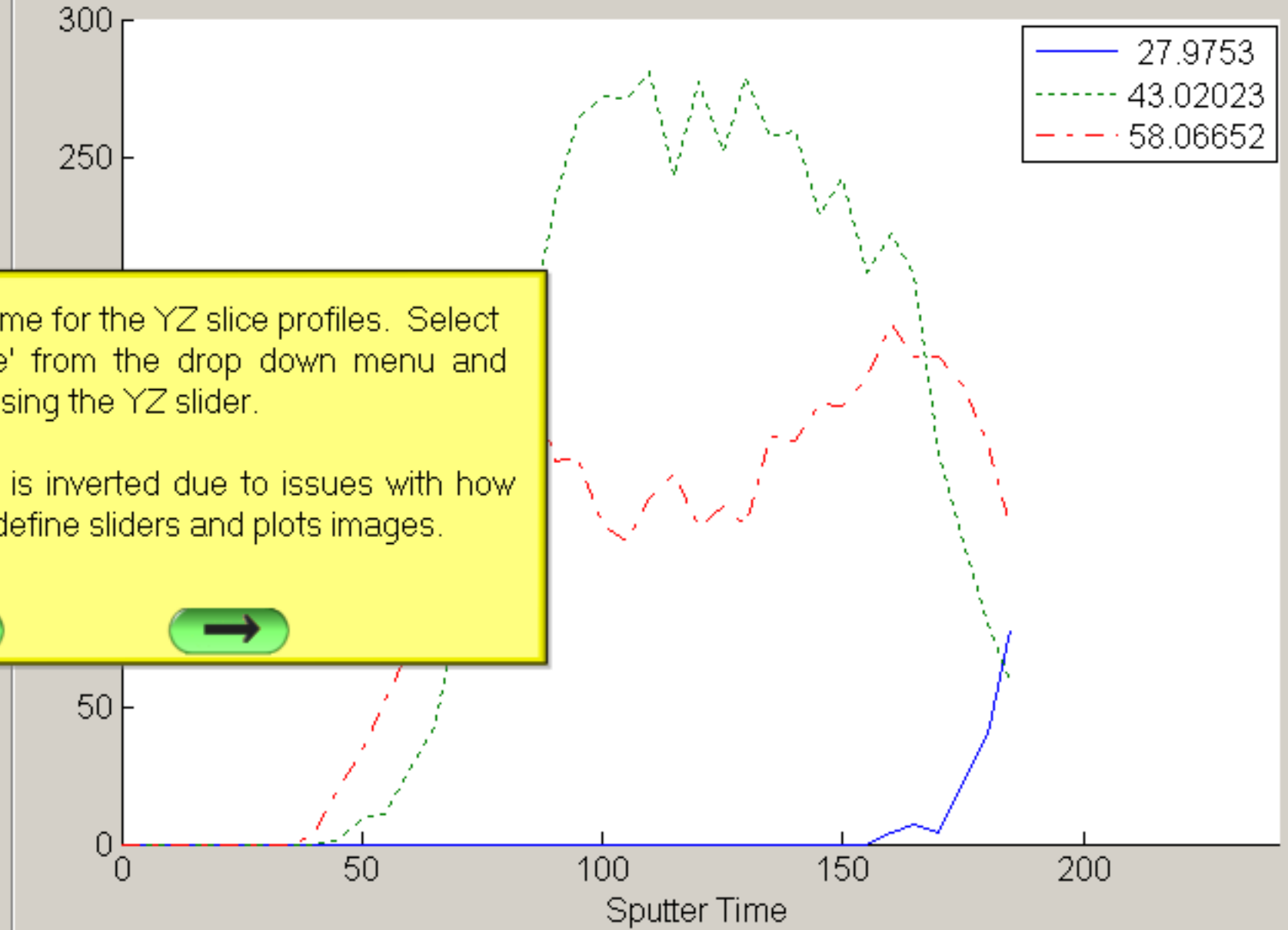
Peaks	
Total_Counts	
27.9753	
42.0103	
42.03415	
125.0238	
131.0426	
158.1276	

The process is the same for the YZ slice profiles. Select 'Profile from YZ slice' from the drop down menu and choose the location using the YZ slider.

NOTE: The YZ slider is inverted due to issues with how Matlab allows you to define sliders and plots images.



Profile from XZ slice



Save Plot

Ext Plot

Export Data

Sputtertime/layer sec

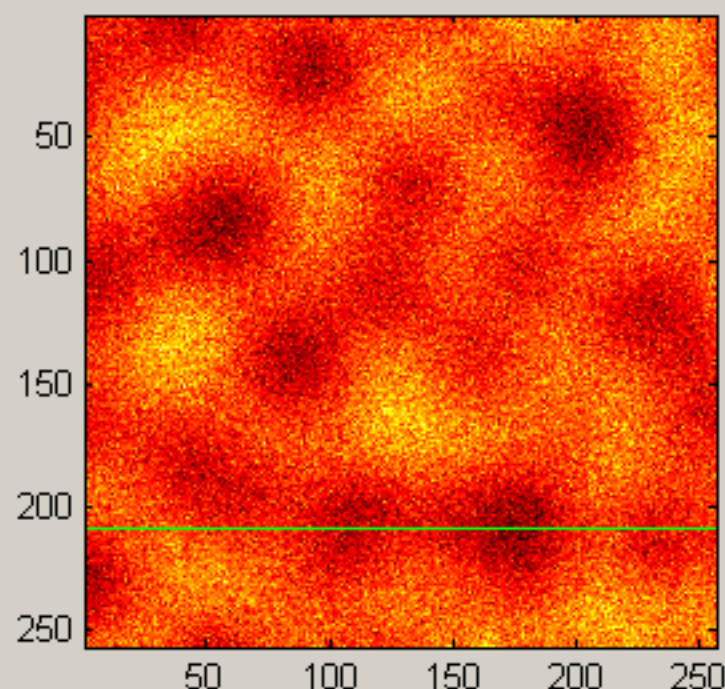
Close

Choose Profile Type

Profile from YZ slice

Set Start Point

Set ROI



max
row #
208
min

Peaks

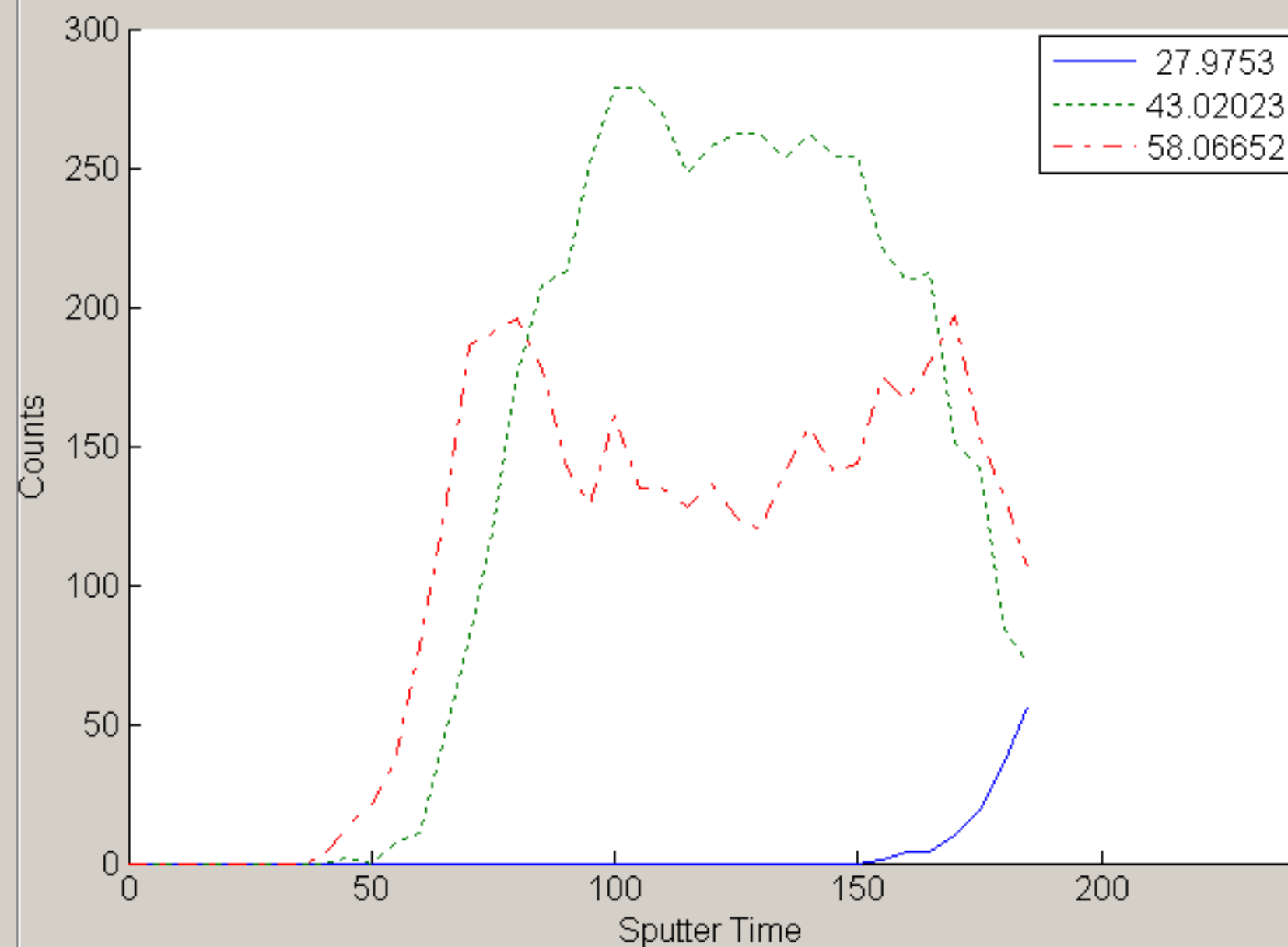
Total Counts

27.9753
42.0103
42.03415
43.02023
44.04944
45.03426
55.01973
56.03308
57.03631
58.06652
71.07748
72.08701
100.0151
101.027
129.0256
131.0426
158.1276

Now select the peaks you want in the profile and the profile plot is created as before.



Profile from XZ slice



Save Plot

Ext Plot

Export Data

Sputtertime/layer sec

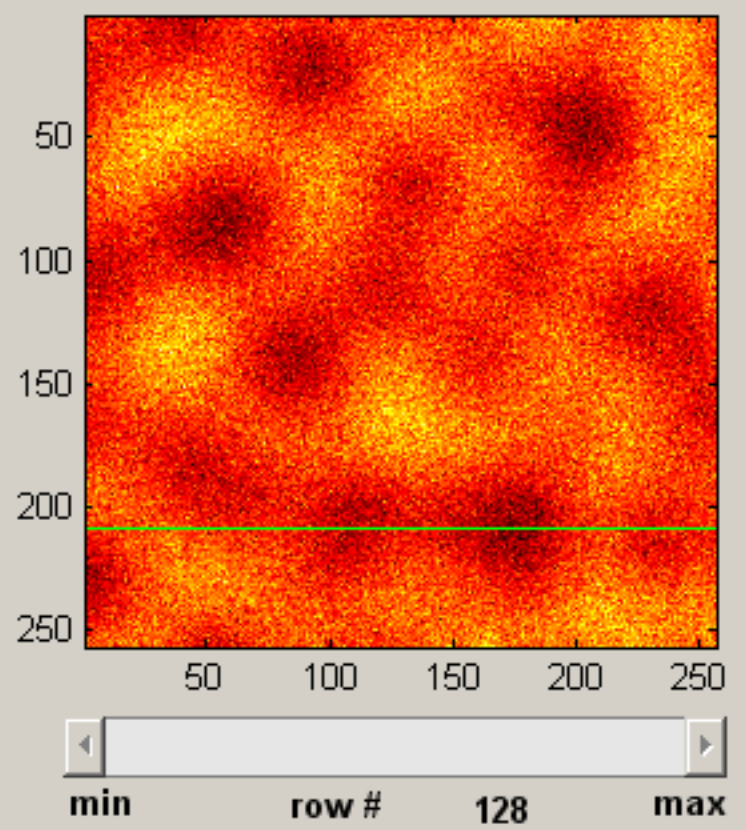
Close

Choose Profile Type

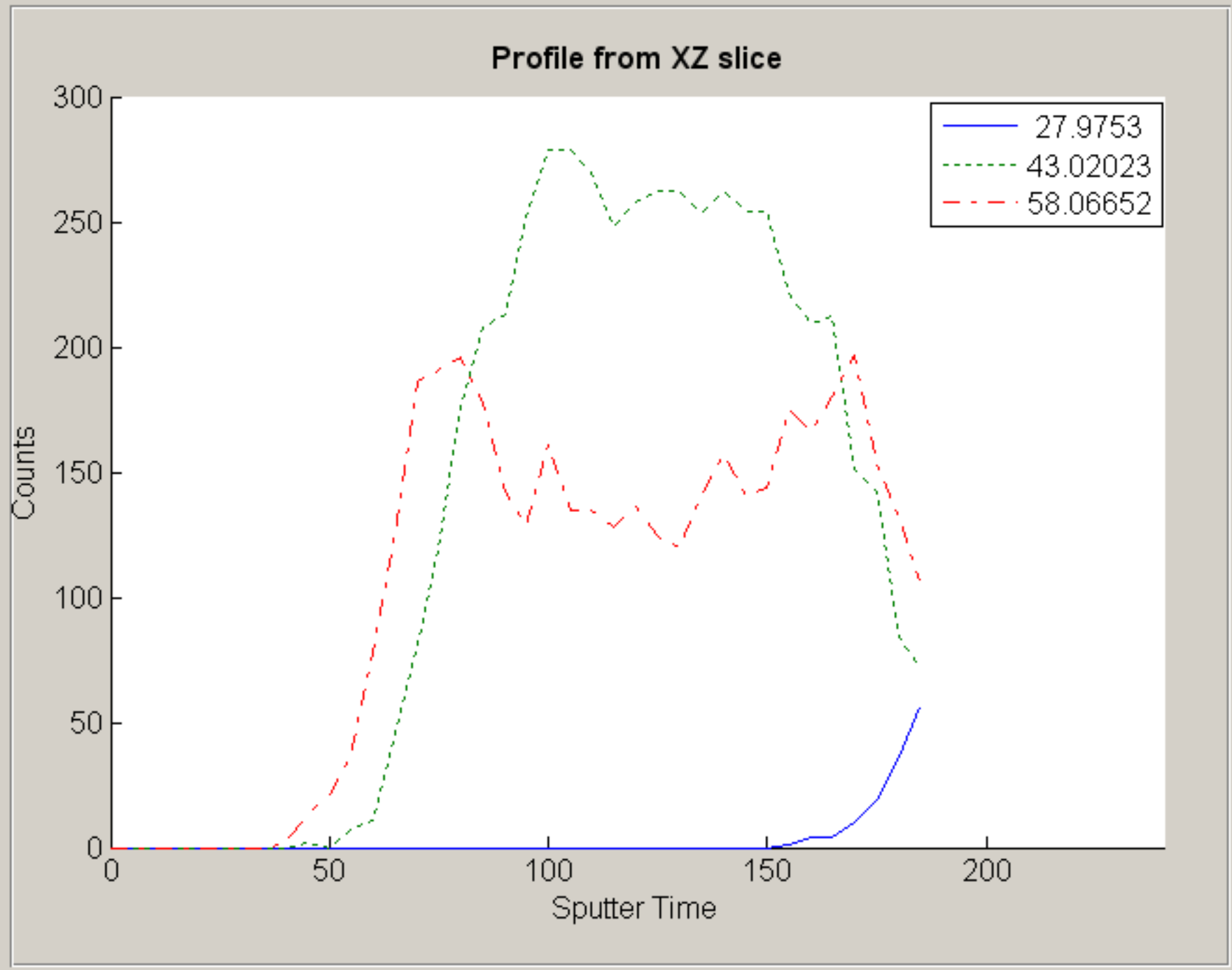
Profile from YZ slice

Set Start Point

Set ROI



Peaks	
Total_Counts	
27.9753	
42.0103	
42.03415	
43.02023	
44.04944	
45.03426	
55.01973	
56.03308	
57.03631	
58.06652	
71.07748	
72.08701	
100.0151	
101.027	
129.0256	
131.0426	
158.1276	



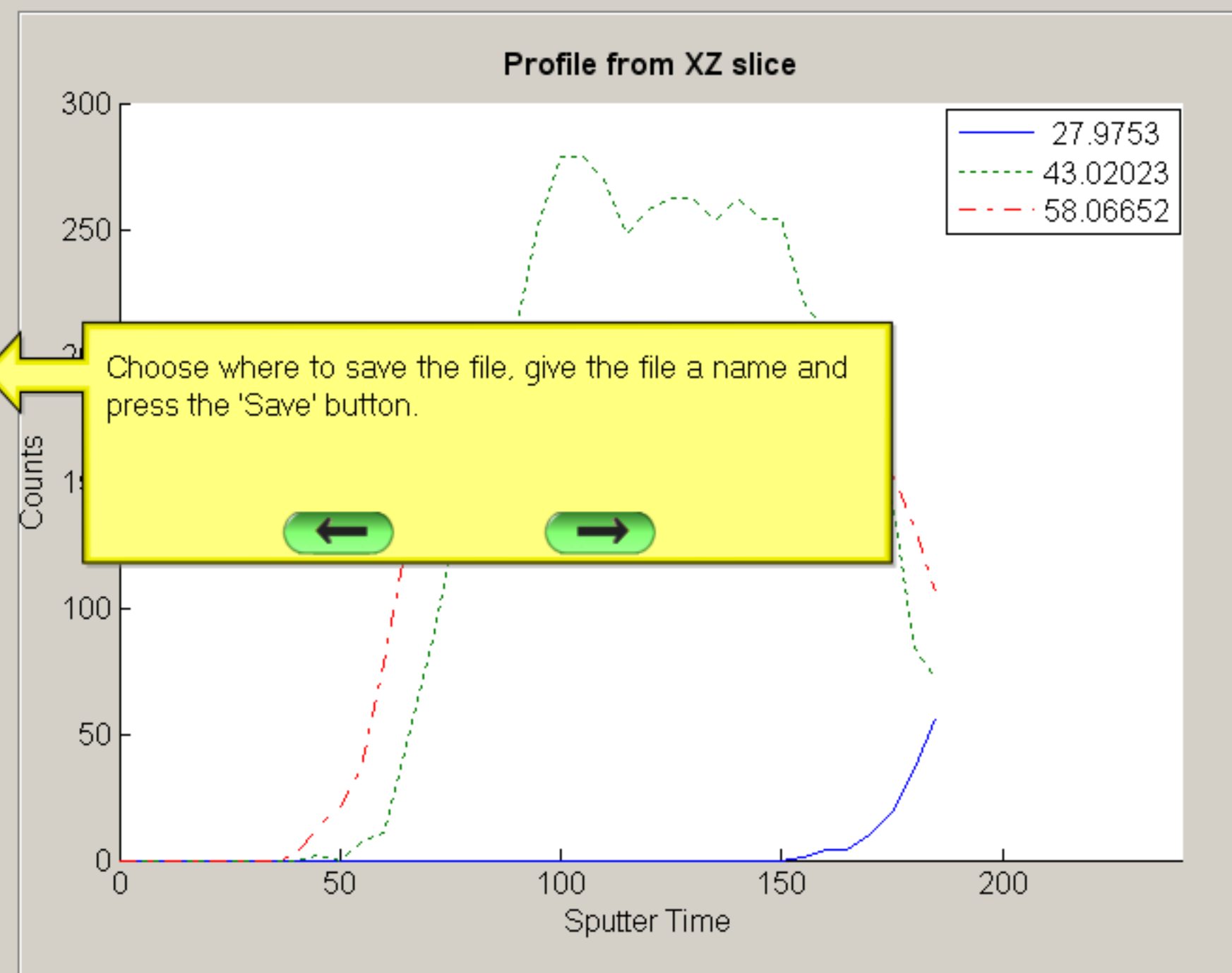
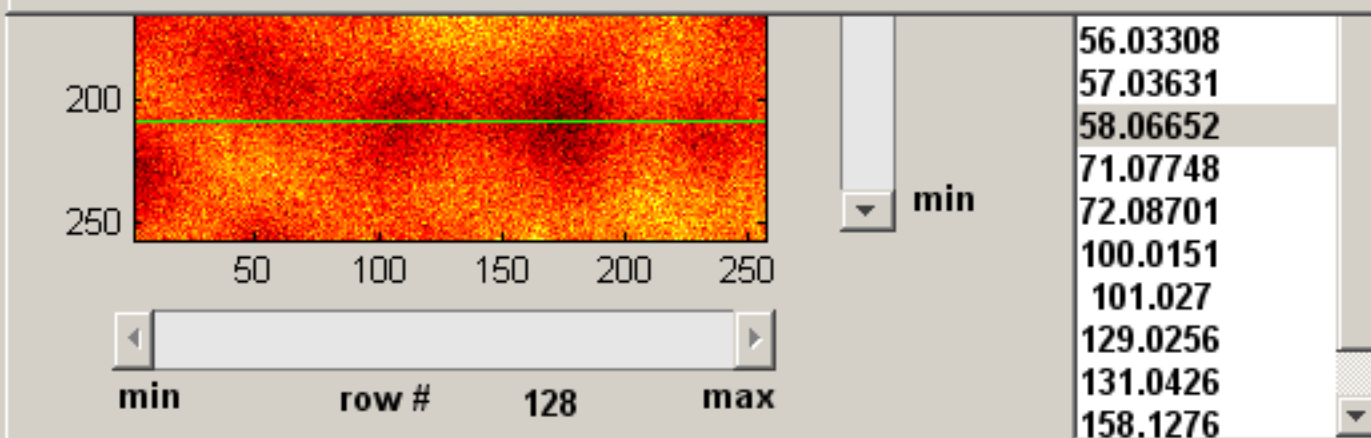
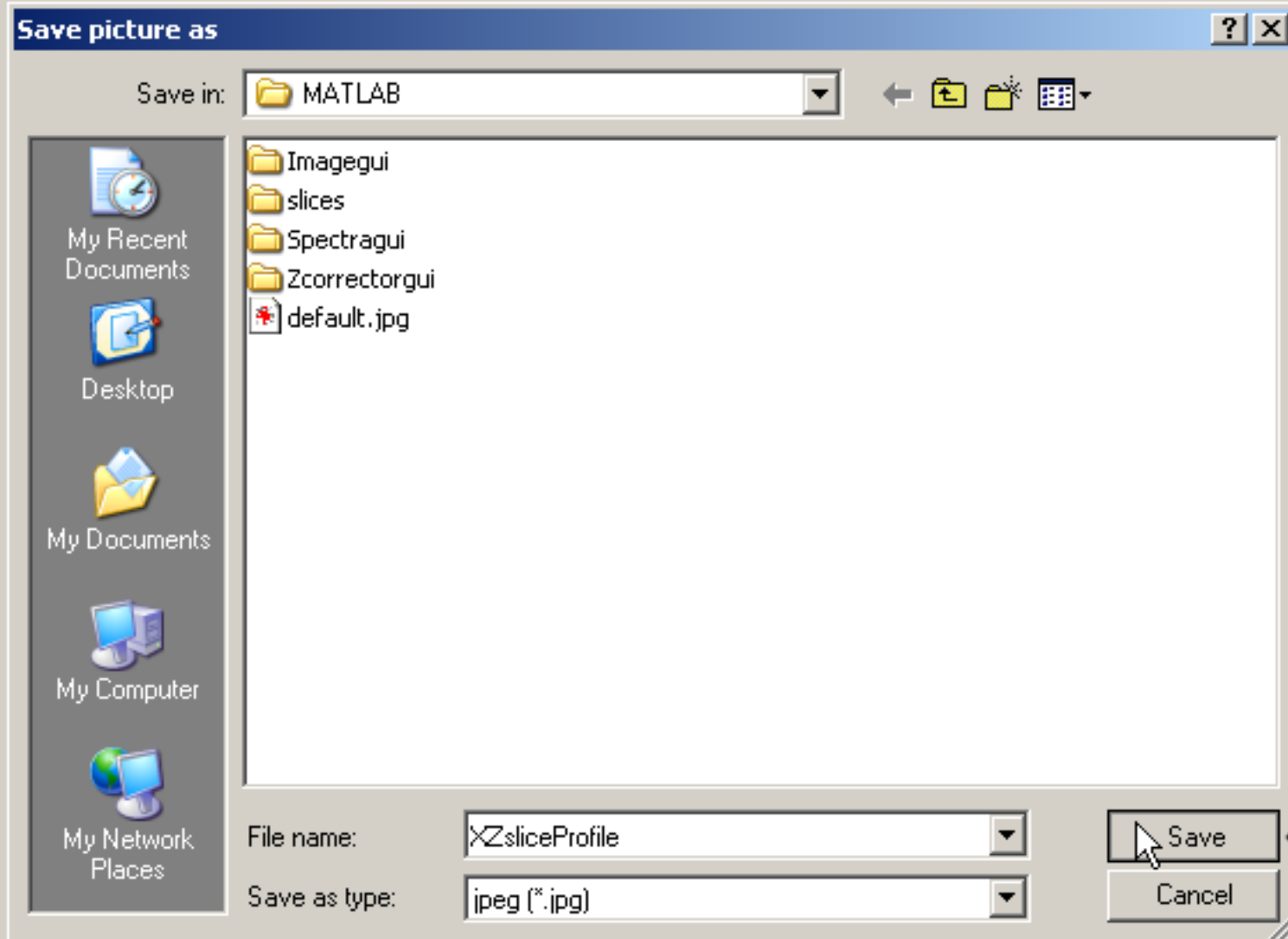
To save a copy of the plot, press the 'Save Plot' button.

Save Plot

Ext Plot

Export Data

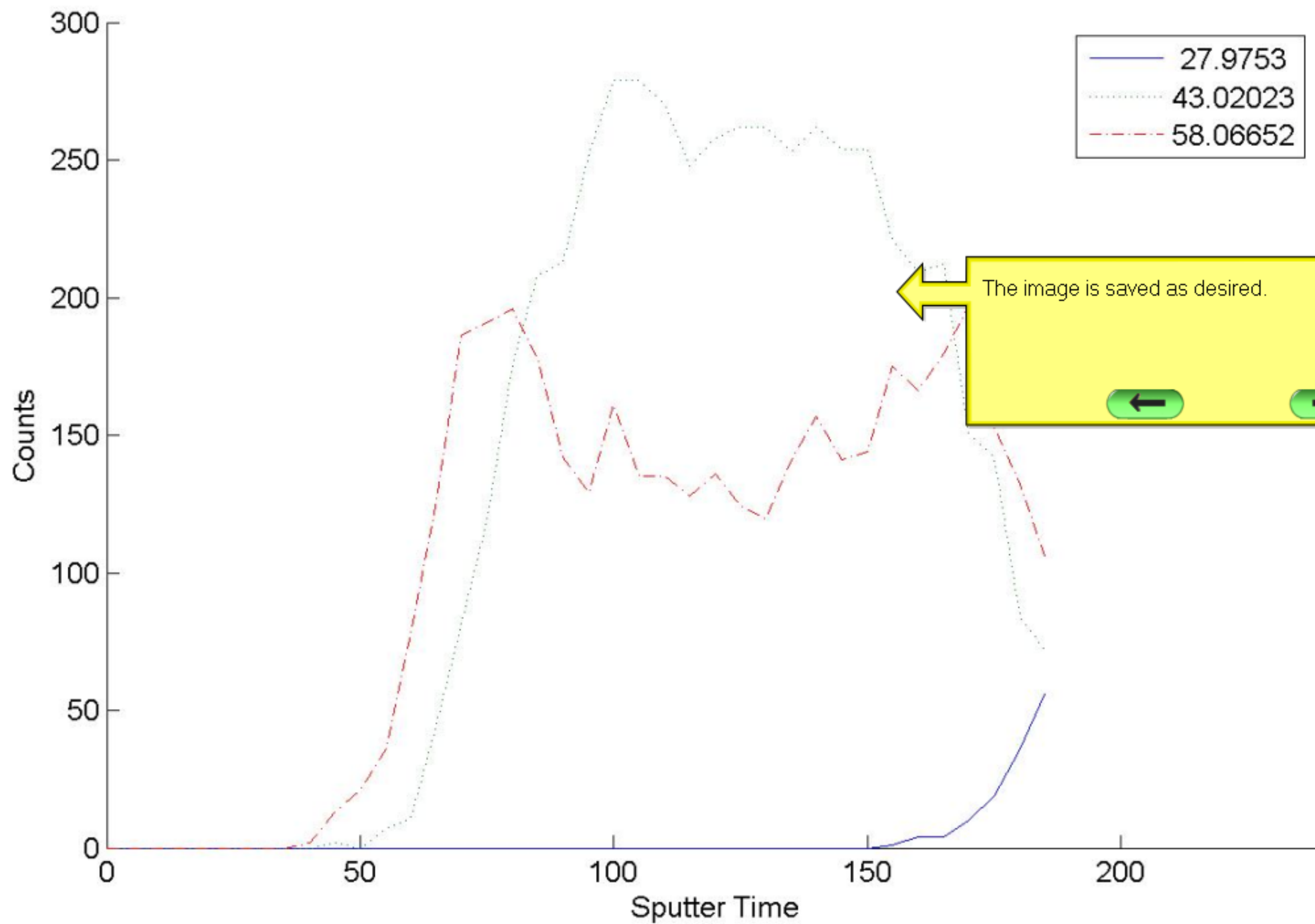




Save Plot

Ext Plot

Export Data



The image is saved as desired.



Sputtertime/layer sec

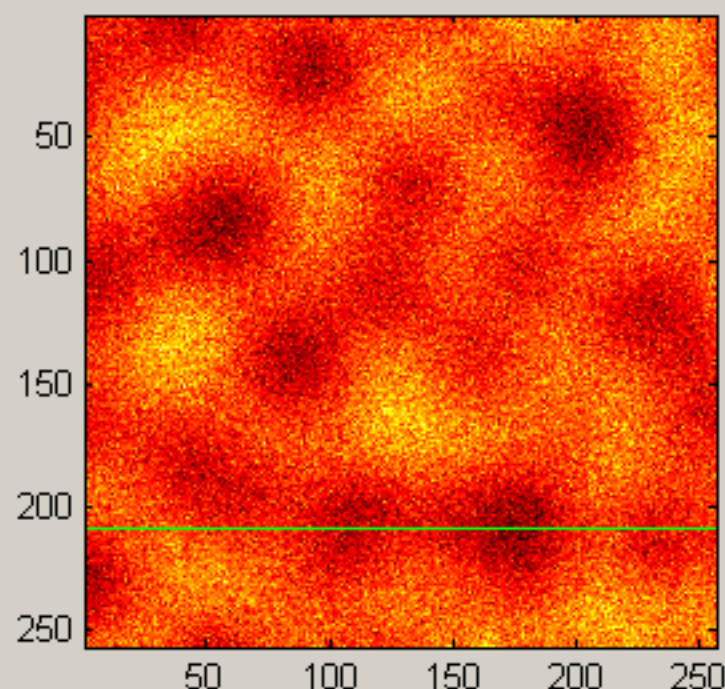
Close

Choose Profile Type

Profile from YZ slice

Set Start Point

Set ROI



max

row #
208

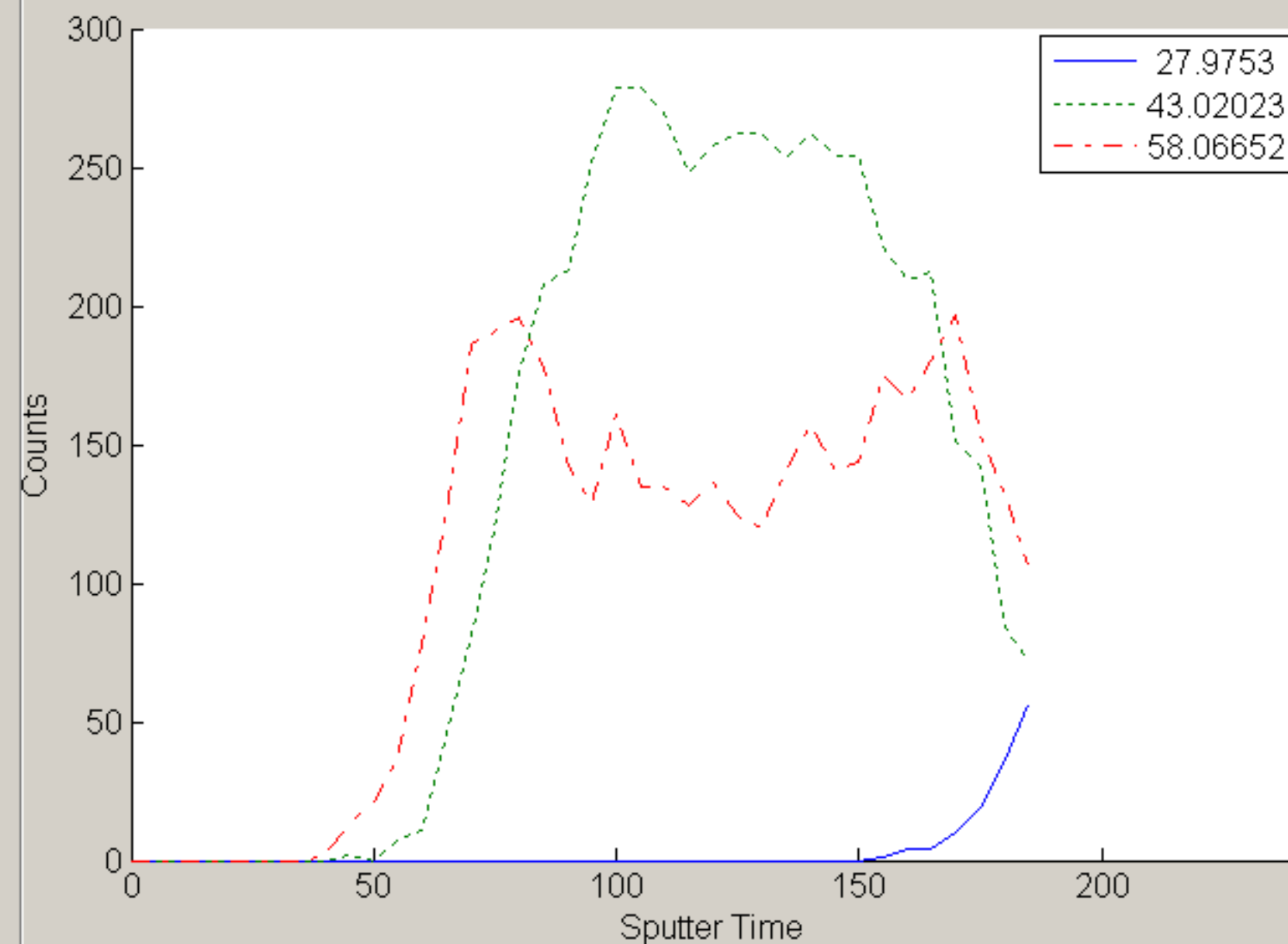
min

Peaks

Total_Counts

27.9753
42.0103
42.03415
43.02023
44.04944
45.03426
55.01973
56.03308
57.03631
58.06652
71.07748
72.08701
100.0151
101.027
129.0256
131.0426
158.1276

Profile from XZ slice



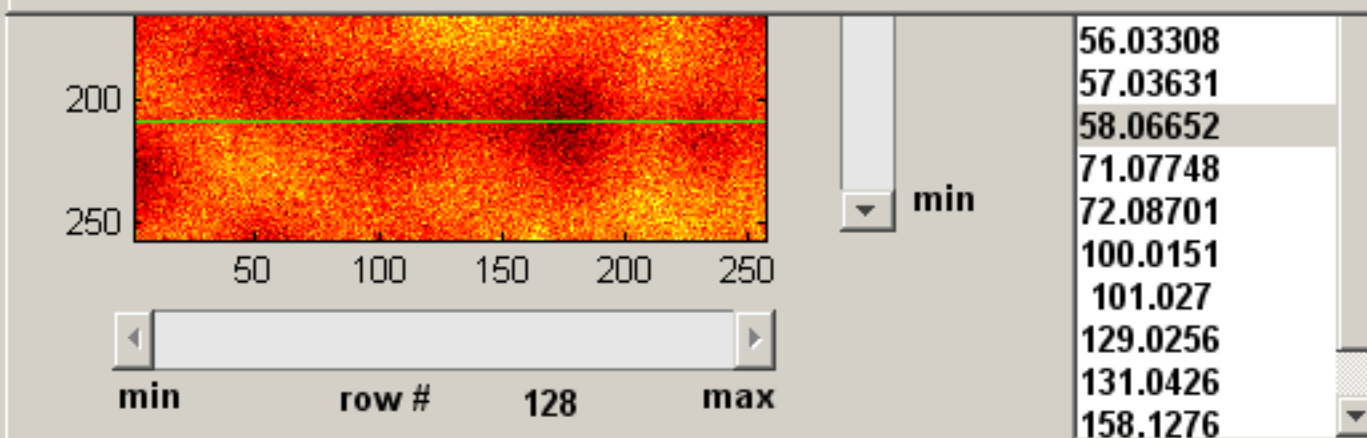
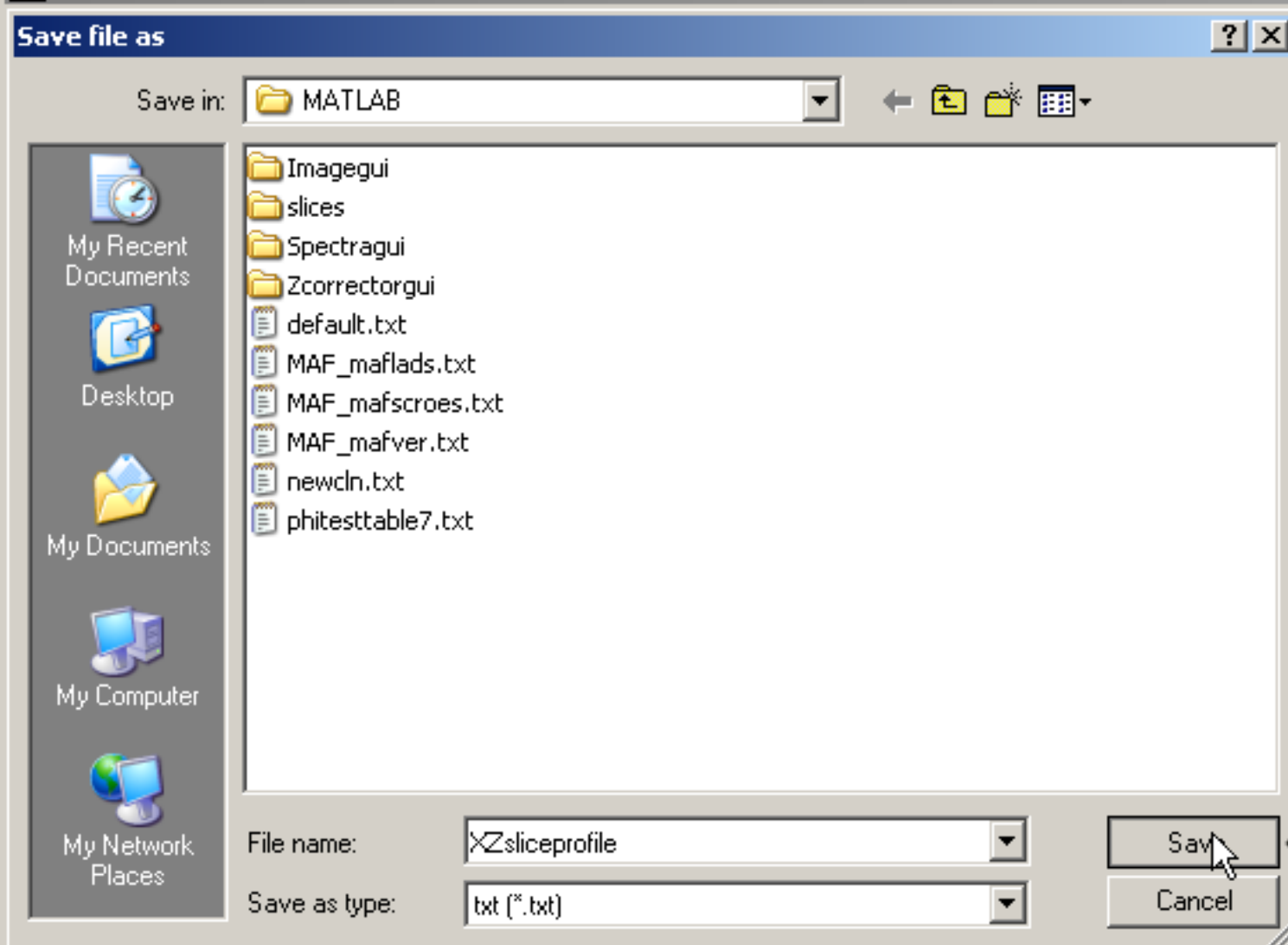
You can also save a copy of the data to a text file by pressing the 'Export Data' button.

Save Plot

Ext Plot

Export Data





Save Plot

Ext Plot

Export Data

zcorrectorgui

File

Search Folders

ings\graham\My Documents\MATLAB

Name	Size	Type
Imagegui		File
slices		File
Spectragui		File
Zcorrectorgui		File
DAN01.BIF	2,817 KB	BIF
1100_02.BIF6	38,403 KB	BIF
default.jpg	35 KB	JPG
foo2.mat	3,314 KB	MAT
foo.mat	30 KB	MAT
mycoolimagedata.mat	27,742 KB	MAT
testdatapcanew.mat	30 KB	MAT
testdicerdata.mat	989 KB	MAT
testimageguipca.mat	3,314 KB	MAT
testmodelload.mat	6 KB	MAT
MAF_mafscroes.txt	3,371 KB	Text
MAF_mafver.txt	1 KB	Text
newcln.txt	54 KB	Text
phitesttable7.txt	1 KB	Text
ddd.avi	39,280 KB	Video
XZsliceProfile.jpg	49 KB	JPG
XZsliceprofile.txt	2 KB	Text

XZsliceprofile.txt - WordPad

File Edit View Insert Format Help

0.00000	27.97530	43.02023	58.06652
0.00000	0.00000	0.00000	0.00000
5.00000	0.00000	0.00000	0.00000
10.00000	0.00000	0.00000	0.00000
15.00000	0.00000	0.00000	0.00000
20.00000	0.00000	0.00000	0.00000
25.00000	0.00000	0.00000	0.00000
30.00000	0.00000	0.00000	0.00000
35.00000	0.00000	0.00000	0.00000
40.00000	0.00000	0.00000	2.00000
45.00000	0.00000	2.00000	13.00000
50.00000	0.00000	0.00000	21.00000
55.00000	0.00000	7.00000	36.00000
60.00000	0.00000	11.00000	78.00000
65.00000	0.00000	45.00000	126.00000
70.00000	0.00000	81.00000	186.00000
75.00000	0.00000	119.00000	191.00000
80.00000	0.00000	176.00000	196.00000
85.00000	0.00000	208.00000	178.00000
90.00000	0.00000	213.00000	142.00000
95.00000	0.00000	252.00000	129.00000
100.00000	0.00000	279.00000	161.00000
105.00000	0.00000	279.00000	135.00000
110.00000	0.00000	270.00000	135.00000
115.00000	0.00000	248.00000	128.00000
120.00000	0.00000	258.00000	136.00000
125.00000	0.00000	262.00000	124.00000
130.00000	0.00000	262.00000	120.00000
135.00000	0.00000	253.00000	141.00000
140.00000	0.00000	262.00000	157.00000
145.00000	0.00000	254.00000	141.00000
150.00000	0.00000	254.00000	144.00000
155.00000	1.00000	221.00000	175.00000
160.00000	4.00000	209.00000	166.00000
165.00000	4.00000	212.00000	180.00000
170.00000	10.00000	151.00000	197.00000
175.00000	19.00000	142.00000	153.00000
180.00000	36.00000	84.00000	132.00000
185.00000	56.00000	72.00000	106.00000

The data is saved to a file. The first column contains the sputter time in seconds. The next columns contain the data for the selected peaks.

←

→

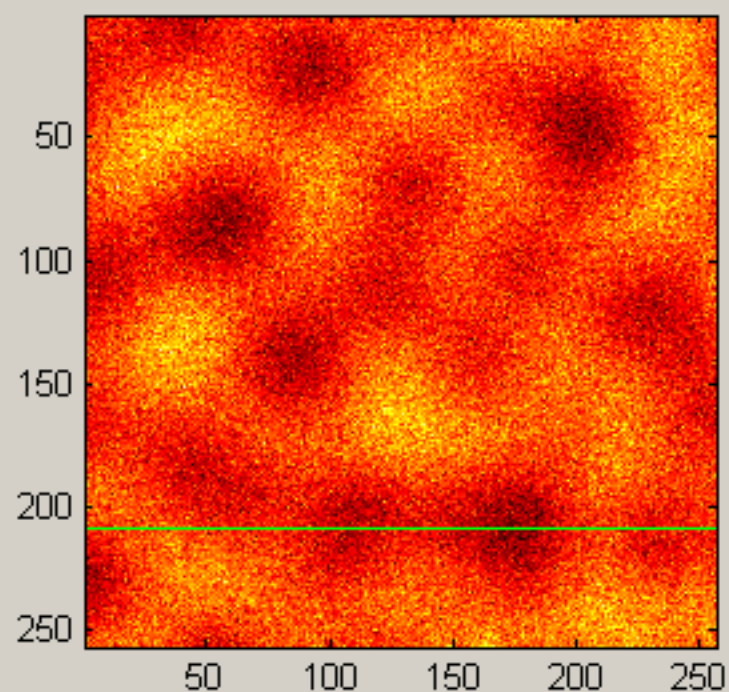
Sputtertime/layer sec

Choose Profile Type

Profile from YZ slice

Set Start Point

Set ROI



max
row #
208
min

Peaks

Total_Counts

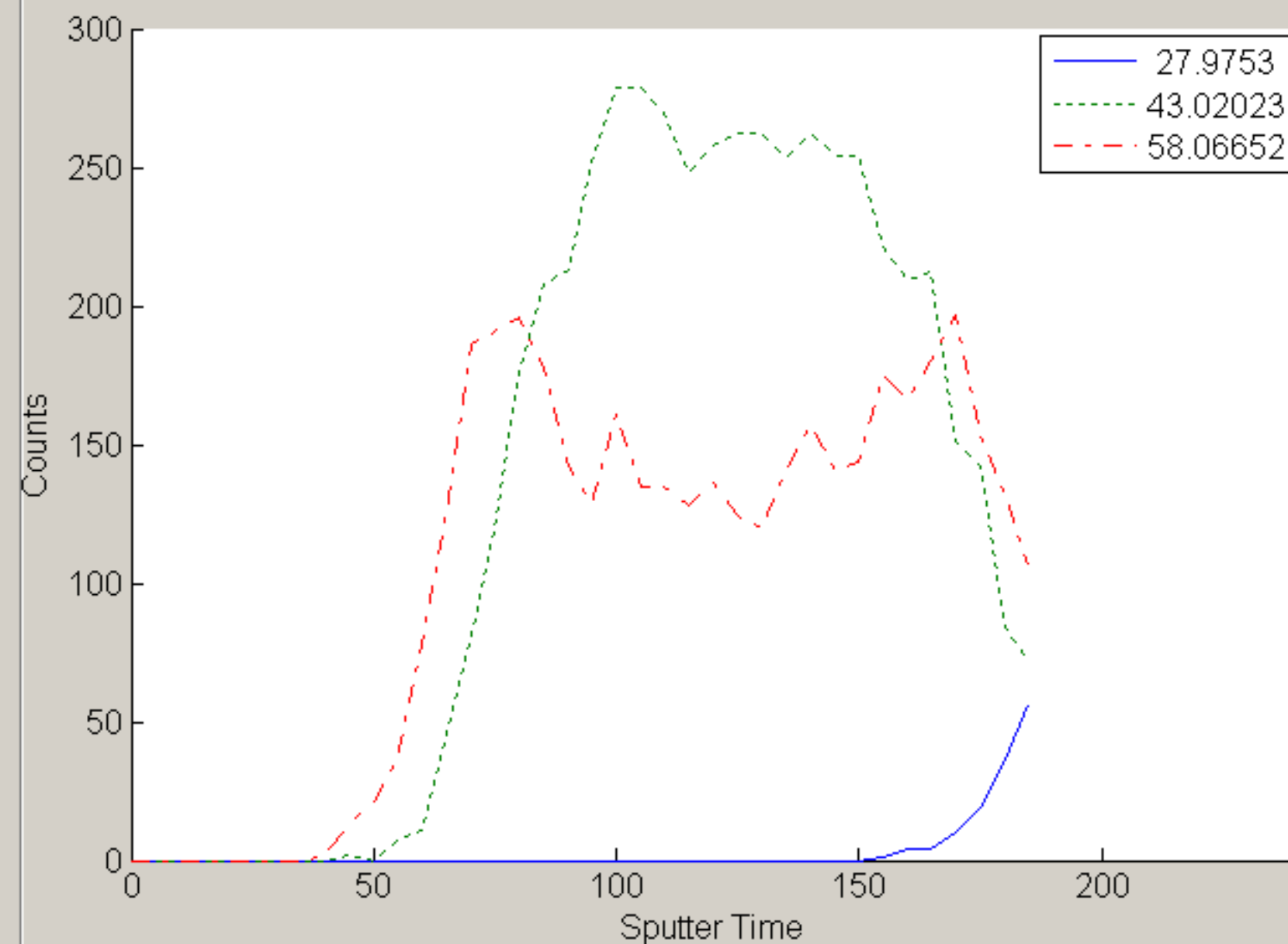
27.9753
42.0103
42.03415
43.02023
44.04944
45.03426
55.01973
56.03308
57.03631
58.06652
71.07748
72.08701
100.0151
101.027
129.0256
131.0426
158.1276

min row # 128 max

To close the panel, press the 'Close' button.

Close

Profile from XZ slice



Save Plot

Ext Plot

Export Data

