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.
This tutorial assumes you have already run either PCA or MAF and saved the MVA data.
From the 'Data Display' menu select ->'PCA'->'Plot PCA Loadings'  

(NOTE: The following steps work the same for labeling MAF loadings. You can access the MAF loadings from the 'MAF' submenu in the 'Data Display' menu.)
This will bring up the 'Plot Loadings' and 'Label Loadings' panels.
Select the data you want to plot from the drop-down menus.
Press the 'Load Selected Data' button.
Choose the PC# you want to plot from the drop down menu.
Choose how you want to plot the loadings:

- Traditional = both + and - loadings
- Pos Loadings Only = only the positive loadings
- Neg Loadings Only = only the negative loadings (*-1) so they are plotted as positive values
Press the 'Plot Loads' button.
The loadings are plotted in this window.
To label all peaks above a certain threshold value, enter the number for the threshold here and press the 'Label Threshold' button.
Data Selection Panel

- Name of Image Matrix: imagedata_DAN...
- Name of Variable Matrix: exactmass_DAN01...

Scores
- Select Scores: ...
- Loadings: PCA_loads ...
- Variance: PCA_var ...

Plot Loadings
- Load Selected Data
- Load Selected Data
- PC# to plot: 1
- % Variance: PCA_var
- Plot Options: Traditional
- Plot Loads
- Save Figure
- Make Ext
- Close Panel

Label Loadings
- Label all peaks above a threshold value.
- Label Peaks Above: 0.15
- Label Threshold
- Image size (microns):
- Create Raw Data Plot For Labeled Peaks

All peaks above the threshold value are labeled.
You can create peak area images for each labeled peak by entering the size of the image data in microns here and press the 'Create Raw Data Plot For Labeled Peaks' button.
The figures will appear briefly as they are created.
After they are all created you can find them in the active Matlab directory.
You can clear the labels and start over by recreating the loadings plot. Simply press the 'Plot Loads' button again.
First you must create a variable that contains the labels you want to use.
Because of how Matlab handles text, all the labels must all have the same number of characters. You can use spaces if the labels you want to use have different lengths.

The general format is:
variablename=['label1'; 'label2'; 'label3';...'labeln']
Note the spaces to keep the labels the same length.
>> customlabels=['These';'Are ';'Big ';'Peaks']

customlabels =

These  
Are  
Big  
Peaks

Press enter and the new variable is created with the label names.
Within the Spectragui, Press the 'Choose Peaks' button in the 'use custom labels' section.
Data Selection Panel

Name of Image Matrix: imagedata_DAN...
Name of Variable Matrix: exactmass_DAN01...

Scores
Loadings
Variance

Select Scores...
PCA_loads...
PCA_var...

Plot Loadings

Load Selected Data

Loaded Data
Loadings: PCA_loads
Variables: exactmass_DAN01
% Variance: PCA_var

PC# to plot: 1
Plot Options: Traditional

Plot Loads
Save Figure
Make Ext
Close Panel

Click on a peak where you want the label to appear to add it to the selection. Then press 'Enter' to turn selection mode off.

Align the cross hairs on the desired peak and single click on the peak(s) you want to label. The number of peaks you select has to equal the number of labels you created.

For this tutorial I created 4 labels, so I need to select 4 peaks.

The numbers on the following 4 slides are part of the tutorial and will not show up when you select peaks.

Label Loadings

Label all peaks above a threshold value.

Label Peaks Above
Label Threshold

Image size (microns): 100

Create Raw Data Plot For Labeled Peaks

Use custom labels for selected peaks.

Custom Labels to use

Choose Peaks
Label Custom
Now enter the name of the custom labels we created before in this box.
Press the 'Label Custom' button.
The labels appear next to the peaks that you selected.

NOTE: The labels appear in the order you select the peaks.
You can save the figure using the 'Save Figure' button.
This dialog allows you to save the figure where you want and in the format that you want.

Give the figure a name and press the save button.
The file is saved where you put it and looks like this.
You can make an external matlab figure by pressing the 'Make Ext' button.
The figure is recreated in an external Matlab figure window. It can be edited and saved as desired.
Now you can close both panels by pressing this 'Close Panel' button.
That's it for this tutorial.

Press the green button on the left to go back to the previous step. Press the button the right to go back to the beginning of the tutorial.