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 will cover how to create custom scores plot figures that can be saved as an image file.

This tutorial will show how to plot PCA scores, but the process for this is the same whether one is plotting PCA scores or MAF factors. The only difference is that the plotting function for MAF factors is in a different sub menu.
From the 'Data Display' menu, choose:
Data Display -> PCA -> Plot PCA Scores.
This brings up the PCA scores plot panel.
Select the appropriate data from the drop down menus above.
Then press the 'Load Selected Scores' button.
Select the PC number you want to plot.
Select whether you want to plot the scores traditionally, or if you want to plot only the positive or negative scores.
And Press the 'Plot PCA Scores' button.
This is the 'Scalebar Maker' panel. It allows the user to add a custom scale bar to the scores image.

The user must know the correct image size in pixels and microns for the scale bar to be accurate.

The image size in pixels is the pixel density (i.e. 256x256 pixels).

The image size in microns is the scan size used to acquire the image (i.e. 100x100 microns).
Press the 'Show Image Properties Panel' to bring up additional plot options.
The Image Properties panel has many options for modifying a plot. For now, let's enter the values for the X and Y image size in microns. This will enable us to use the 'Show Image Size' button in the 'Scalebar Maker.'
After entering the X and Y image size in microns we can press the 'Show Image Size' button and the program will autopopulate the 'Image size (pixels)' and 'Image size (microns)' boxes.

(You can also just enter the number manually).
All the boxes are filled in so we are ready to move to the next step.
Choose where you would like the scale bar to appear on the image.
Choose what color you want the scale bar to be.
Press the 'Add Scale Bar' button.
The scale bar is placed on the image in the location selected and in the chosen color.
10 micron
Let's add a title to the figure. Enter the title you want and press the 'Add Title' button.
The title is added to the figure.
X and Y axis labels can be added the same way using the appropriate fields and buttons.

Let's make the X-axis label capitalized.
The X-Axis label was changed.
The Y Axis label was added. Note that it changed the label that was there before to the label added from the Image Properties panel.
Once the image looks as desired it can be saved to an image file by pressing the 'Save Score Image' button.
Choose where the file should be saved, enter an appropriate name and press the 'Save' button.
You can also recreate the figure in an external window by pressing the 'Make Ext Figure' button.
The image is recreated in a Matlab figure window. This figure can be further modified and saved as desired using the menus at the top of the figure window.
A scores image can be added to the image overlay list by pressing the 'Add Score Image To Overlay List' button. This is particularly useful to enable overlaying PCs that show opposite contrast.
Pressing the 'Close Panel' button in the Plot Scores panel will close all open panels.
If we check in the image overlay panel we see the scores image has been added to the list of available images.
If we select it, the scores image is shown in the selected color channel.
## Data Selection Panel

<table>
<thead>
<tr>
<th>Name of Image Matrix</th>
<th>Name of Variable Matrix</th>
</tr>
</thead>
<tbody>
<tr>
<td>imagematrix-1</td>
<td>exactmass_matrix-1</td>
</tr>
</tbody>
</table>

That ends this tutorial. Press the button on the left to go back to the previous step. Press the button on the right to start the tutorial over.