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 demonstrate the Image Properties function.

The Image Properties Tools can be used with images generated using the Plot Image Data panel, Plot PCA Scores panel, Plot MAF Scores panel, and the Image Overlay panel.
The Image Properties panel can be opened using the Data Display menu. It can also be opened using a button located on the Plot PCA/MAF panels.
This is the Image Properties panel. It has several tools that can be used on a variety of images.
The figure label tools can be used on any image from the Plot Image Data, Plot PCA/MAF scores, or image overlay panels.
The Legend Maker for RGB Plots allows the user to add a colorbar legend to RGB plots. So it is only used with the Image Overlay panel.
The Set Image size (microns) tools allows the user to specify the size of the image in microns and then enable plotting the images on a micron scale.
The Colormap Changer allows the user to change the colormap of the active image. It is useful for the Plot Image Data and Plot PCA/MAF Scores panels. It cannot be used with RGB overlays because it would override the color channels from the RGB plots.
Let's first look at how to use the 'Image Properties' using an overlay image.

Once an image is created, choose 'Image Properties' from the 'Data Display' menu.
First let's change the title of the figure. Enter the desired text and press the 'Add Title' button.
The new title is added.
The title can be removed by pressing the 'Remove Title' button.
The title is gone.
The X and Y axis labels can also be modified the same way. Let's remove the X axis label by pressing the corresponding 'Remove X Label' button.
Now let's change the image so it is plotted on a micron scale. First enter the correct micron dimensions for X and Y and then check the 'Use micron scale' box.
To update the figure we have to recreate it.
The image is now plotted on a micron scale. To switch back to plotting on a pixel scale simply uncheck the 'Use micron scale' box and recreate the figure.
Now let's add a legend to the RGB plot. First enter the labels you want to use in the labels in the boxes.

1 = red channel  
2 = green channel  
3 = blue channel

The colors default to red, green and blue, but you can change them if you want. However, this is not recommended since it can result in complicated color mixing.

Check the boxes for the colors you want to use in the legend.
Press the 'Add Legend' button.
The legend is created with the labels entered above.
Now lets create an RG image by pressing the ‘Create RG’ button.
Uncheck the 'Use Label 3' and press the 'Add Legend' button.
## Image Properties

### Image Selection Panel

<table>
<thead>
<tr>
<th>Name of Image Matrix</th>
<th>Name of Variable Matrix</th>
</tr>
</thead>
<tbody>
<tr>
<td>imagedata_dan01</td>
<td>exactmass_dan01</td>
</tr>
</tbody>
</table>

### Figure Label Options

- **Figure Title**: [Add Title] [Remove Title]
- **X-Axis Label**: [Add X Label] [Rem X Label]
- **Y-Axis Label**: [Add Y Label] [Rem Y Label]

### Legend Maker for RGB Plots

- **Legend Label 1**: CN [Color 1] [Use In Legend]
- **Legend Label 2**: bars [Color 2] [Use In Legend]
- **Legend Label 3**: squares [Color 3] [Use In Legend]

### Colormap Changer

- Choose new colormap
- Choose on...

### Close Panel

## Scalebar Maker

- **Image size (pixels)**
- **Image size (microns)**
- **Scalebar location**: Choose an option
- **Scalebar color**: Choose a color

### Close Panel
Now let's learn about how to change the colormap. We will use the Plot PCA scores panel.

PC 1 Scores

PC Scores

Plot Options: Traditional

Show Scalebar Tools Panel

Show Image Properties Panel

Save Score Image

Make Ext Figure

Add Score Image To Overlay List

Close Panel
The colormap changer can be used to change the current colormap of the figure. Simply choose the color map you would like to use. Here we will choose 'Jet'.
and the figure is automatically updated.
The two color colormaps are particularly useful for score images. Score images have both positive and negative values so the two color colormaps use one color for positive and one color for negative with zero being black.

Let's try the red/green colormap.
This color map clearly distinguishes the positive and negative scores.
Now let's replot the scores using a pixel scale.
Uncheck the 'Use micron scale' box.
And replot the data by pressing the 'Plot PCA Scores' button.
The image is replotted using a pixel scale.
Remember the Image Properties functions can be used on almost all of the Imagegui’s figures.

If the 'Use micron scale' box is checked, then all images within the gui will be plotted using a micron scale.

The currently selected colormap is also used for all images within the Imagegui. The default colormap is 'hot'.
Data Selection Panel

Name of Image Matrix | Name of Variable Matrix
----------------------|-------------------------
imagedata_dan01       | exactmass_dan01

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.