

Data Selection Panel

Name of Image Matrix

Select Data ...

Name of Variable Matrix

Select Variables ...

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.



Data Selection Panel

Name of Image Matrix

Name of Variable Matrix

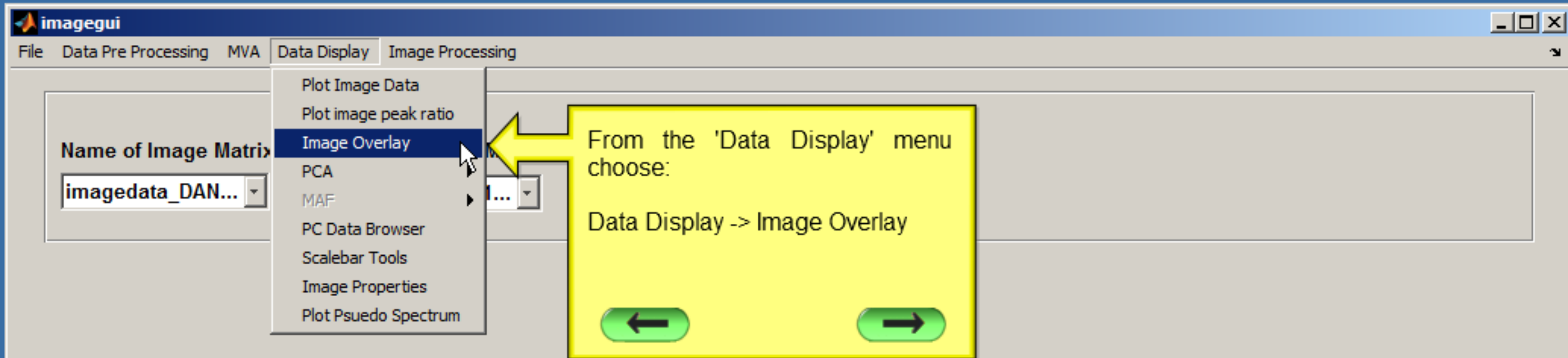
imagedata_dan01

exactmass_dan01

This tutorial will cover how to make RGB overlay plots within the Imagegui

RGB overlays can be made using individual peak images, or using combined sum images you have created using the 'Plot Image Data' panel.





Data Selection Panel

Name of Image Matrix

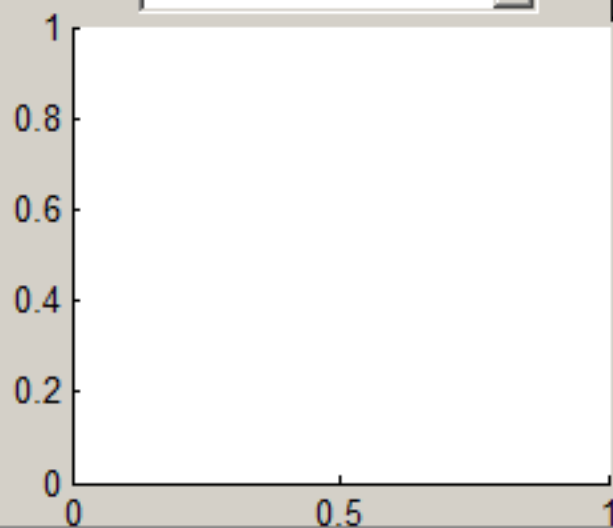
imagedata_DAN...

Name of Variable Matrix

exactmass_DAN01...

RED

Choose A Peak...



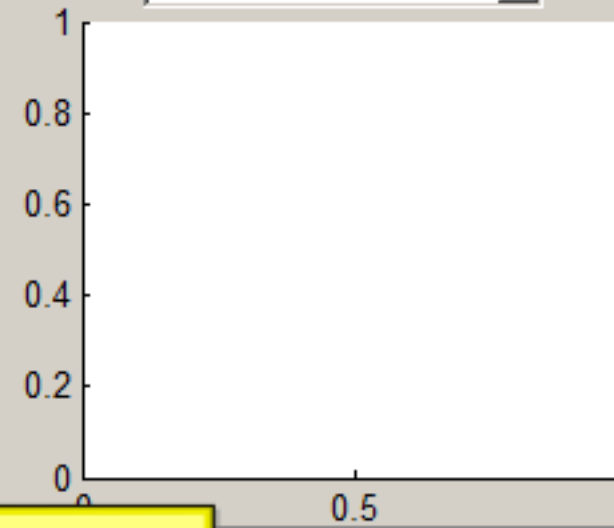
GREEN

Choose A Peak...



BLUE

Choose A Peak...



Create R G B

Create R G

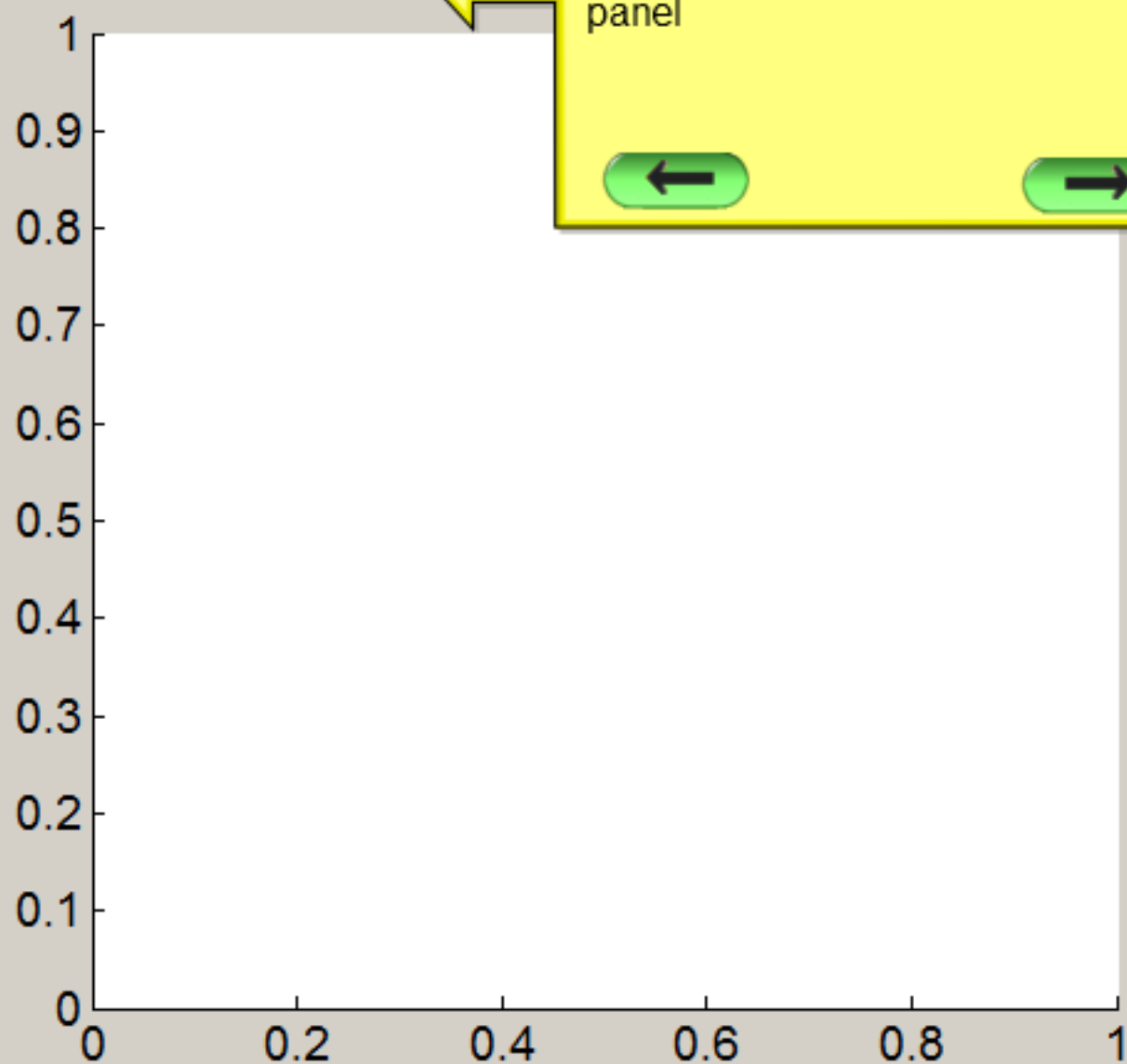
Create R B

Create G B

Save Overlay

Make Ext

Close Panel



This brings up the Image Overlay panel



Data Selection Panel

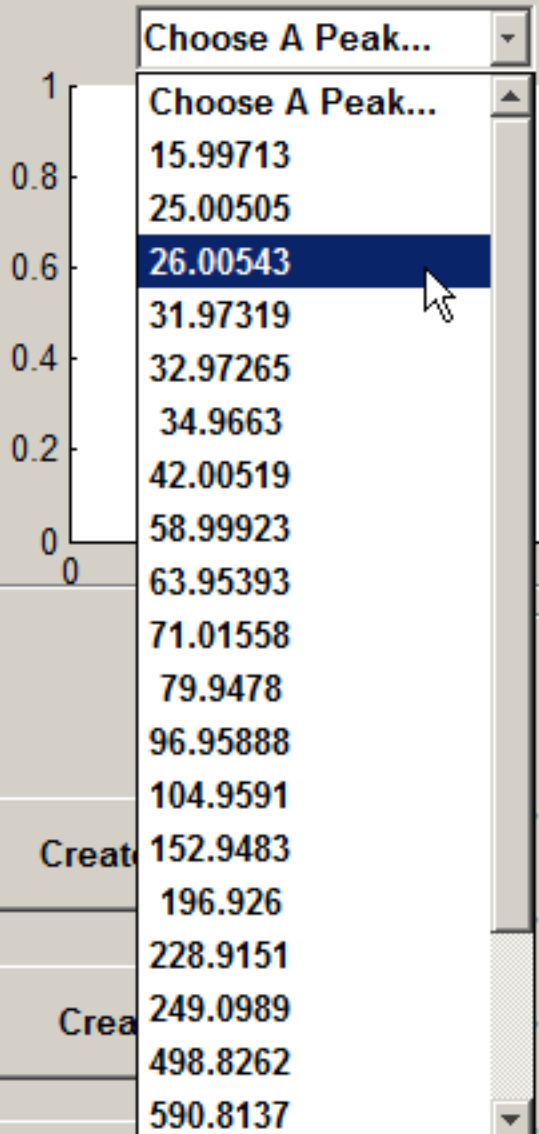
Name of Image Matrix

imagedata_DAN...

Name of Variable Matrix

exactmass_DAN01...

RED



Create

Create

Create R B

Create G B

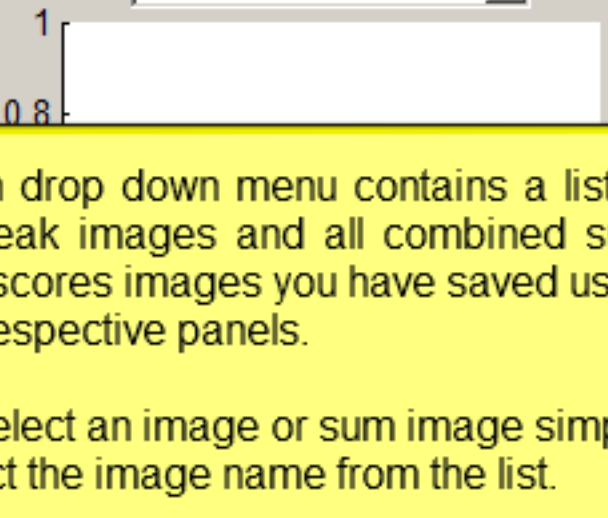
Save Overlay

Make Ext

Close Panel

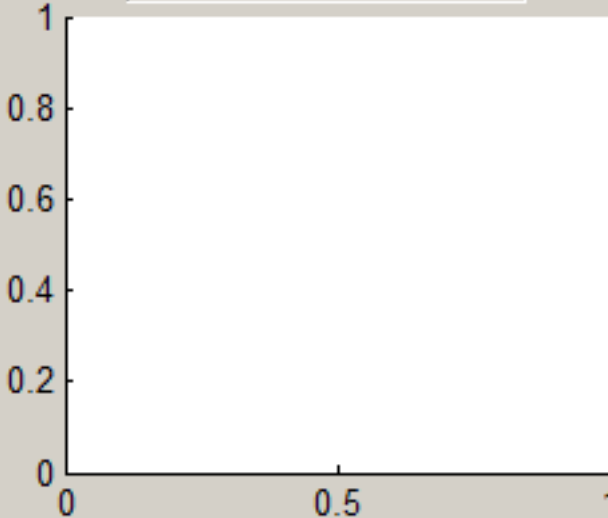
GREEN

Choose A Peak...



BLUE

Choose A Peak...



Each drop down menu contains a list of all peak images and all combined sum and scores images you have saved using the respective panels.

To select an image or sum image simply select the image name from the list.

A preview image will be shown on the axes below the drop down menu.



Data Selection Panel

Name of Image Matrix

imagedata_DAN...

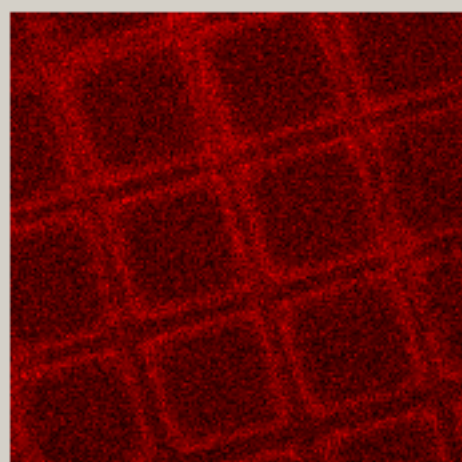
Name of Variable Matrix

exactmass_DAN01...

RED

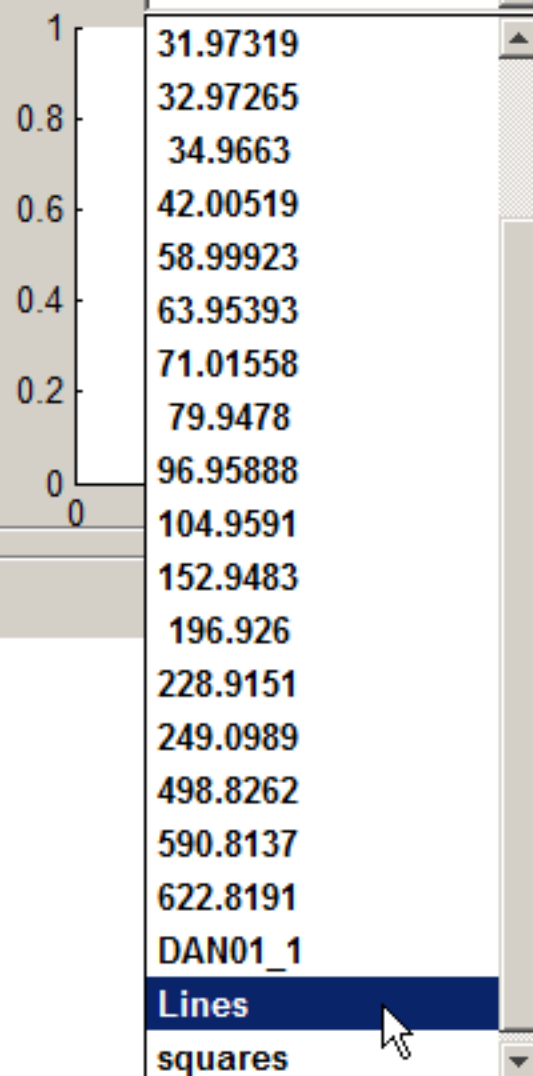
26.00543

26.0054



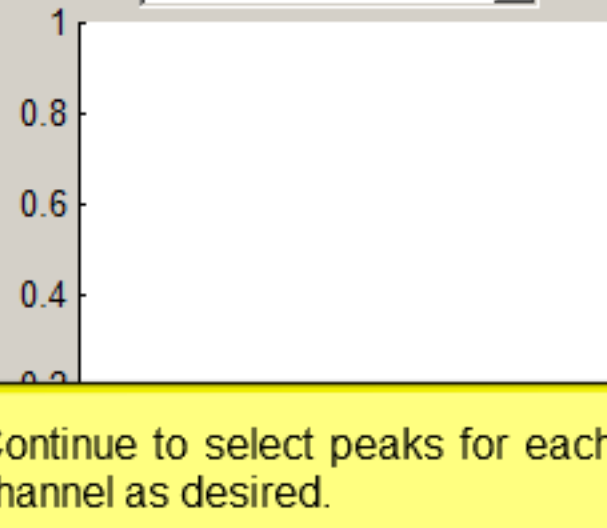
GREEN

Choose A Peak...



BLUE

Choose A Peak...



Continue to select peaks for each channel as desired.



Create R G B

Create R G

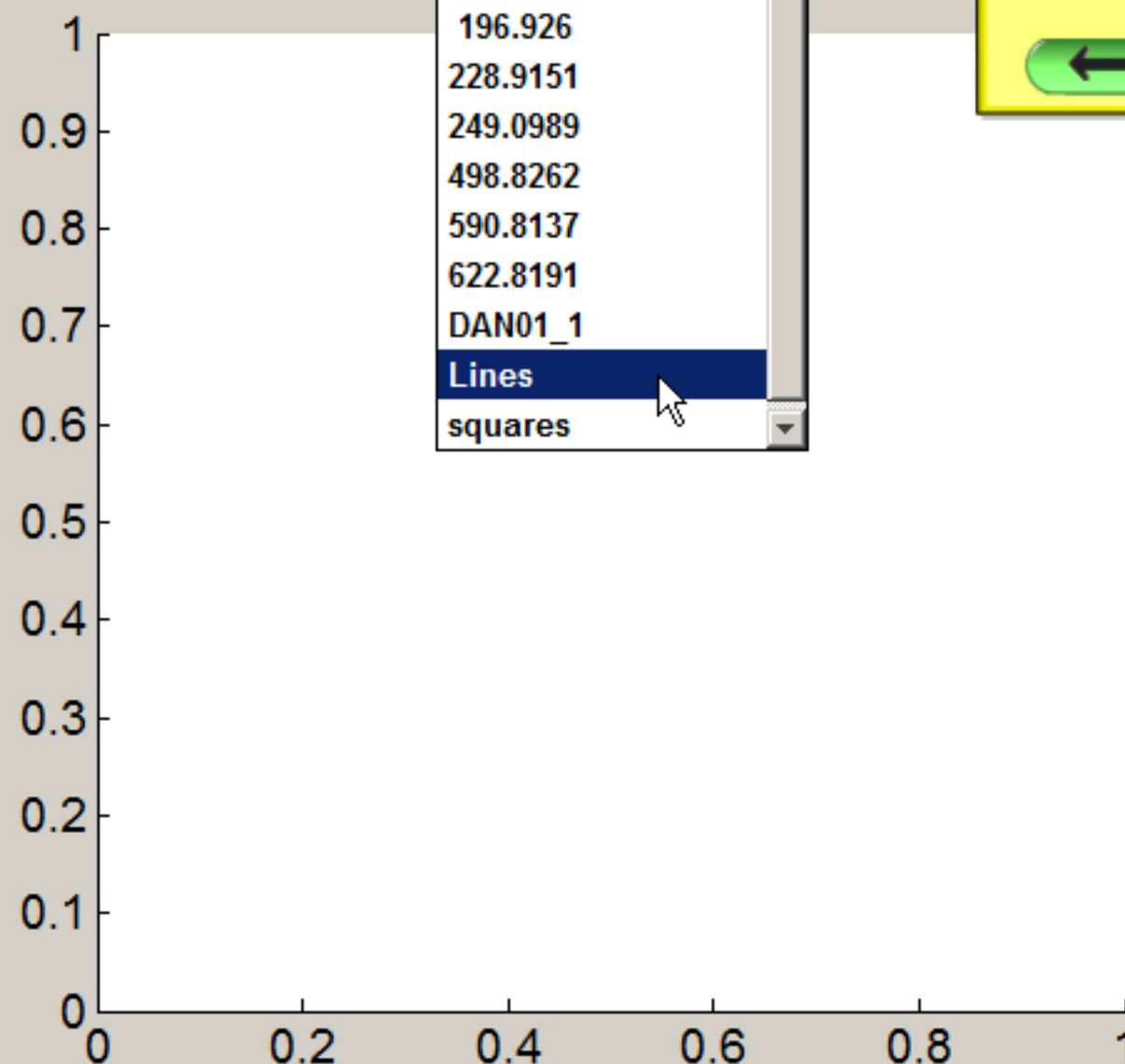
Create R B

Create G B

Save Overlay

Make Ext

Close Panel



Data Selection Panel

Name of Image Matrix

imagedata_DAN...

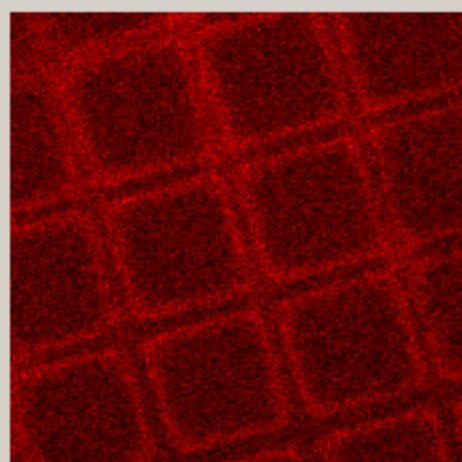
Name of Variable Matrix

exactmass_DAN01...

RED

26.00543

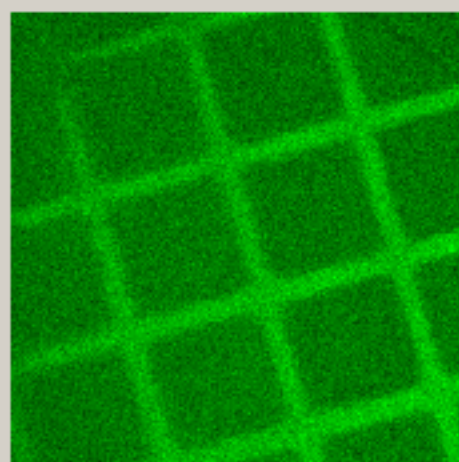
26.0054



GREEN

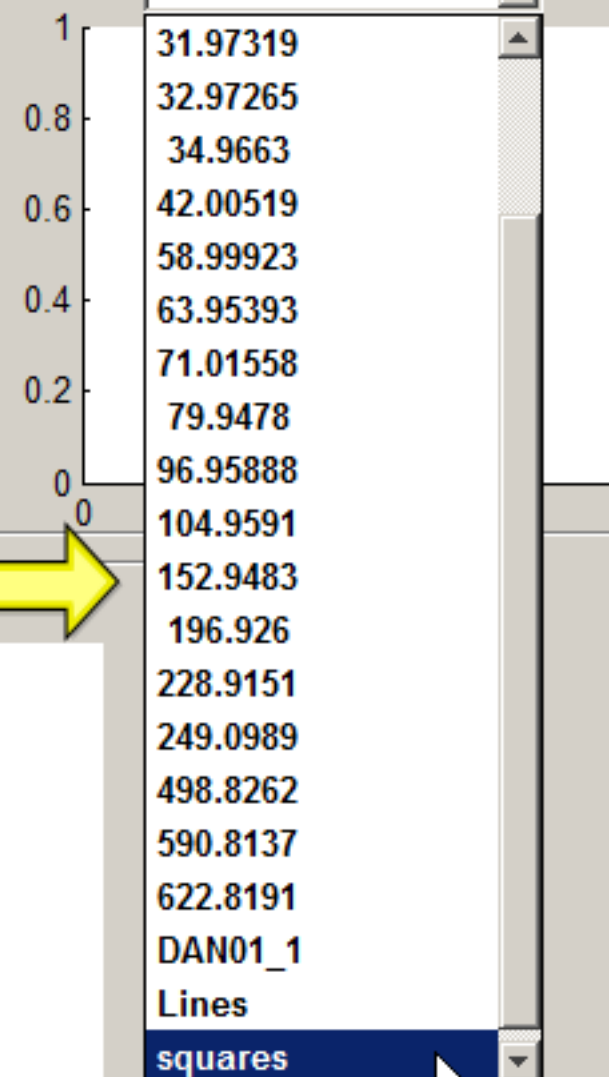
Lines

Lines



BLUE

Choose A Peak...



You do not have to choose an image for each color channel, but if you do not select a color for a given channel you will not be able to create an overlay that uses that channel.

For this tutorial we will use all color channels.



Create R G B

Create R G

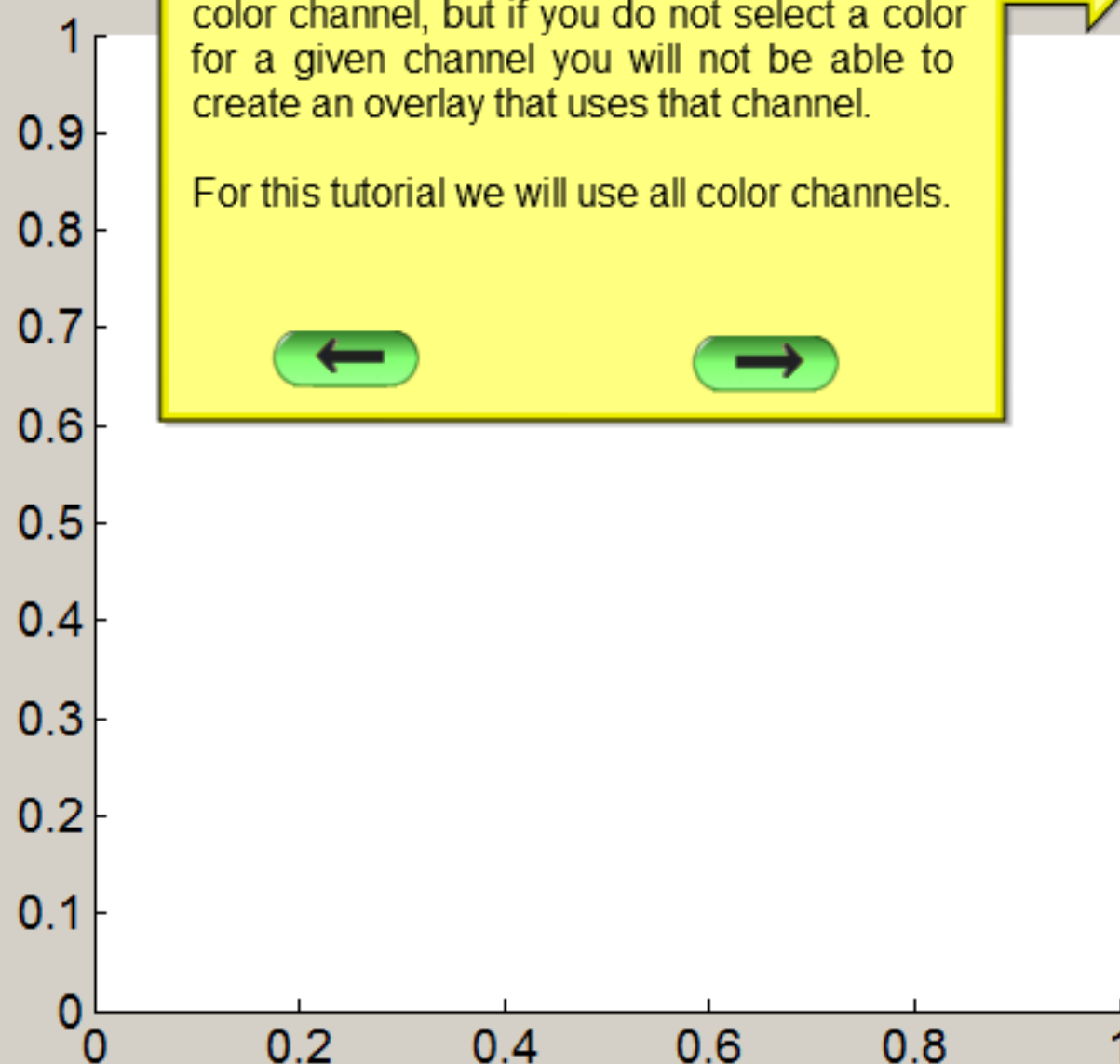
Create R B

Create G B

Save Overlay

Make Ext

Close Panel



Data Selection Panel

Name of Image Matrix

imagedata_DAN...

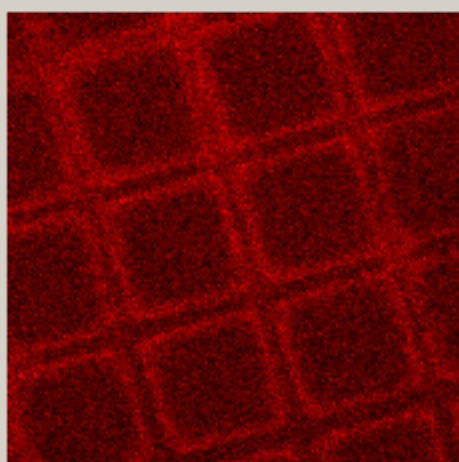
Name of Variable Matrix

exactmass_DAN01...

RED

26.00543

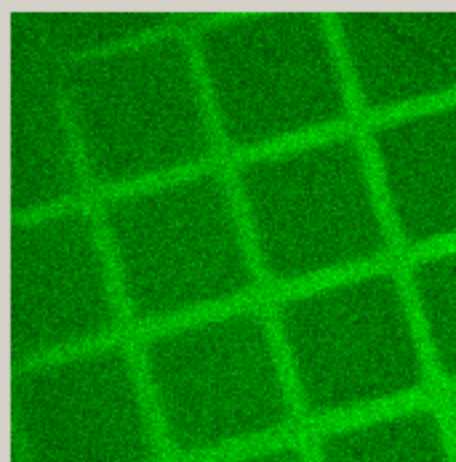
26.0054



GREEN

Lines

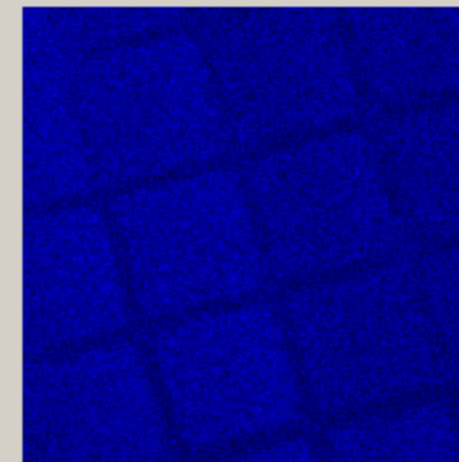
Lines



BLUE

squares

squares



Create R G B

Create R G

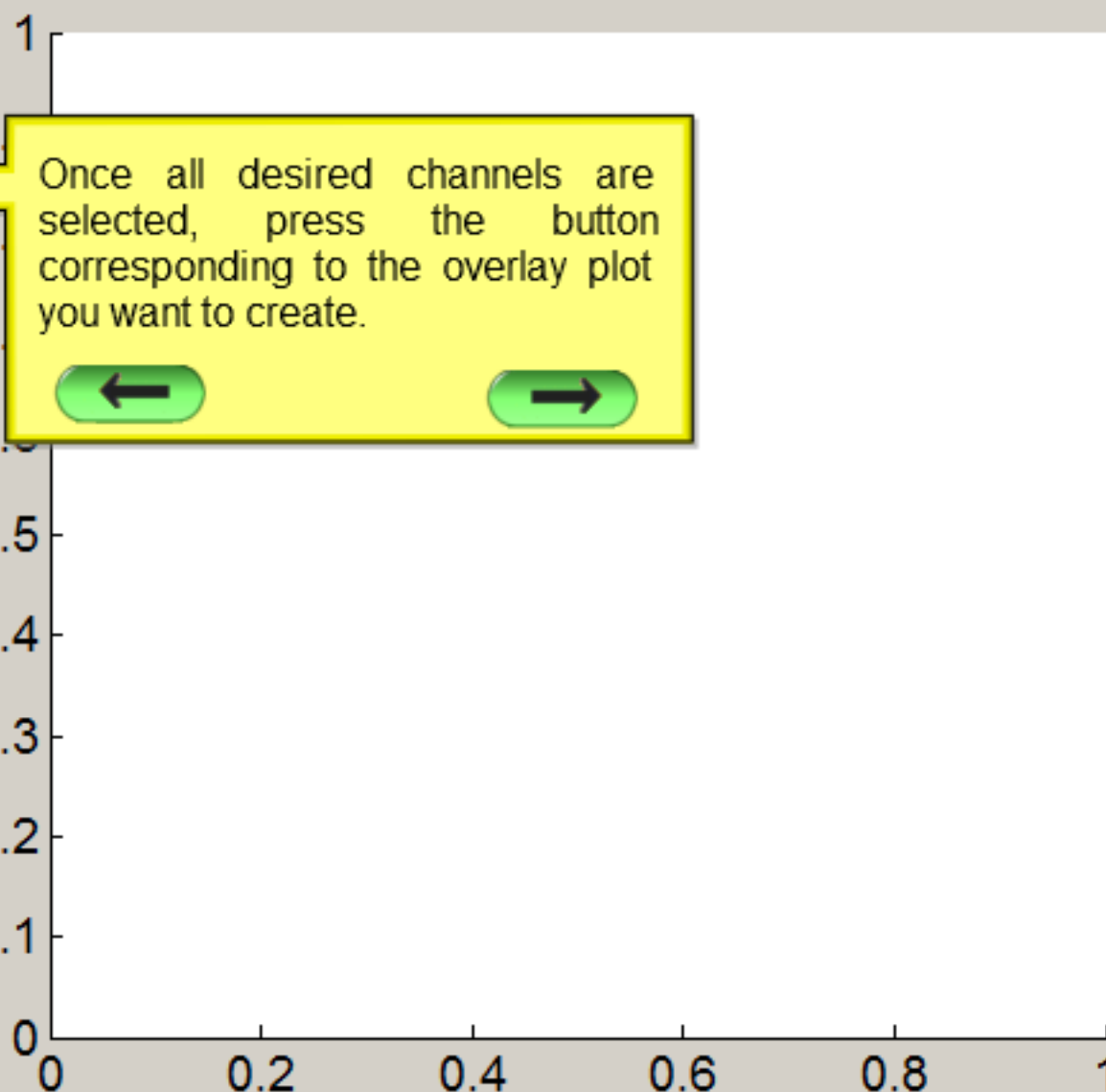
Create R B

Create G B

Save Overlay

Make Ext

Close Panel



Once all desired channels are selected, press the button corresponding to the overlay plot you want to create.



Data Selection Panel

Name of Image Matrix

imagedata_DAN...

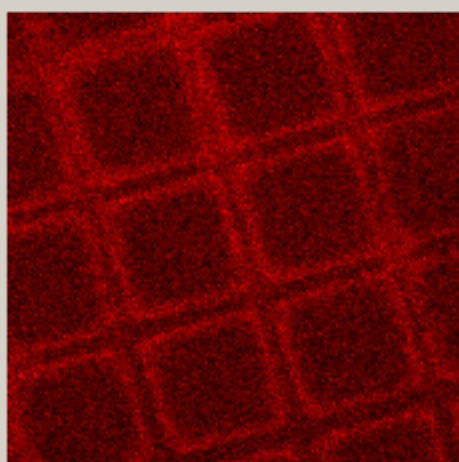
Name of Variable Matrix

exactmass_DAN01...

RED

26.00543

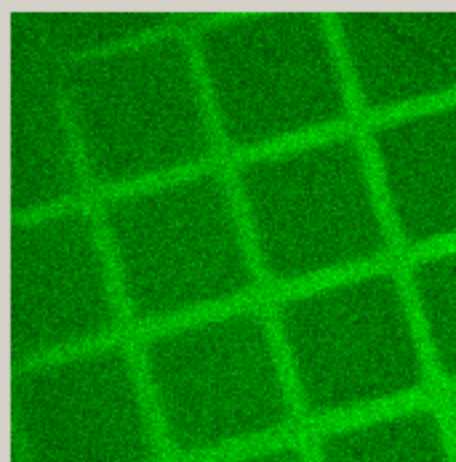
26.0054



GREEN

Lines

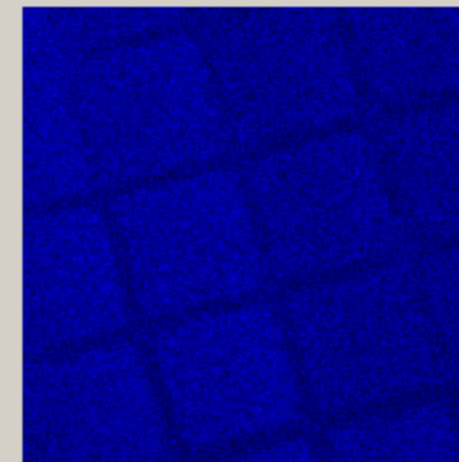
Lines



BLUE

squares

squares



Create R G B

Create R G

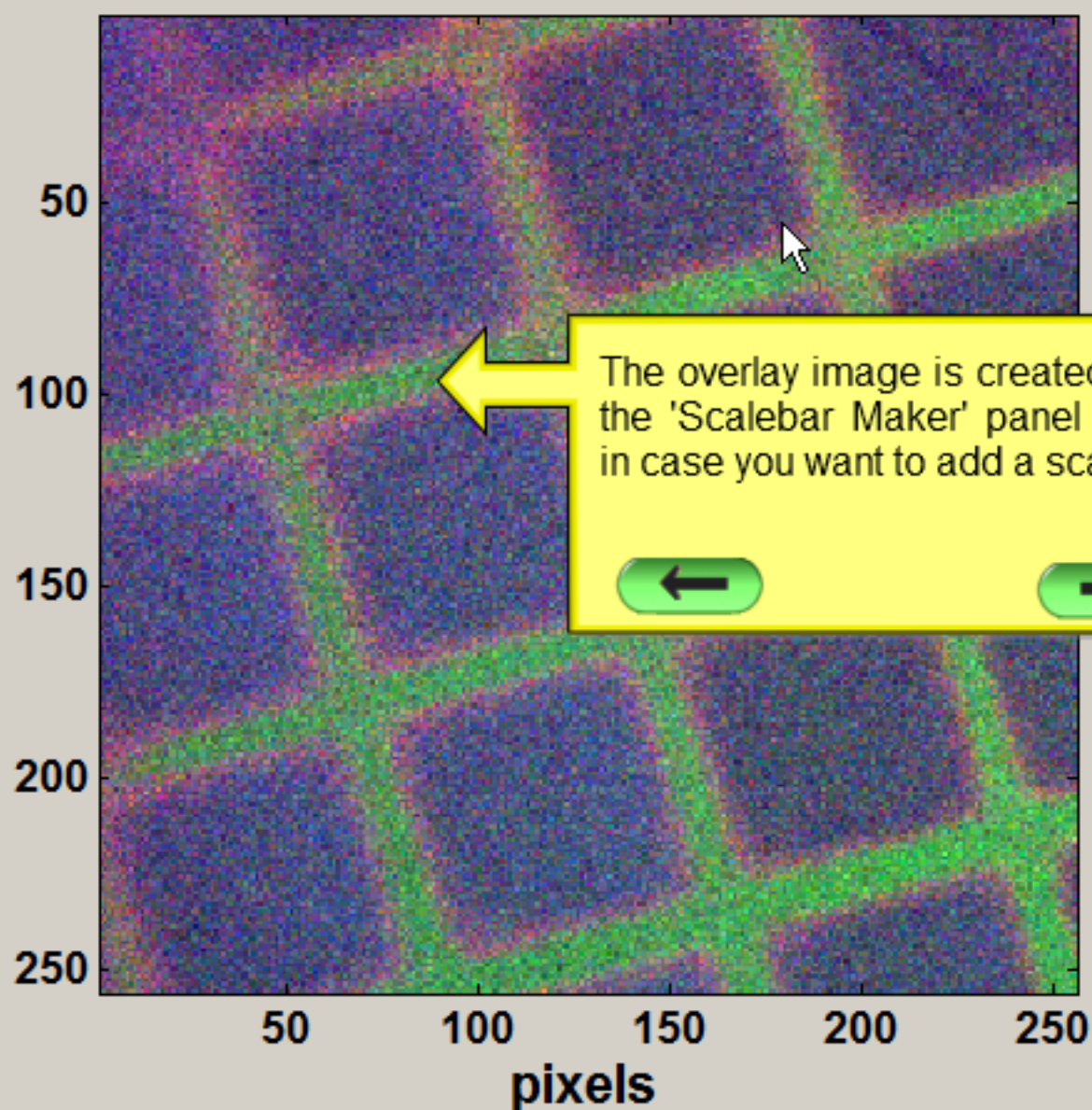
Create R B

Create G B

Save Overlay

Make Ext

Close Panel



Scalebar Maker

Show Image Size

Image size (pixels)

X

Y

Image size (microns)

X

Y

Scalebar location

Choose an option

Scalebar color

Choose a color

Add Scale Bar

Close panel

Data Selection Panel

Name of Image Matrix

imagedata_DAN...

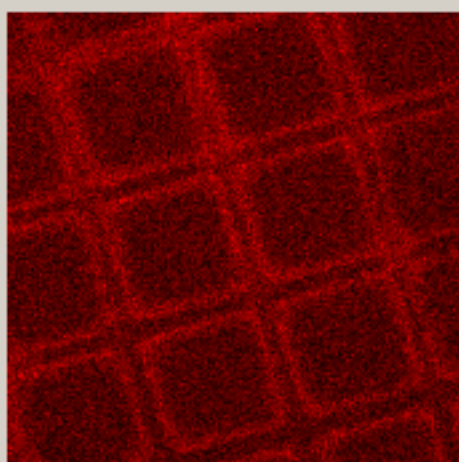
Name of Variable Matrix

exactmass_DAN01...

RED

26.00543

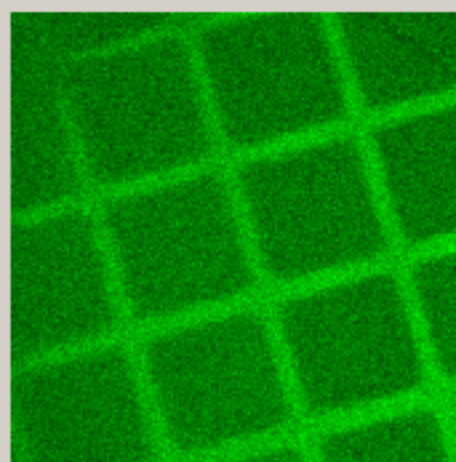
26.0054



GREEN

Lines

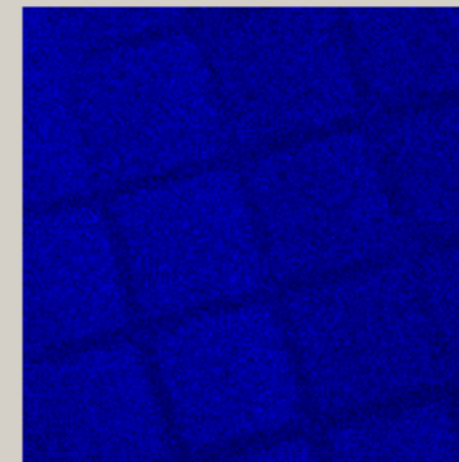
Lines



BLUE

squares

squares



Create R G B

Create R G

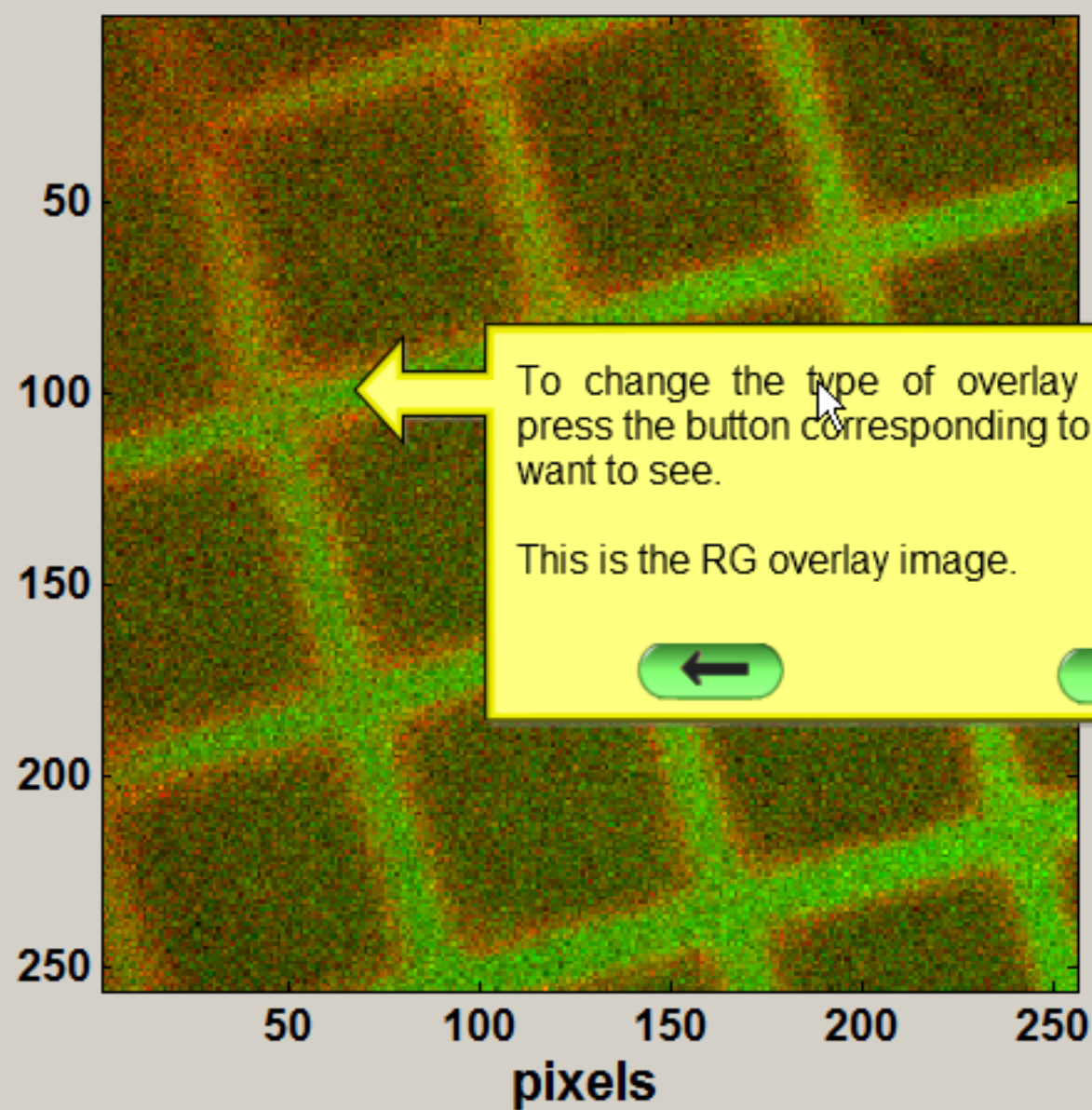
Create R B

Create G B

Save Overlay

Make Ext

Close Panel



To change the type of overlay plot simply press the button corresponding to the plot you want to see.

This is the RG overlay image.

Scalebar Maker

Show Image Size

Image size (pixels)

X

Y

Image size (microns)

X

Y

Scalebar location

Choose an option

Scalebar color

Choose a color

Add Scale Bar

Close panel

Data Selection Panel

Name of Image Matrix

imagedata_DAN...

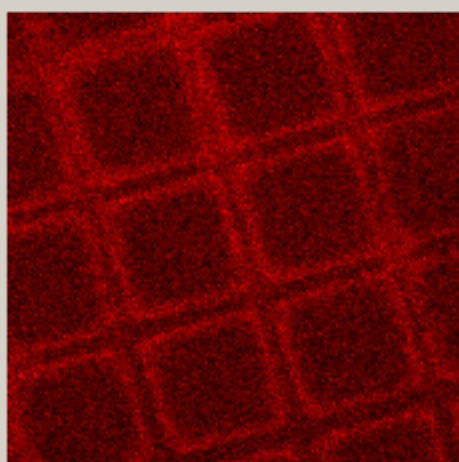
Name of Variable Matrix

exactmass_DAN01...

RED

26.00543

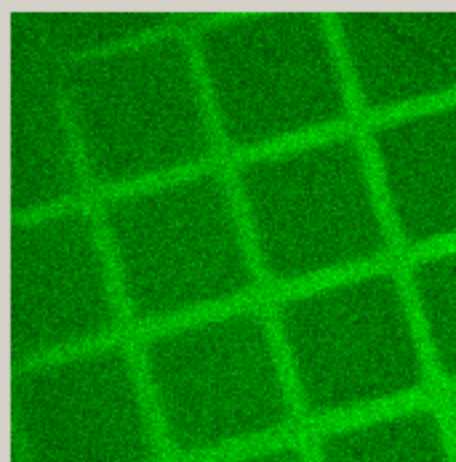
26.0054



GREEN

Lines

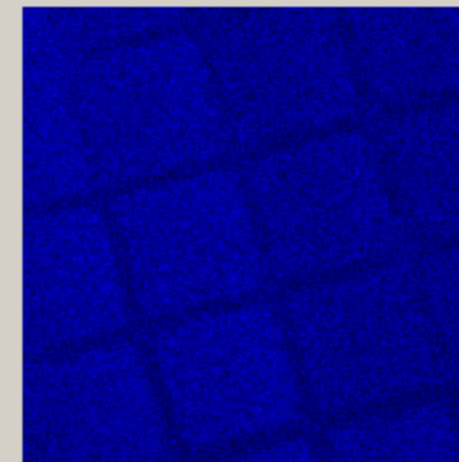
Lines



BLUE

squares

squares



Create R G B

Create R G

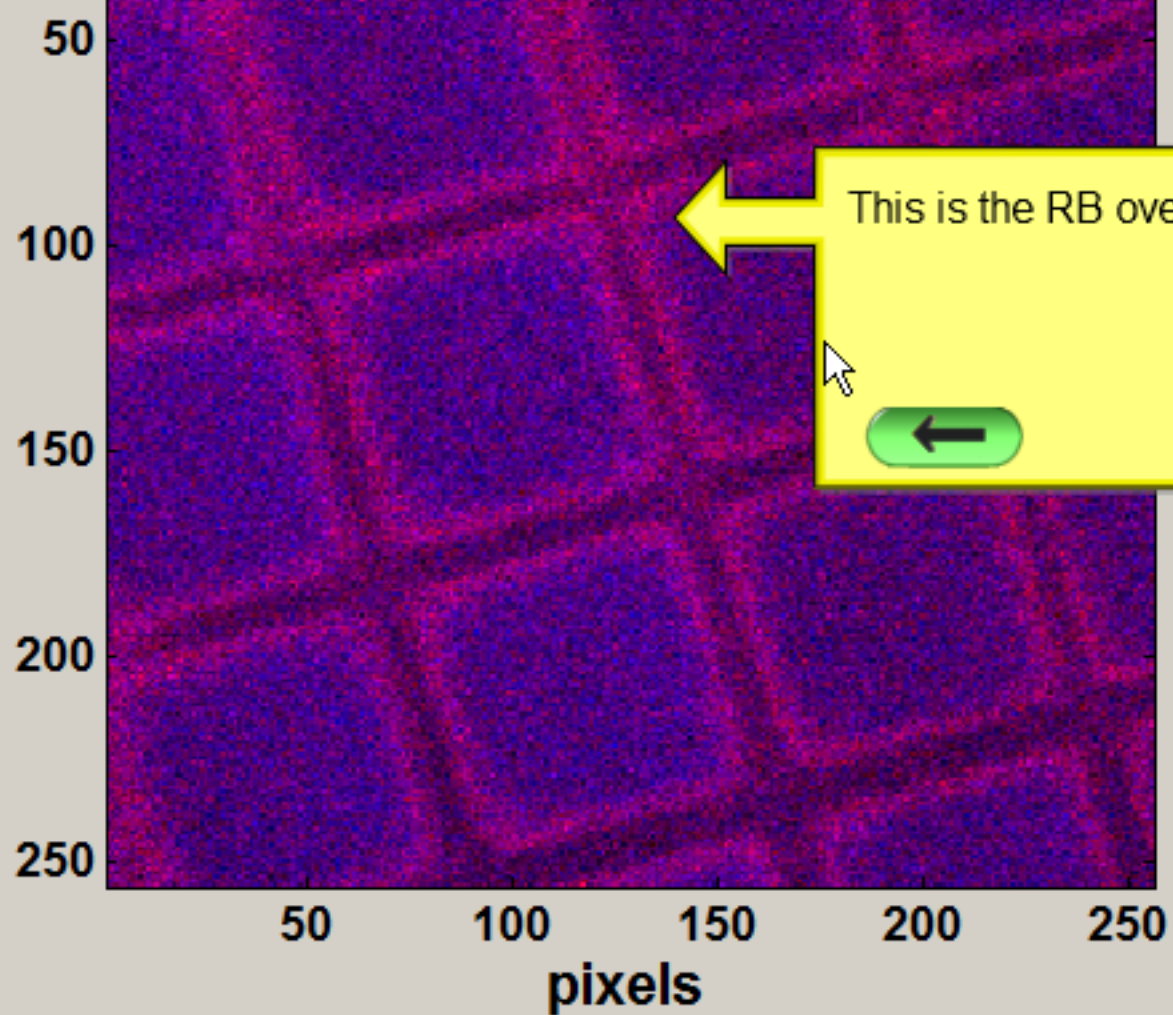
Create R B

Create G B

Save Overlay

Make Ext

Close Panel



Scalebar Maker

Show Image Size

Image size (pixels)

X

Y

Image size (microns)

X

Y

Scalebar location

Choose an option

Scalebar color

Choose a color

Add Scale Bar

Close panel

Data Selection Panel

Name of Image Matrix

imagedata_DAN...

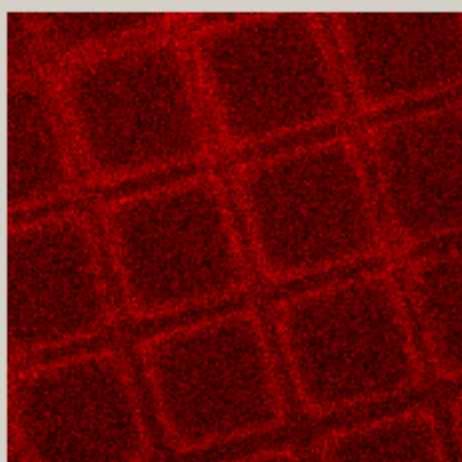
Name of Variable Matrix

exactmass_DAN01...

RED

26.00543

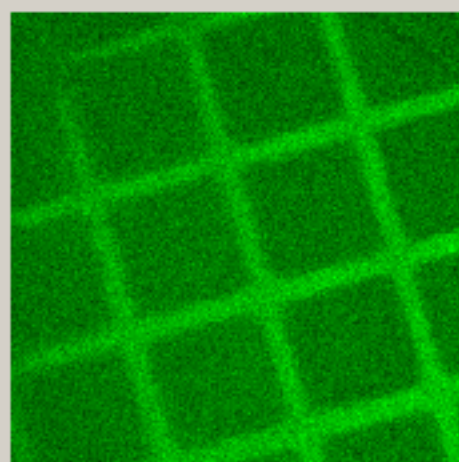
26.0054



GREEN

Lines

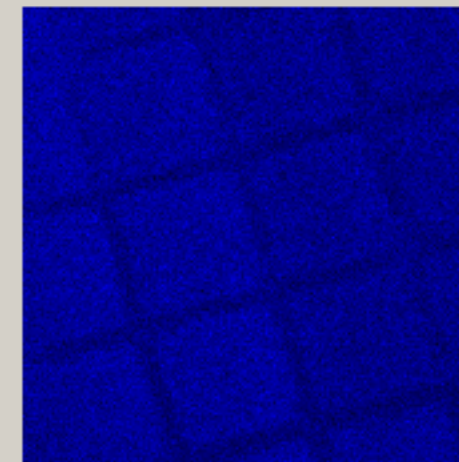
Lines



BLUE

squares

squares



Create R G B

Create R G

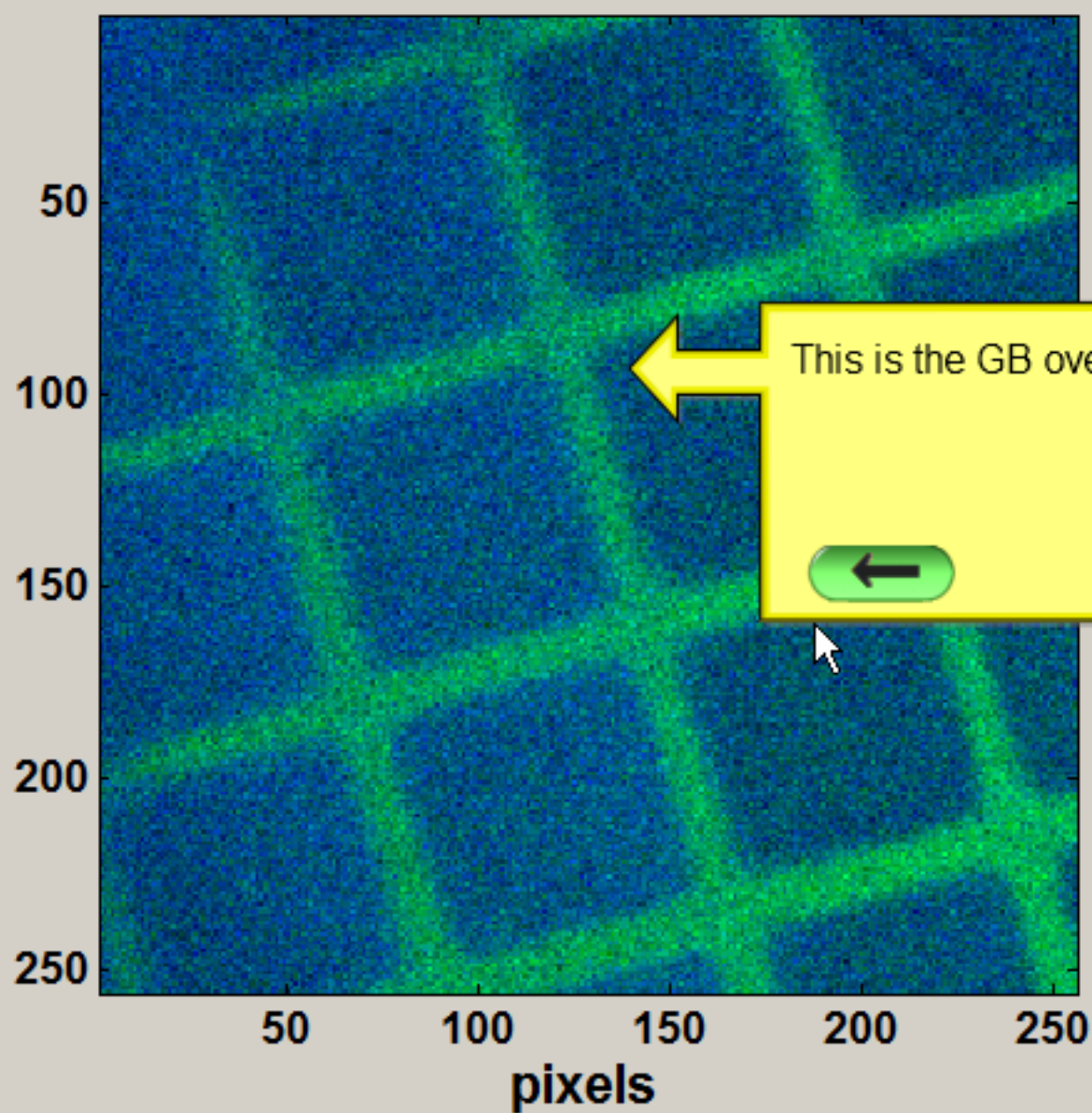
Create R B

Create G B

Save Overlay

Make Ext

Close Panel



This is the GB overlay Image.

Scalebar Maker

Show Image Size

Image size (pixels)

X

Y

Image size (microns)

X

Y

Scalebar location

Choose an option

Scalebar color

Choose a color

Add Scale Bar

Close panel

Data Selection Panel

Name of Image Matrix

imagedata_DAN...

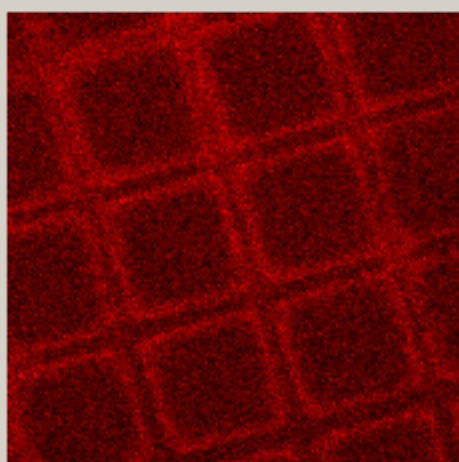
Name of Variable Matrix

exactmass_DAN01...

RED

26.00543

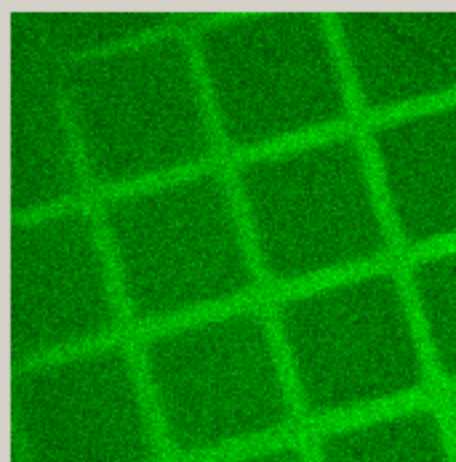
26.0054



GREEN

Lines

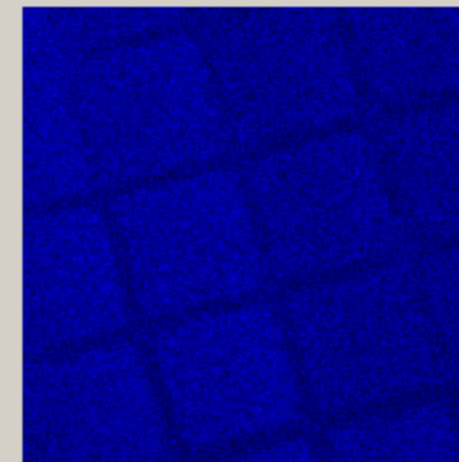
Lines



BLUE

squares

squares



Create R G B

Create R G

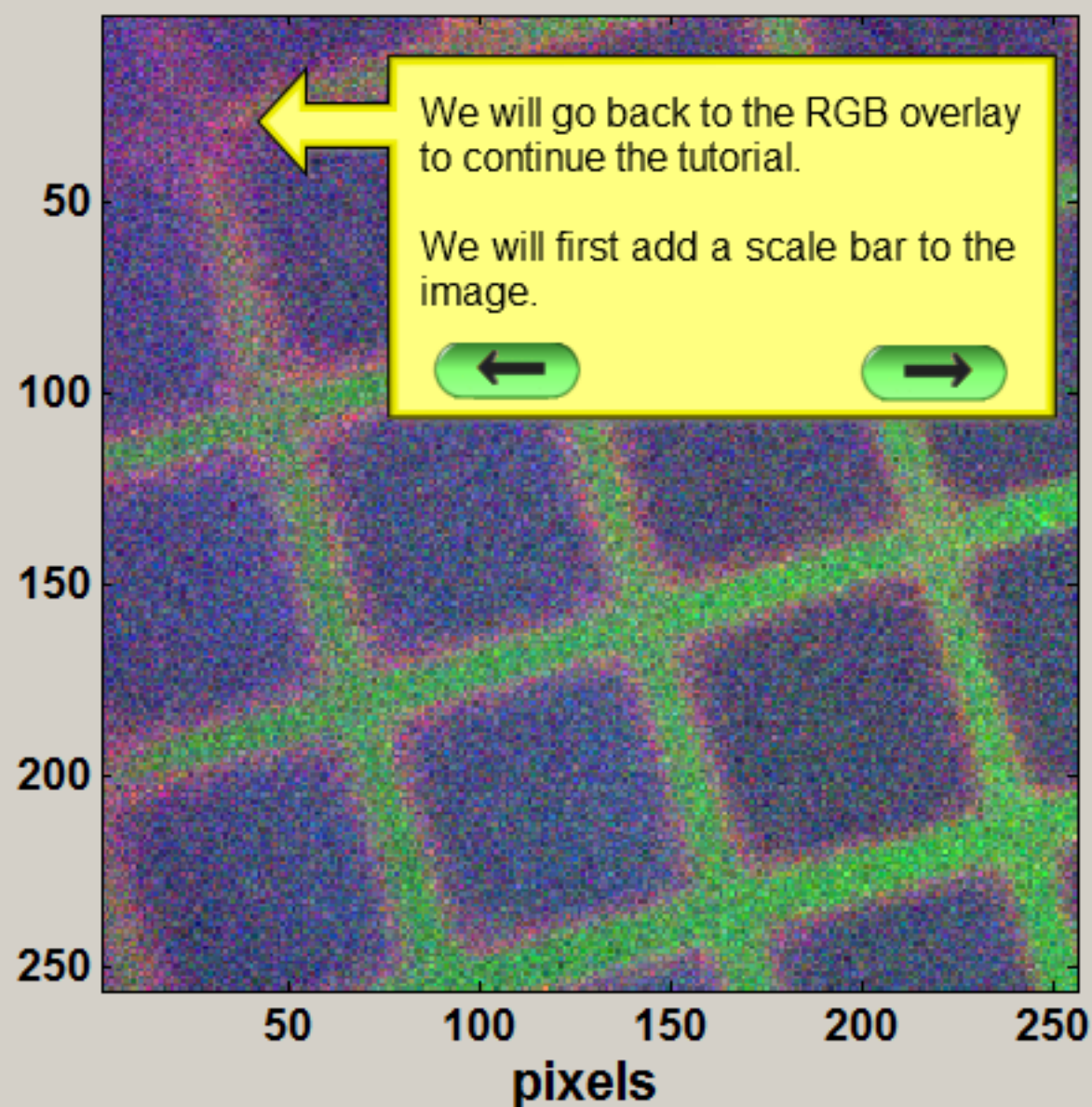
Create R B

Create G B

Save Overlay

Make Ext

Close Panel



Scalebar Maker

Show Image Size

Image size (pixels)

X

Y

Image size (microns)

X

Y

Scalebar location

Choose an option

Scalebar color

Choose a color

Add Scale Bar

Close panel

Data Selection Panel

Name of Image Matrix

imagedata_DAN...

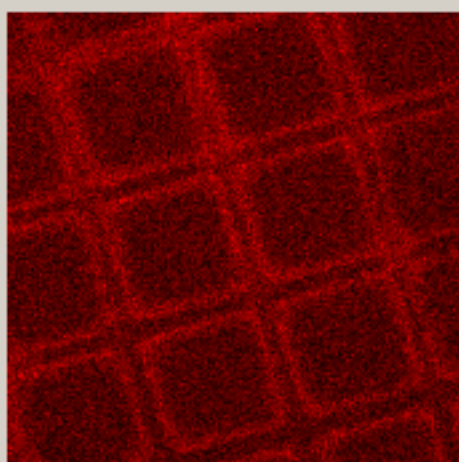
Name of Variable Matrix

exactmass_DAN01...

RED

26.00543

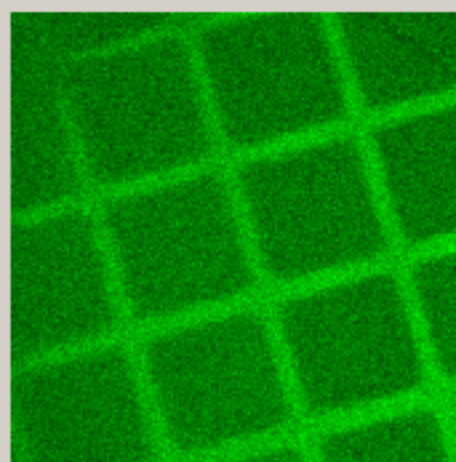
26.0054



GREEN

Lines

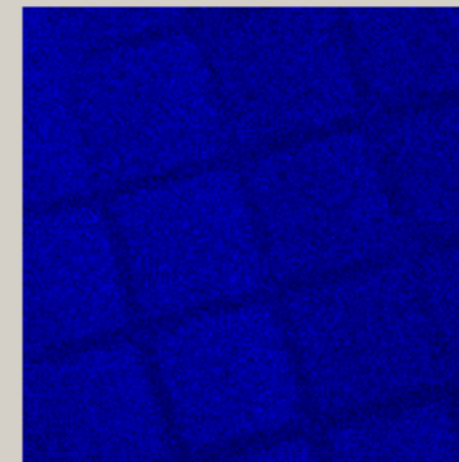
Lines



BLUE

squares

squares



Create R G B

Create R G

Create R B

Create G B

Save Overlay

Make Ext

Close Panel

50

100

150

200

250

This is the 'Scalebar Maker' panel. It allows the user to add a custom scale bar to the scores image.

If you have entered the image size in microns into the image properties panel you can simply press the 'Show Image Size' button to fill in the boxes below. Otherwise you must fill them in manually.

The image size in pixels is the pixel density (i.e. 256x256 pixels). If the image is not square simply enter the correct X and Y pixel dimensions for the image.

The image size in microns is the scan size used to acquire the image (i.e. 100x100 microns). If the image is not square simply enter the correct X and Y micron dimensions for the image.



50

100

150

200

250

pixels

Scalebar Maker

Show Image Size

Image size (pixels)

X

Y

Image size (microns)

X

Y

Scalebar location

Choose an option



Scalebar color

Choose a color



Add Scale Bar

Close panel

Data Selection Panel

Name of Image Matrix

imagedata_DAN...

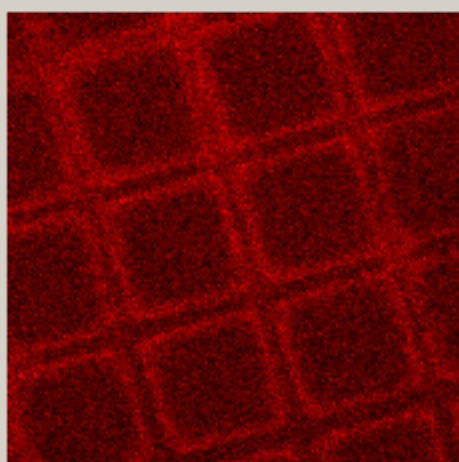
Name of Variable Matrix

exactmass_DAN01...

RED

26.00543

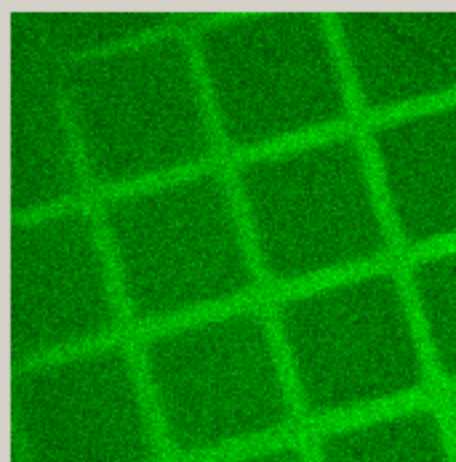
26.0054



GREEN

Lines

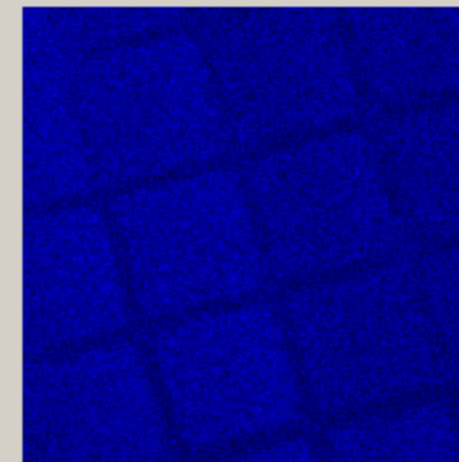
Lines



BLUE

squares

squares



Create R G B

Create R G

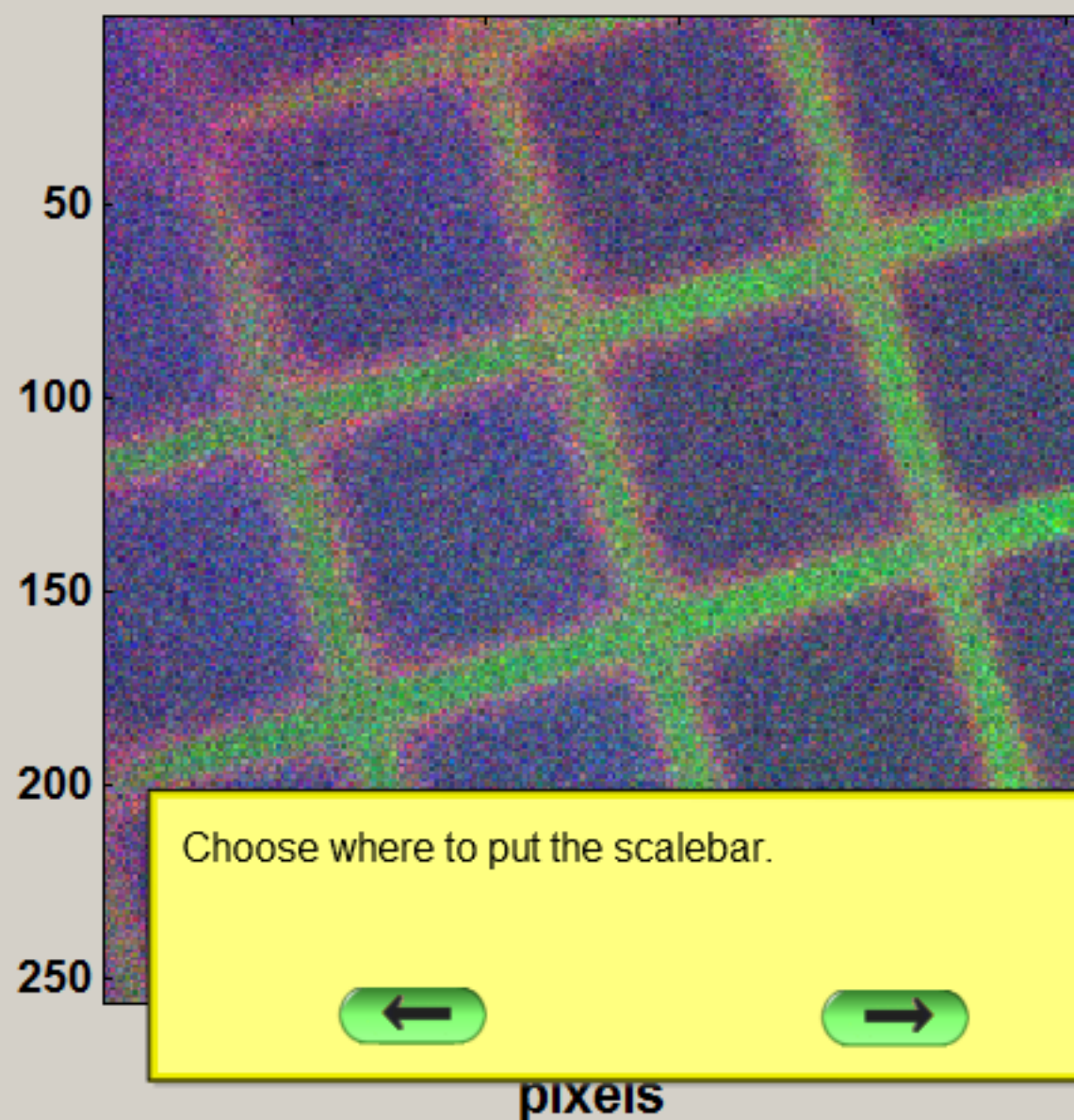
Create R B

Create G B

Save Overlay

Make Ext

Close Panel



Scalebar Maker

Show Image Size

Image size (pixels)

X 256

Y 256

Image size (microns)

X 100

Y 100

Scalebar location

Choose an option
Choose an option
Top Right
Top Left
Bottom Right
Bottom Left

Add Scale Bar

Close panel

Data Selection Panel

Name of Image Matrix

imagedata_DAN...

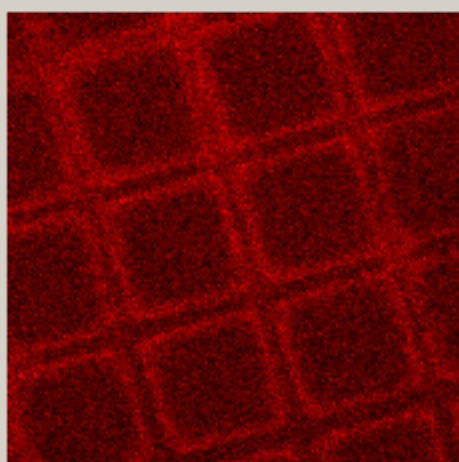
Name of Variable Matrix

exactmass_DAN01...

RED

26.00543

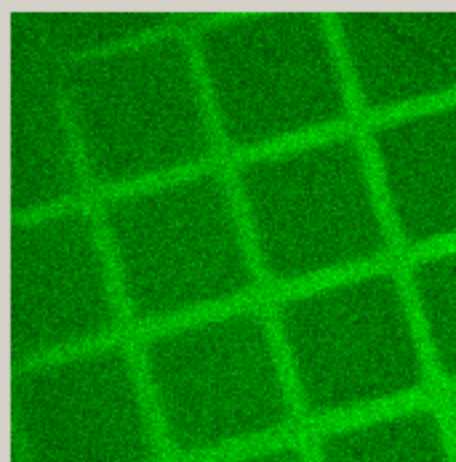
26.0054



GREEN

Lines

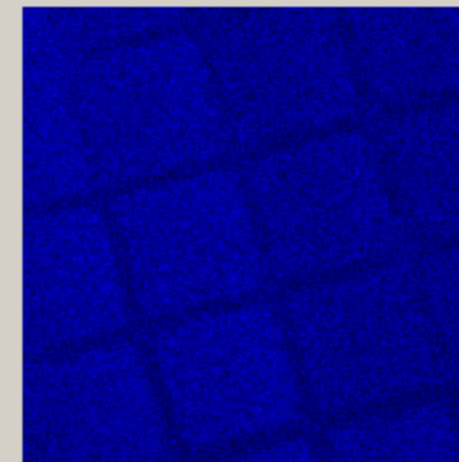
Lines



BLUE

squares

squares



Create R G B

Create R G

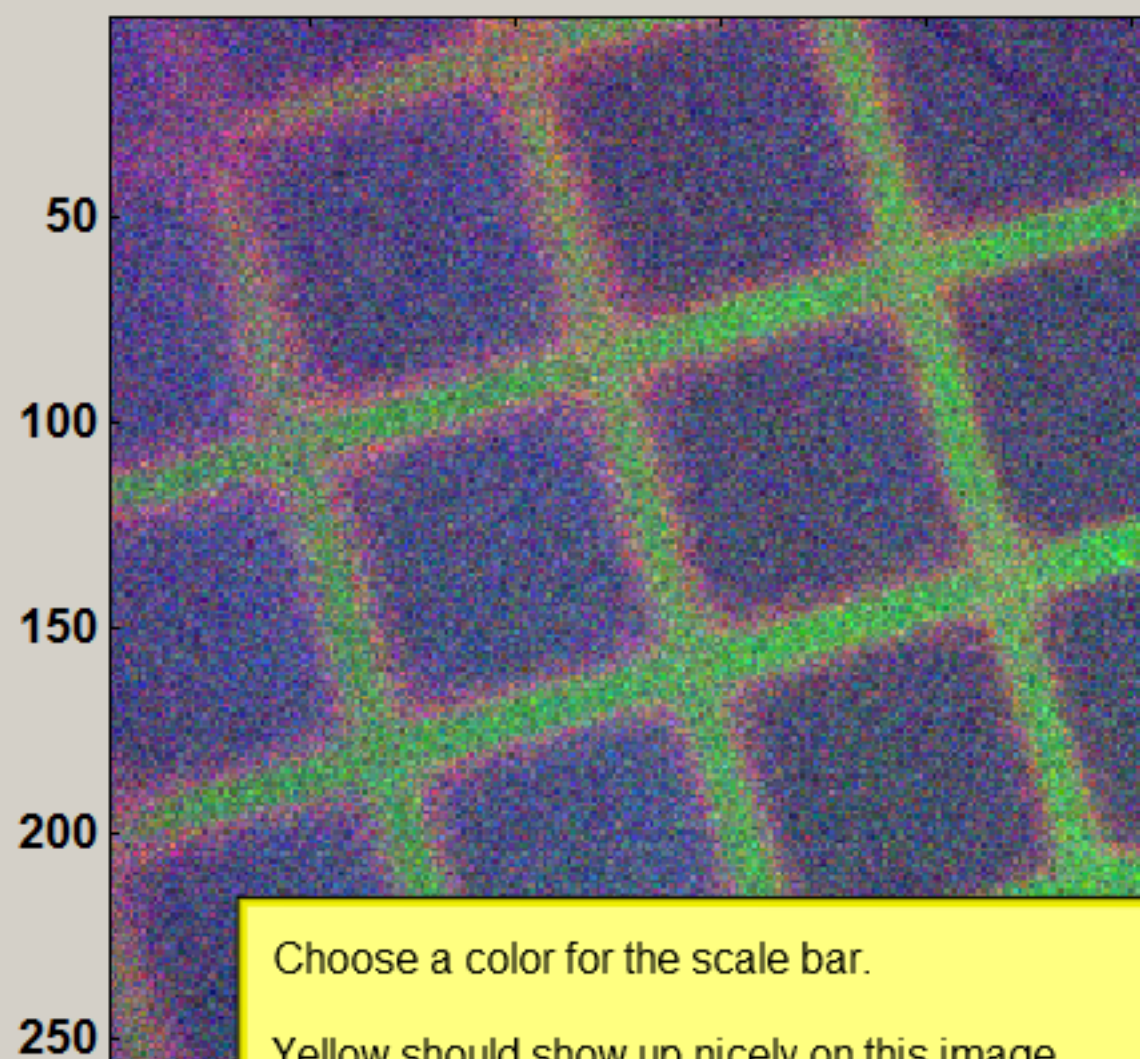
Create R B

Create G B

Save Overlay

Make Ext

Close Panel



Choose a color for the scale bar.

Yellow should show up nicely on this image.

Scalebar Maker

Show Image Size

Image size (pixels)

X 256

Y 256

Image size (microns)

X 100

Y 100

Scalebar location

Bottom Right

Scalebar color

Choose a color

Choose a color

Blue

Green

Red

Cyan

Magenta

Yellow

Black

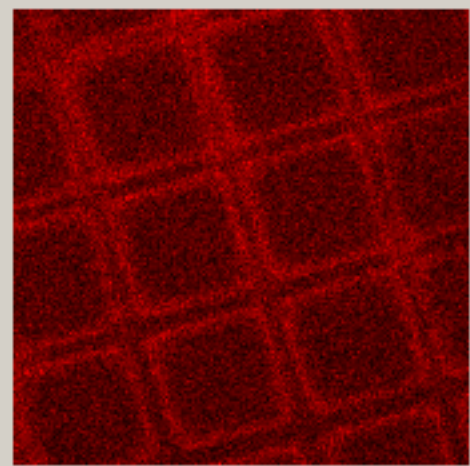
Name of Image Matrix

imagedata_DAN...

- Plot Image Data
- Plot image peak ratio
- Image Overlay
- PCA
- MAF
- PC Data Browser
- Scalebar Tools
- Image Properties**
- Plot Psuedo Spectrum

Data Selection Panel

26.0



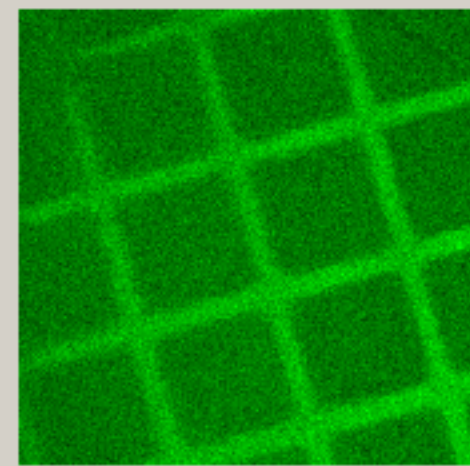
26.0054

Matrix

...

GREEN

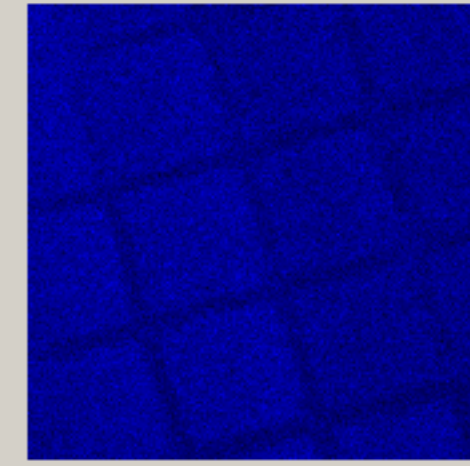
Lines



Lines

BLUE

squares



squares

Create R G B

Create R G

Create R B

Create G B

Save Overlay

Make Ext

Close Panel

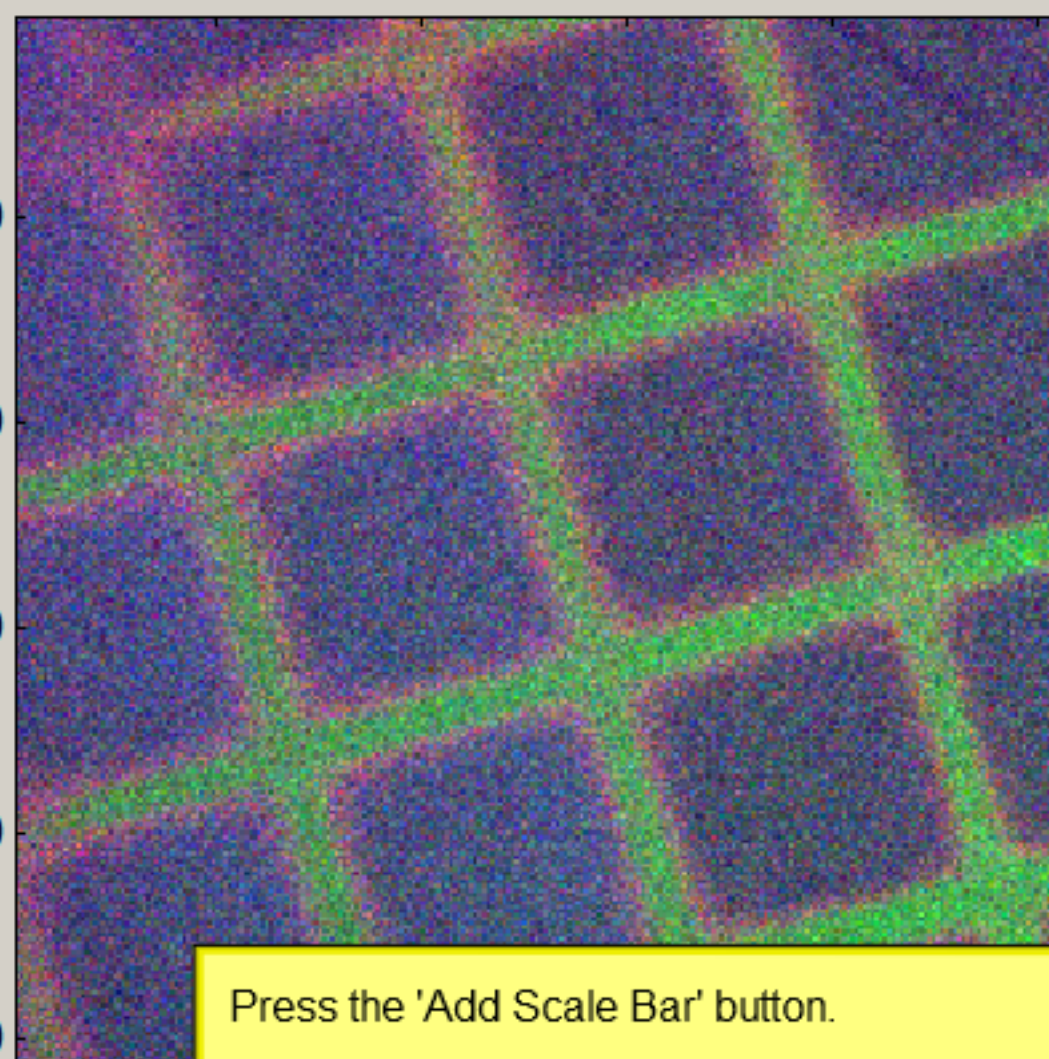
50

100

150

200

250



Press the 'Add Scale Bar' button.

Scalebar Maker

Show Image Size

Image size (pixels)

X 256

Y 256

Image size (microns)

X 100

Y 100

Scalebar location

Bottom Right

Scalebar color

Yellow

Add Scale Bar

Close panel



Name of Image Matrix

imagedata_DAN...

- Plot Image Data
- Plot image peak ratio
- Image Overlay
- PCA
- MAF
- PC Data Browser
- Scalebar Tools
- Image Properties**
- Plot Psuedo Spectrum

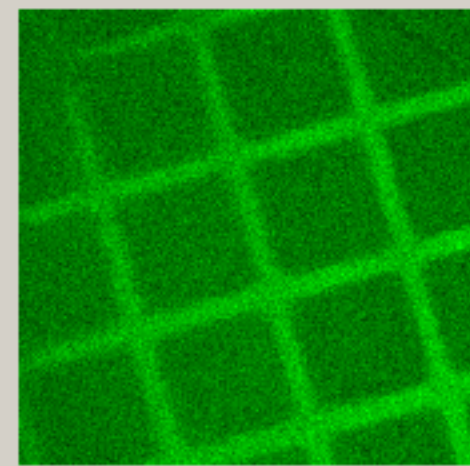
Data Selection Panel

Matrix

...

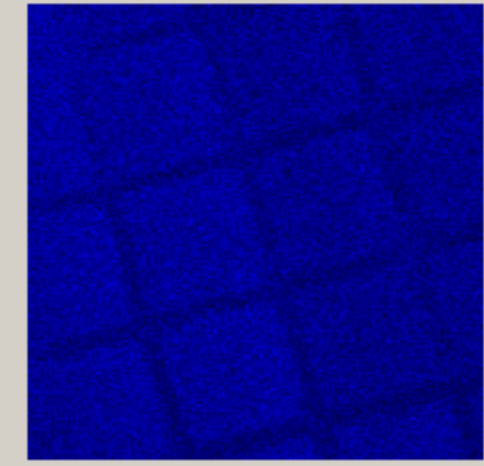
GREEN

Lines

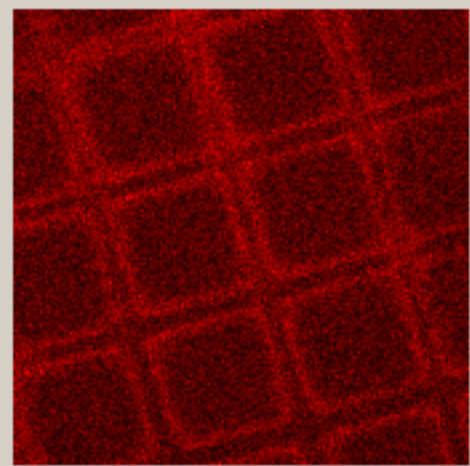


BLUE

squares



26.0



26.0054

Lines

squares

Create R G B

Create R G

Create R B

Create G B

Save Overlay

Ma

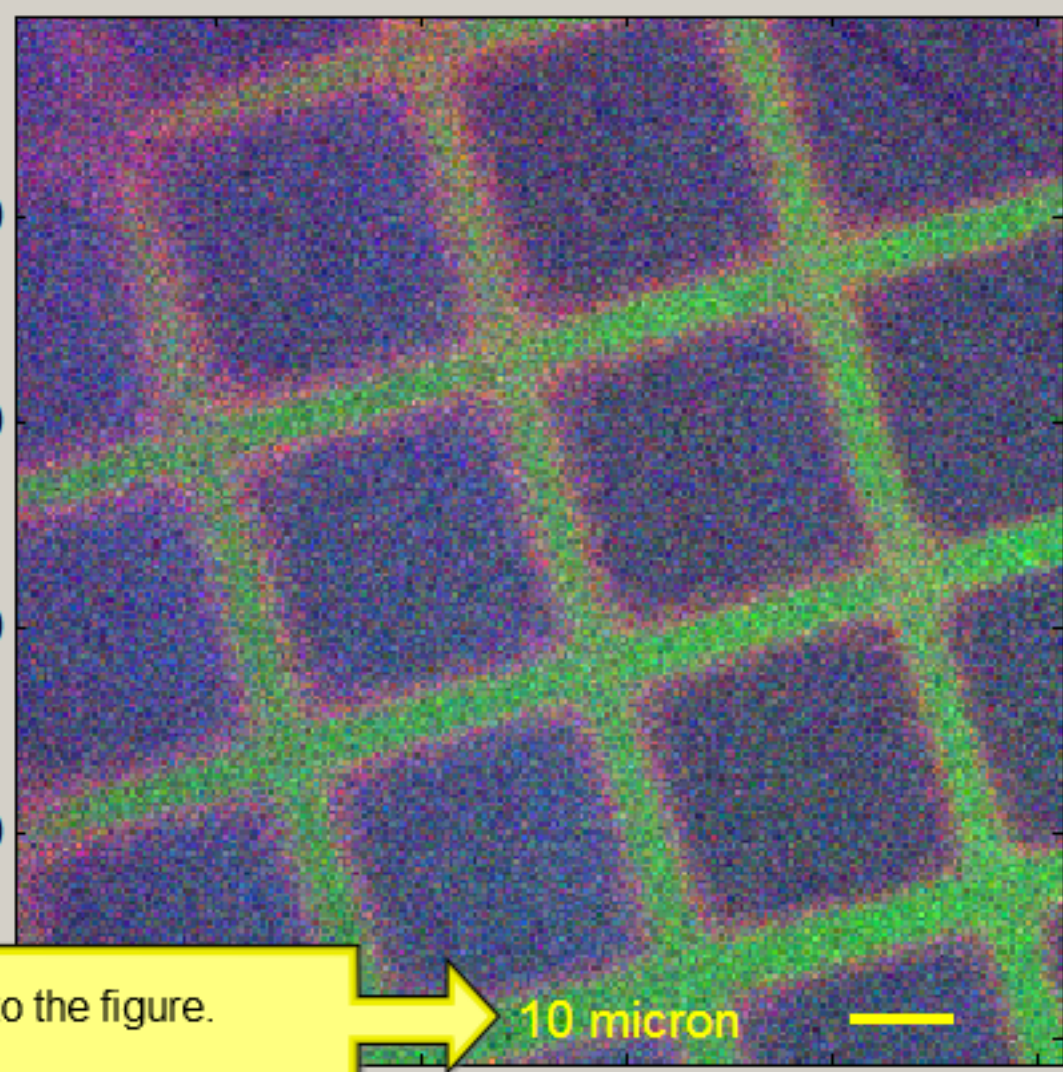
Clos

50

100

150

200

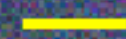


100 150 200 250

pixels

The scalebar is added to the figure.

10 micron



Scalebar Maker

Show Image Size

Image size (pixels)

X 256

Y 256

Image size (microns)

X 100

Y 100

Scalebar location

Bottom Right

Scalebar color

Yellow

Add Scale Bar

Close panel

Name of Image Matrix

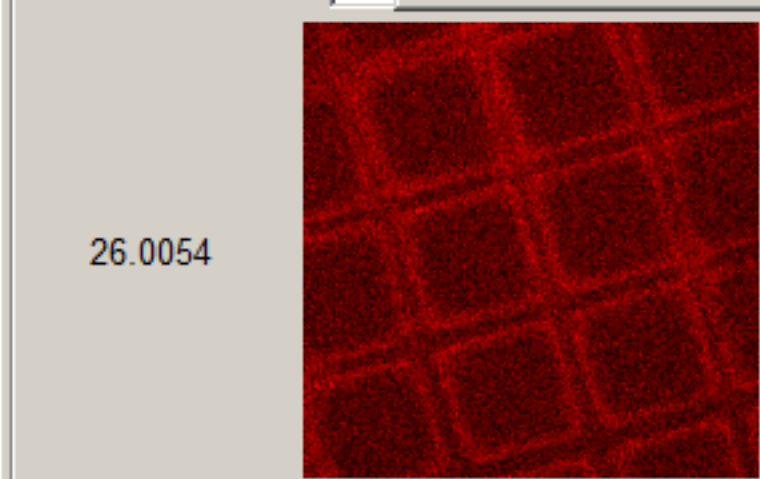
imagedata_DAN...

- Plot Image Data
- Plot image peak ratio
- Image Overlay
- PCA
- MAF
- PC Data Browser
- Scalebar Tools
- Image Properties**
- Plot Psuedo Spectrum

Data Selection Panel

Matrix

...



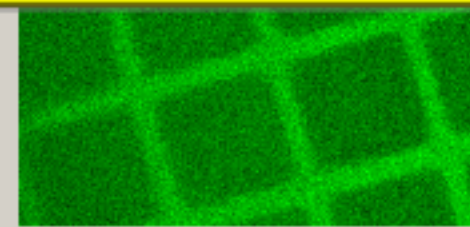
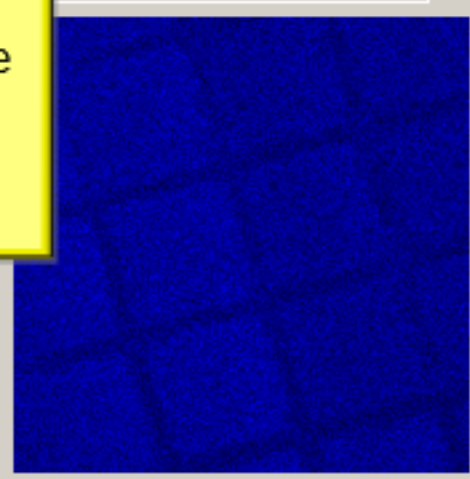
Now lets add some labels and a legend key for the plot.

From the Data Display menu choose 'Image Properties'



BLUE

squares



Create R G B

Create R G

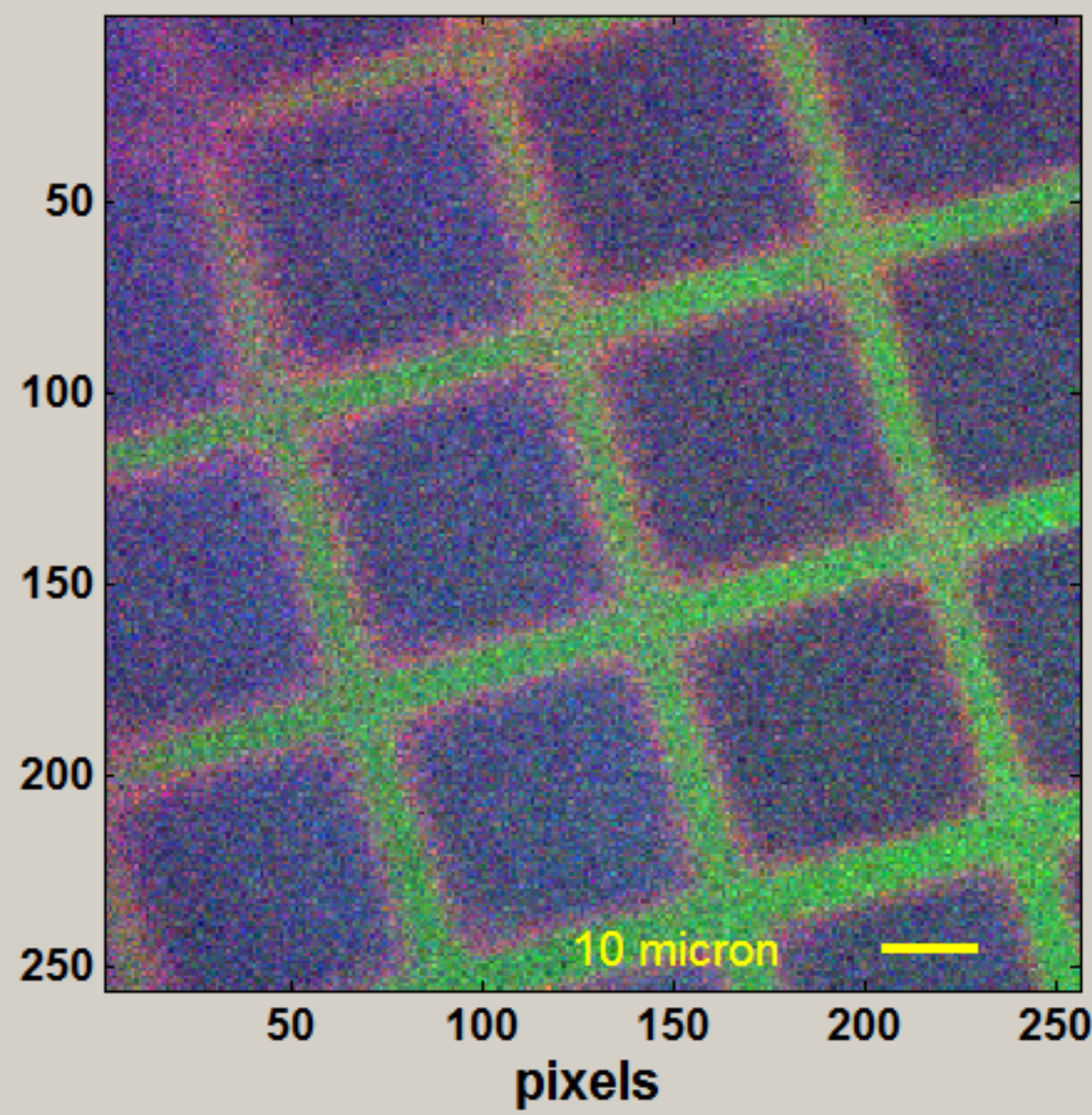
Create R B

Create G B

Save Overlay

Make Ext

Close Panel



Scalebar Maker

Show Image Size

Image size (pixels)

X 256

Y 256

Image size (microns)

X 100

Y 100

Scalebar location

Bottom Right

Scalebar color

Yellow

Add Scale Bar

Close panel

Data Selection Panel

Name of Image Matrix

imagedata_DAN...

Name of Variable Matrix

exactmass_DAN01...

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

Image Properties

Legend Maker for RGB Plots

Label 1

CN

Color 1

☒ Use Label 1

Label 2

Lines

Color 2

☒ Use Label 2

Label 3

Squares

Color 3

☒ Use Label 3

Add Legend

Set Image size (microns)

X (horizontal)

100

Y (vertical)

100

☐ Use micron scale

Colormap Changer

Choose new colormap

Choose on...

Close Panel

Enter the desired names for each of the channels. The default colors are Label 1 = Red, Label 2 = green, Label 3 = blue.

The colors are pre-defined, but if desired you can change them.

Check all the boxes for the entries you want to appear in the legend. Since this is an RGB image we will check all the boxes.

Create

Create

Create R B

Create G B

Save Overlay

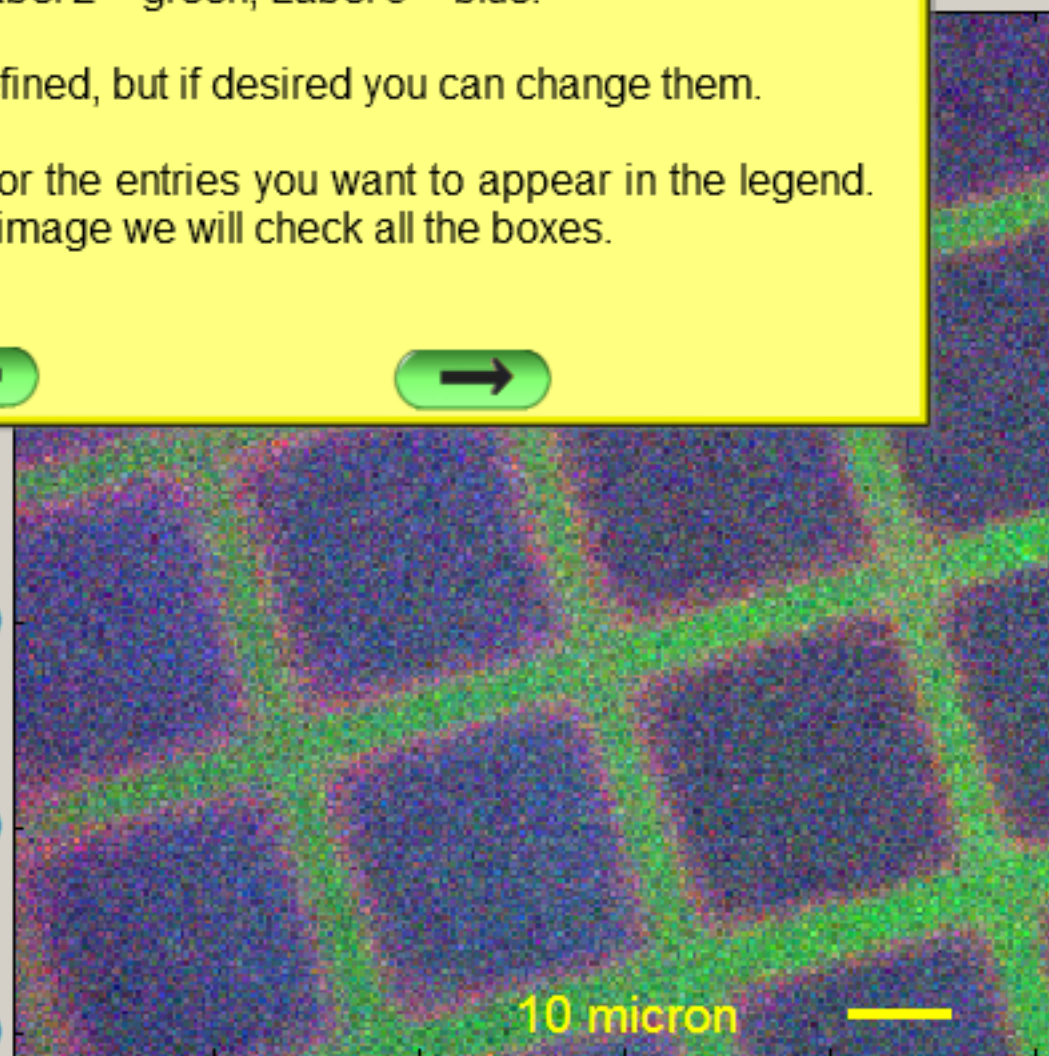
Make Ext

Close Panel

150

200

250



50

100

150

200

250

pixels

Scalebar Maker

Show Image Size

Image size (pixels)

X

256

Y

256

Image size (microns)

X

100

Y

100

Scalebar location

Bottom Right

Scalebar color

Yellow

Add Scale Bar

Close panel

Data Selection Panel

Name of Image Matrix

imagedata_DAN...

Name of Variable Matrix

exactmass_DAN01...

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

Image Properties

Legend Maker for RGB Plots

Label 1

CN

Color 1

☒ Use Label 1

Label 2

Lines

Color 2

☒ Use Label 2

Label 3

Squares

Color 3

☒ Use Label 3

☐ Use micron scale

Add Legend

Press the 'Add Legend' button.

Set Image
size (microns)

X (horizontal)

100

Y (vertical)

100

Colormap
Changer

Choose
new colormap

Choose on...

Create R G B

Create R G

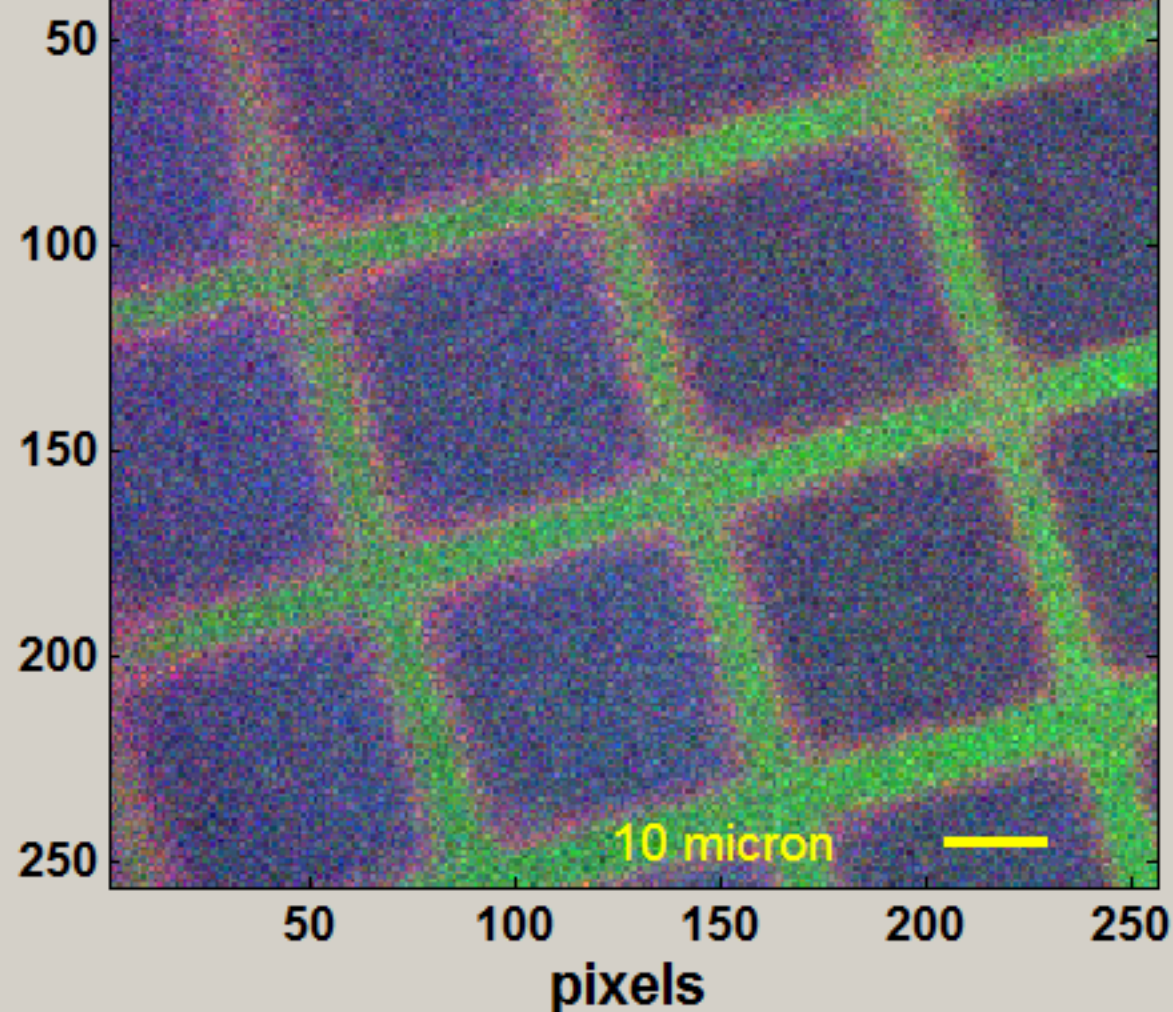
Create R B

Create G B

Save Overlay

Make Ext

Close Panel



Show Image Size

Image size (pixels)

X 256

Y 256

Image size (microns)

X 100

Y 100

Scalebar location

Bottom Right

Scalebar color

Yellow

Add Scale Bar

Close panel

Data Selection Panel

Name of Image Matrix

imagedata_DAN...

Name of Variable Matrix

exactmass_DAN01...

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

Image Properties

Legend Maker for RGB Plots

Label 1

CN

Color 1

☒ Use Label 1

Label 2

Lines

Color 2

☒ Use Label 2

Label 3

Squares

Color 3

☒ Use Label 3

Add Legend

Set Image
size (microns)

X (horizontal)

100

Y (vertical)

100

☐ Use micron scale

Colormap
Changer

Choose
new colormap

Choose on...

Close Panel

Create R G B

Create R G

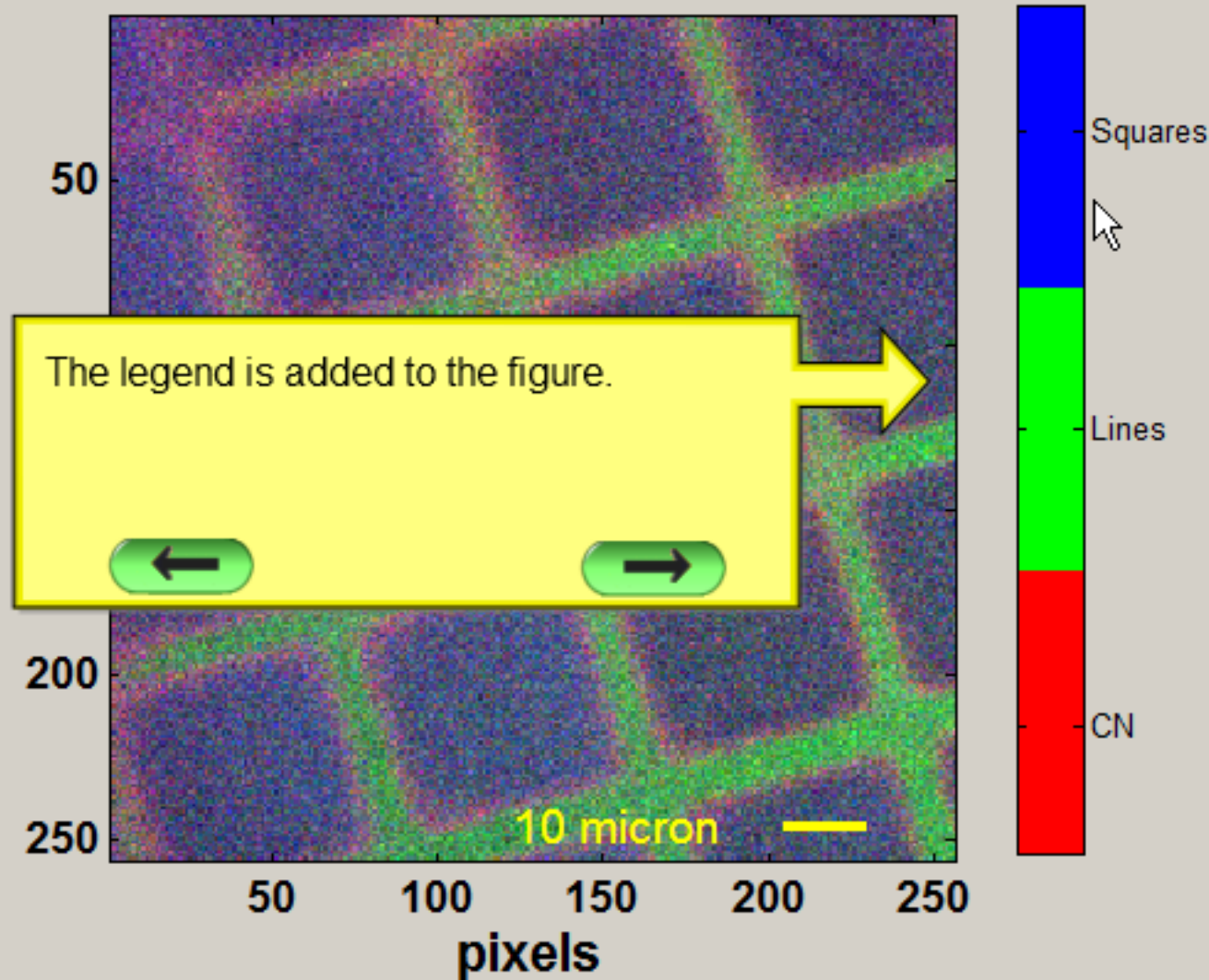
Create R B

Create G B

Save Overlay

Make Ext

Close Panel



Scalebar Maker

Show Image Size

Image size (pixels)

X 256

Y 256

Image size (microns)

X 100

Y 100

Scalebar location

Bottom Right

Scalebar color

Yellow

Add Scale Bar

Close panel

Data Selection Panel

Name of Image Matrix

imagedata_DAN...

Name of Variable Matrix

exactmass_DAN01...

Figure Label Options

Figure Title

Image Overlay

Add Title

Remove Title

X-Axis Label

Add X Label

Rem X Label

Y-Axis Label

Add Y Label

Rem Y Label

Image Properties

Now we will add a title to the image. Enter the desired text and press the 'Add Title' button.



Label 3

Squares

Color 3

☒ Use Label 3

☐ Use micron scale

Add Legend

Set Image size (microns)

X (horizontal)

100

Y (vertical)

100

Colormap Changer

Choose new colormap

Choose on...

Close Panel

Create R G B

Create R G

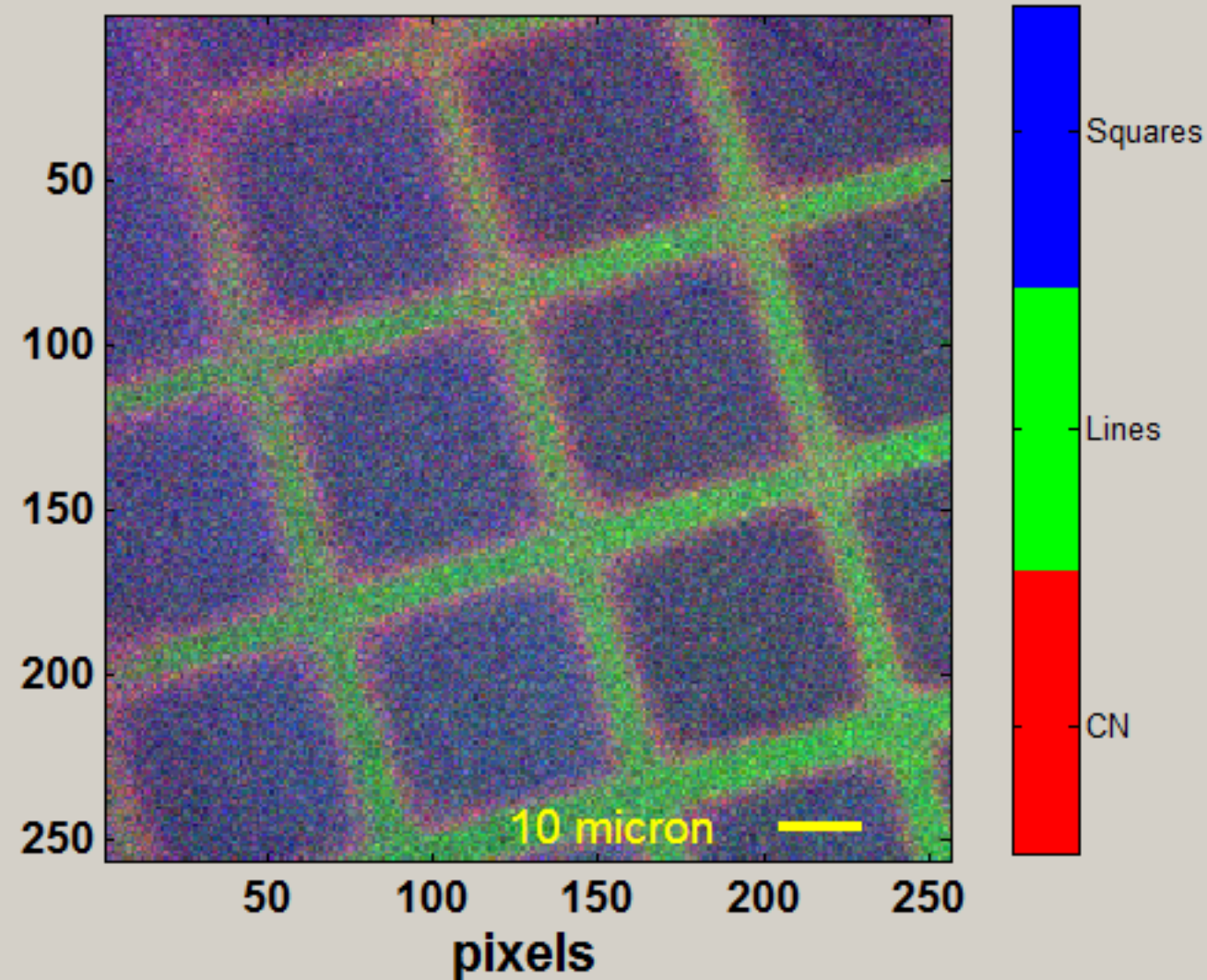
Create R B

Create G B

Save Overlay

Make Ext

Close Panel



Scalebar Maker

Show Image Size

Image size (pixels)

X 256

Y 256

Image size (microns)

X 100

Y 100

Scalebar location

Bottom Right

Scalebar color

Yellow

Add Scale Bar

Close panel

Data Selection Panel

Name of Image Matrix

imagedata_DAN...

Name of Variable Matrix

exactmass_DAN01...

Figure Label Options

Figure Title

Image Overlay

Add Title

Remove Title

X-Axis Label

Add X Label

Rem X Label

Y-Axis Label

Add Y Label

Rem Y Label

Image Properties

Legend Maker for RGB Plots

Label 1

CN

Color 1

☒ Use Label 1

Label 2

Lines

Color 2

☒ Use Label 2

Label 3

Squares

Color 3

☒ Use Label 3

Add Legend

Set Image size (microns)

X (horizontal)

100

Y (vertical)

100

☐ Use micron scale

Colormap Changer

Choose new colormap

Choose on...

Close Panel

Create R G B

Create R G

Create R B

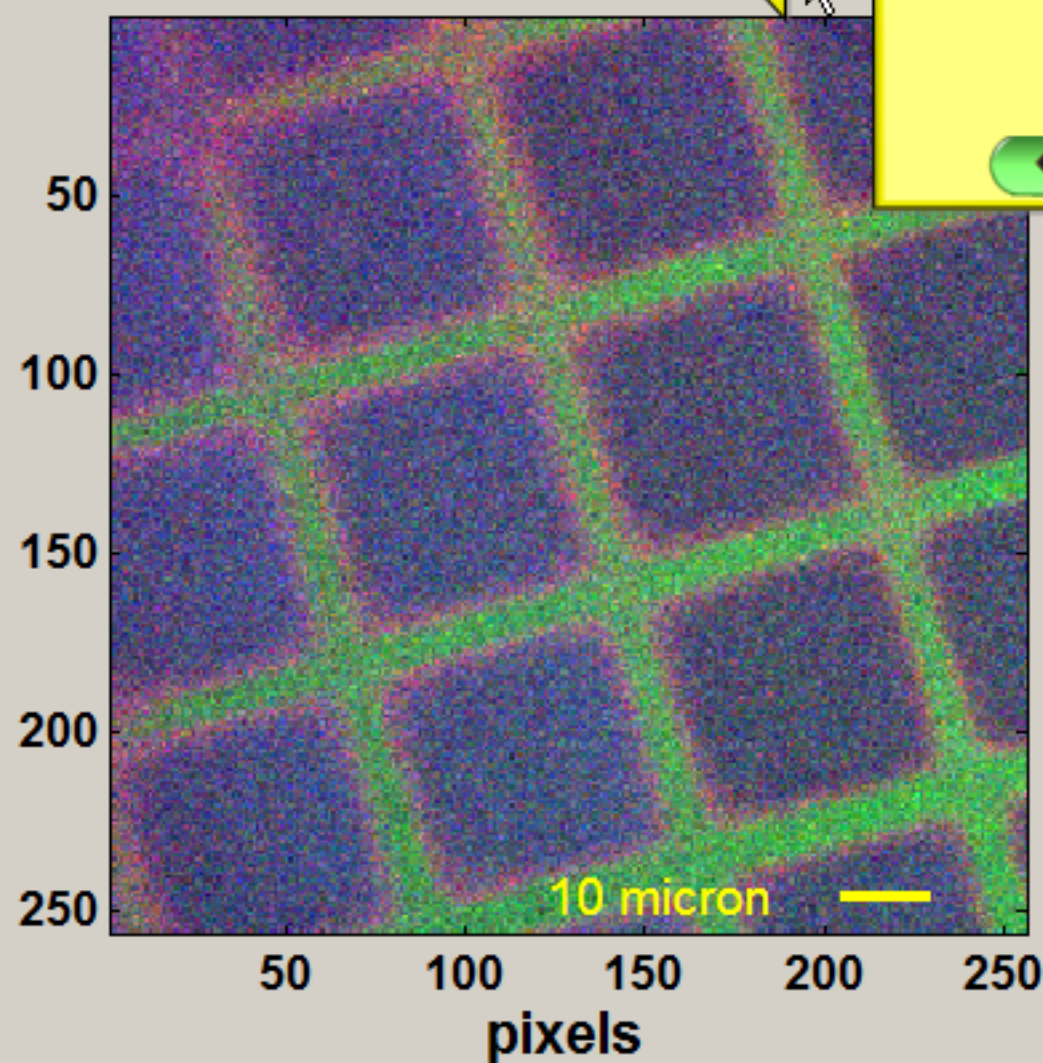
Create G B

Save Overlay

Make Ext

Close Panel

Image Overlay



The title is added to the figure.

Maker

Size

(pixels)

X 256

Y 256

Image size (microns)

X 100

Y 100

Scalebar location

Bottom Right

Scalebar color

Yellow

Add Scale Bar

Close panel

Data Selection Panel

Name of Image Matrix

imagedata_DAN...

Name of Variable Matrix

exactmass_DAN01...

Figure Label Options

Figure Title

Image Overlay

Add Title

Remove Title

X-Axis Label

Add X Label

Rem X Label

Y-Axis Label

Add Y Label

Rem Y Label

Image Properties

Legend Maker for RGB Plots

Label 1

CN

Color 1

☒ Use Label 1

Label 2

Lines

Color 2

☒ Use Label 2

Label 3

Squares

Color 3

☒ Use Label 3

Add Legend

Set Image
size (microns)

X (horizontal)

100

Y (vertical)

100

☐ Use micron scale

Colormap
Changer

Choose
new colormap

Choose on...

Close Panel

Create R G B

Create R G

Create R B

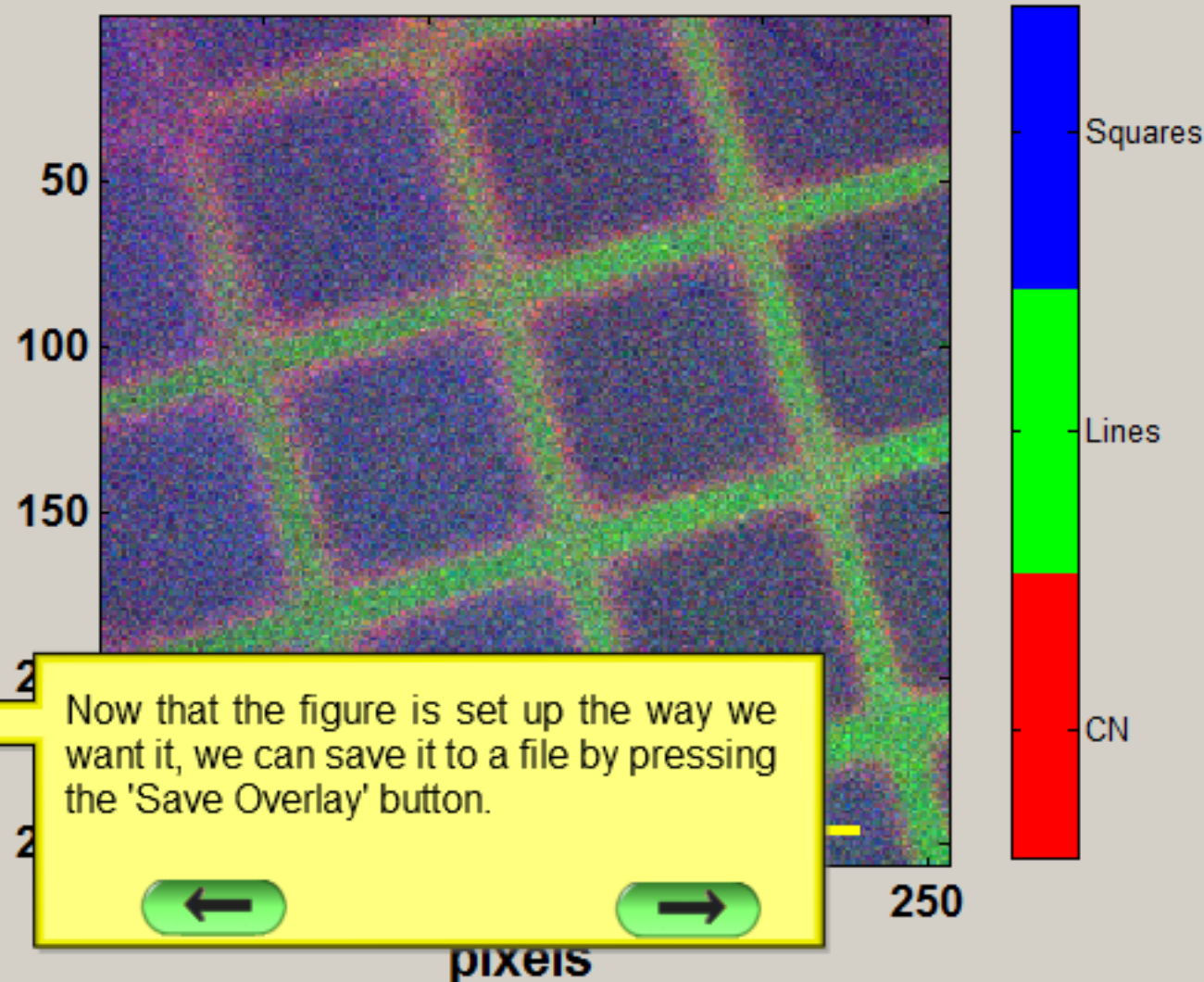
Create G B

Save Overlay

Make Ext

Close Panel

Image Overlay



Now that the figure is set up the way we want it, we can save it to a file by pressing the 'Save Overlay' button.

Scalebar Maker

Show Image Size

Image size (pixels)

X 256

Y 256

Image size (microns)

X 100

Y 100

Scalebar location

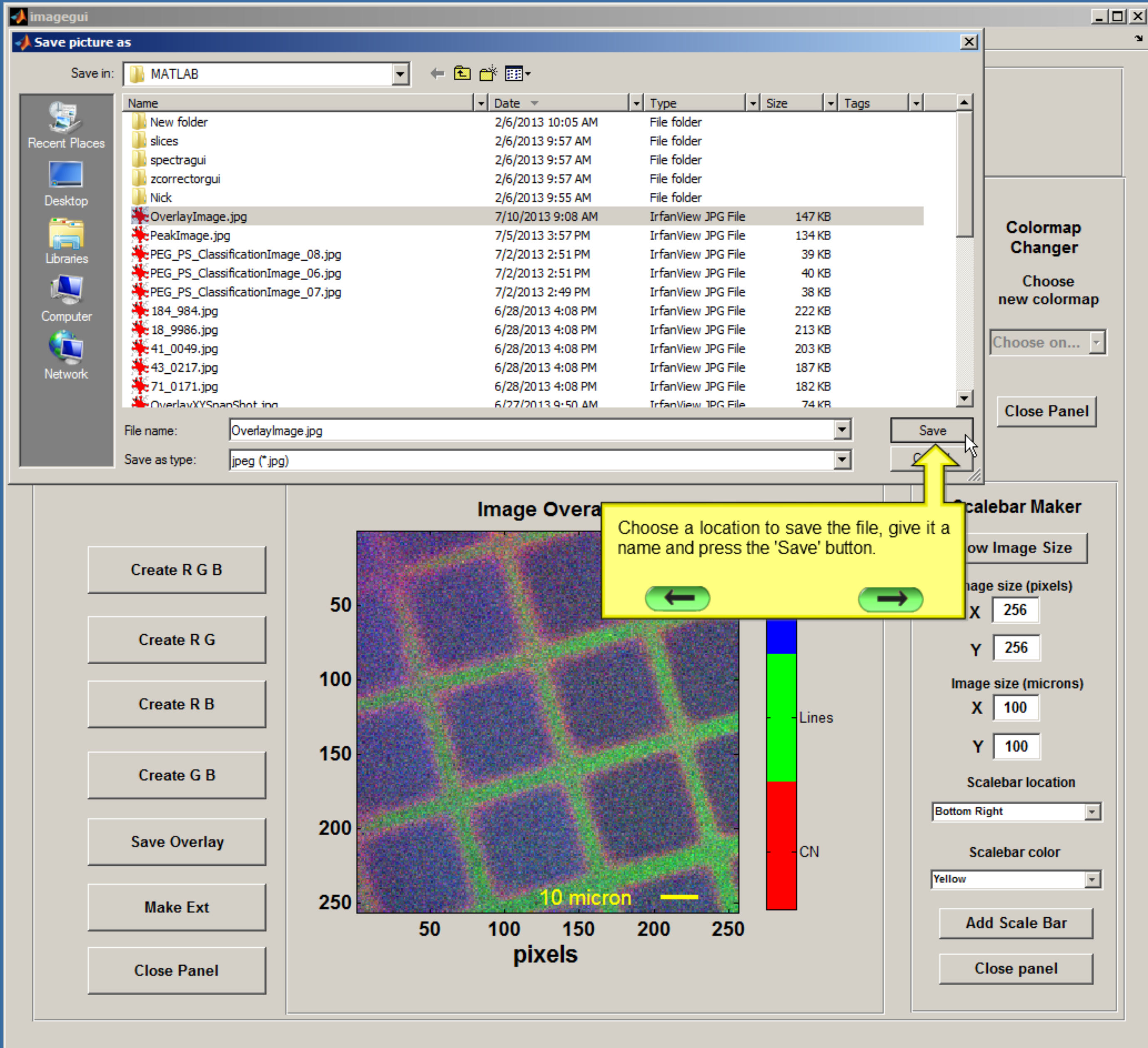
Bottom Right

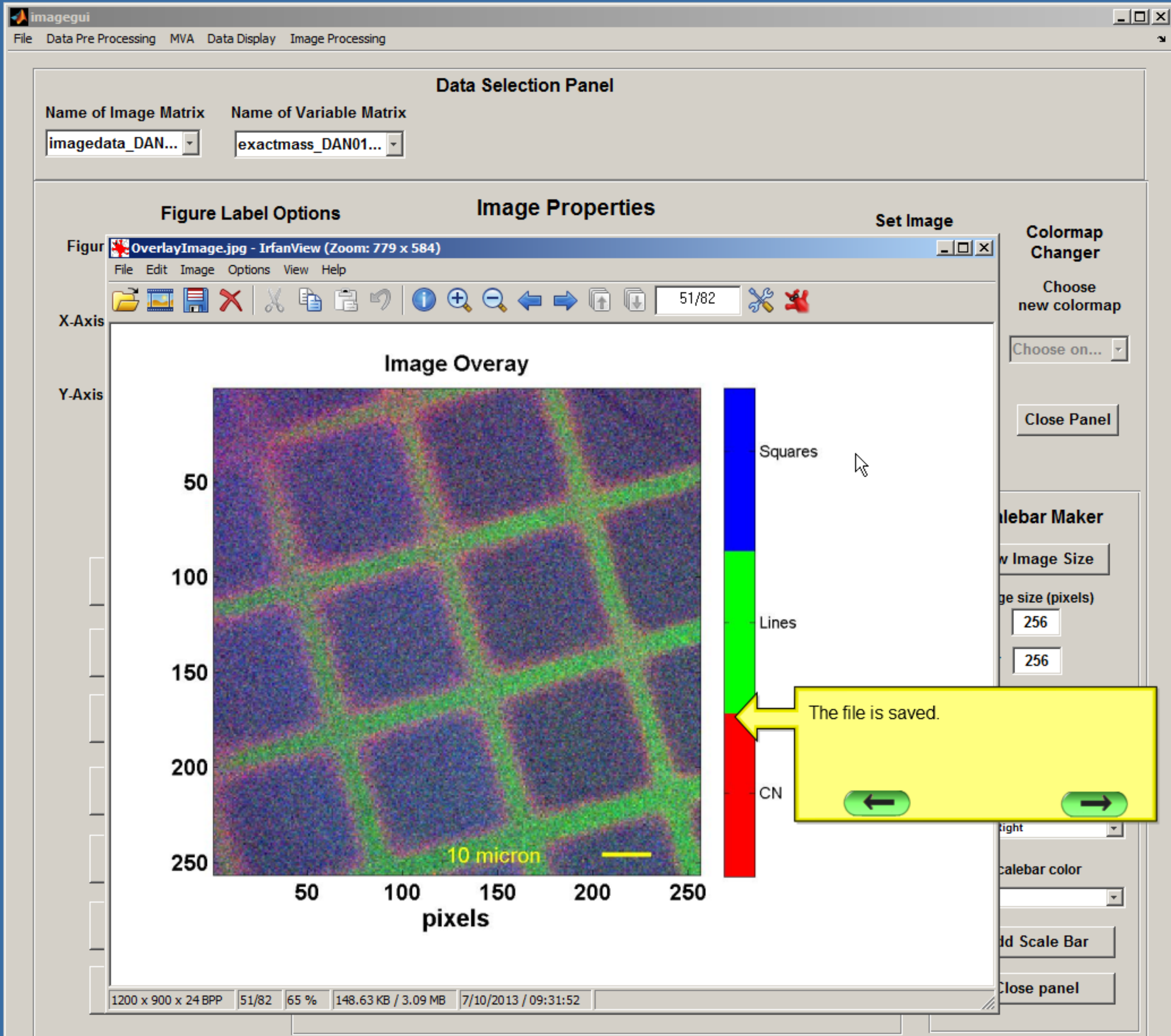
Scalebar color

Yellow

Add Scale Bar

Close panel





Data Selection Panel

Name of Image Matrix

imagedata_DAN...

Name of Variable Matrix

exactmass_DAN01...

Figure Label Options

Figure Title

Image Overlay

Add Title

Remove Title

X-Axis Label

Add X Label

Rem X Label

Y-Axis Label

Add Y Label

Rem Y Label

Image Properties

Legend Maker for RGB Plots

Label 1

CN

Color 1

☒ Use Label 1

Label 2

Lines

Color 2

☒ Use Label 2

Label 3

Squares

Color 3

☒ Use Label 3

Add Legend

Set Image
size (microns)

X (horizontal)

100

Y (vertical)

100

☐ Use micron scale

Colormap
Changer

Choose
new colormap

Choose on...

Close Panel

Create R G B

Create R G

Create R B

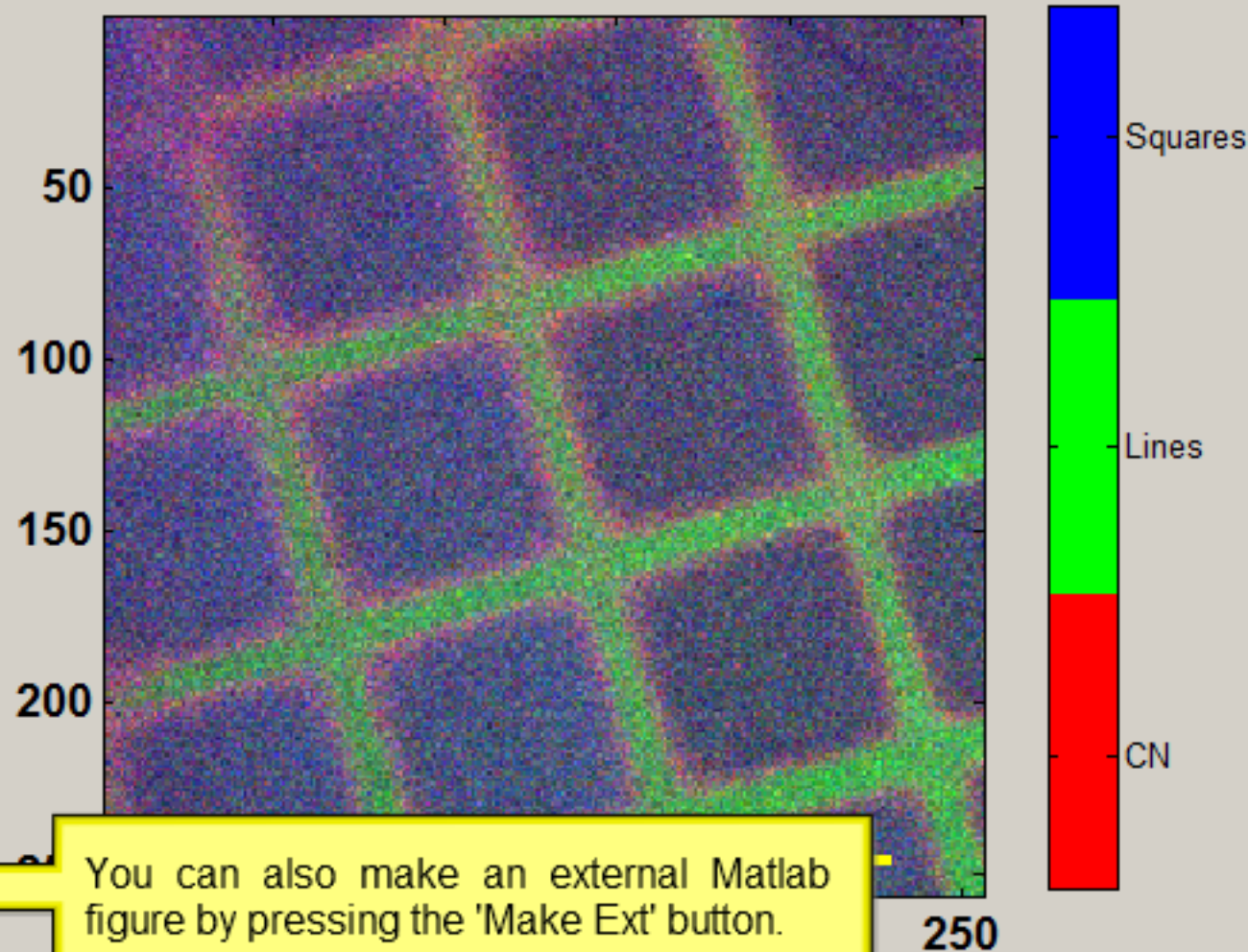
Create G B

Save Overlay

Make Ext

Close Panel

Image Overlay



You can also make an external Matlab figure by pressing the 'Make Ext' button.

Scalebar Maker

Show Image Size

Image size (pixels)

X 256

Y 256

Image size (microns)

X 100

Y 100

Scalebar location

Bottom Right

Scalebar color

Yellow

Add Scale Bar

Close panel

Data Selection Panel

Name of Image Matrix

imagedata_DAN...

Name of Variable Matrix

exactmass_DAN01...

Figure Label Options

Figure Title

Image

Add Title

X-Axis Label

Add X Label

Y-Axis Label

Add Y Label

Create R G B

Create R G

Create R B

Create G B

Save Overlay

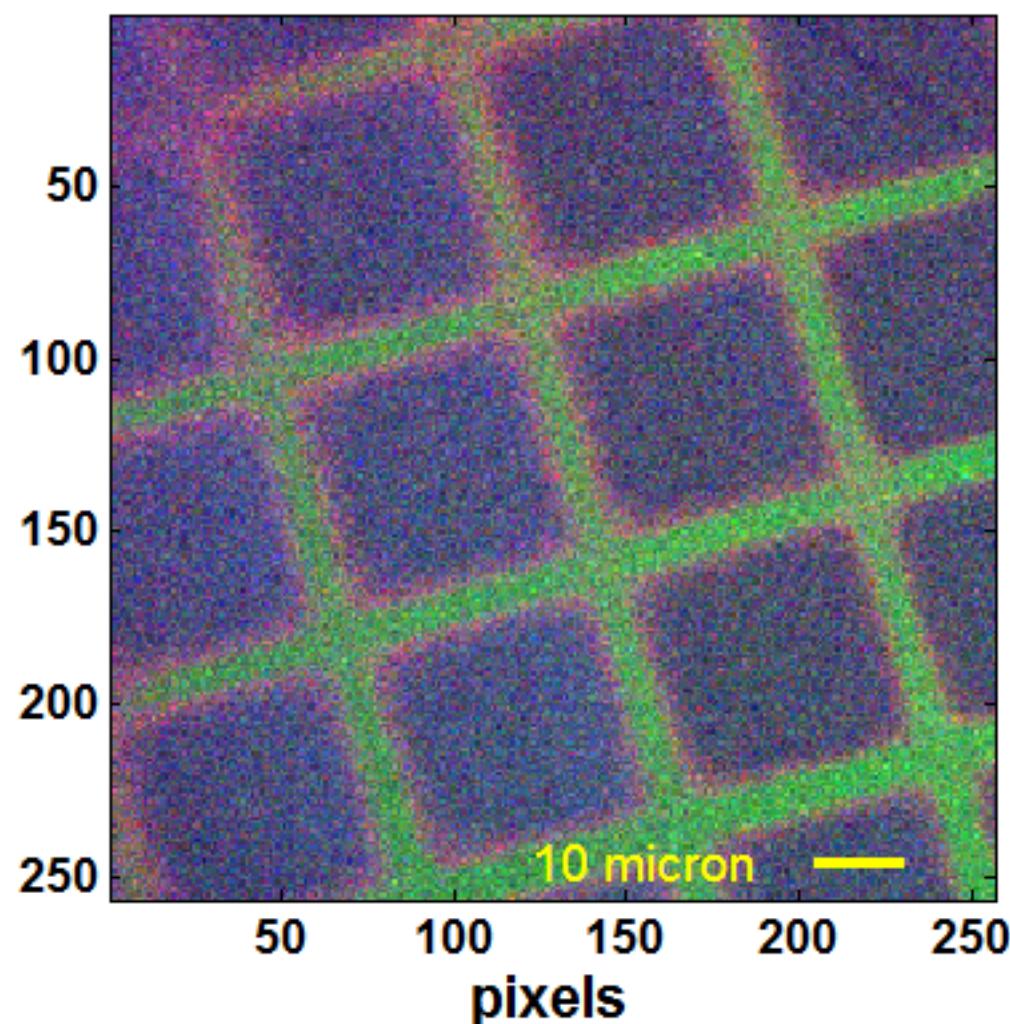
Make Ext

Close Panel

Image Properties



Image Overlay



Squares

Lines

CN

Colormap Changer

Choose new colormap

Choose on...

scale

Close Panel

Scalebar Maker

Show Image Size

Image size (pixels)

X 256

Y 256

Image size (microns)

X 100

Y 100

Scalebar location

Bottom Right

The figure is opened in a new figure window. It can be edited and saved as desired.

Close panel

Data Selection Panel

Name of Image Matrix

imagedata_DAN...

Name of Variable Matrix

exactmass_DAN01...

Figure Label Options

Figure Title

Image Overlay

Add Title

Remove Title

X-Axis Label

Add X Label

Rem X Label

Y-Axis Label

Add Y Label

Rem Y Label

Image Properties

Legend Maker for RGB Plots

Label 1

CN

Color 1

☒ Use Label 1

Label 2

Lines

Color 2

☒ Use Label 2

Label 3

Squares

Color 3

☒ Use Label 3

Add Legend

Set Image
size (microns)

X (horizontal)

100

Y (vertical)

100

☐ Use micron scale

Colormap
Changer

Choose
new colormap

Choose on...

Close Panel

Create R G B

Create R G

Create R B

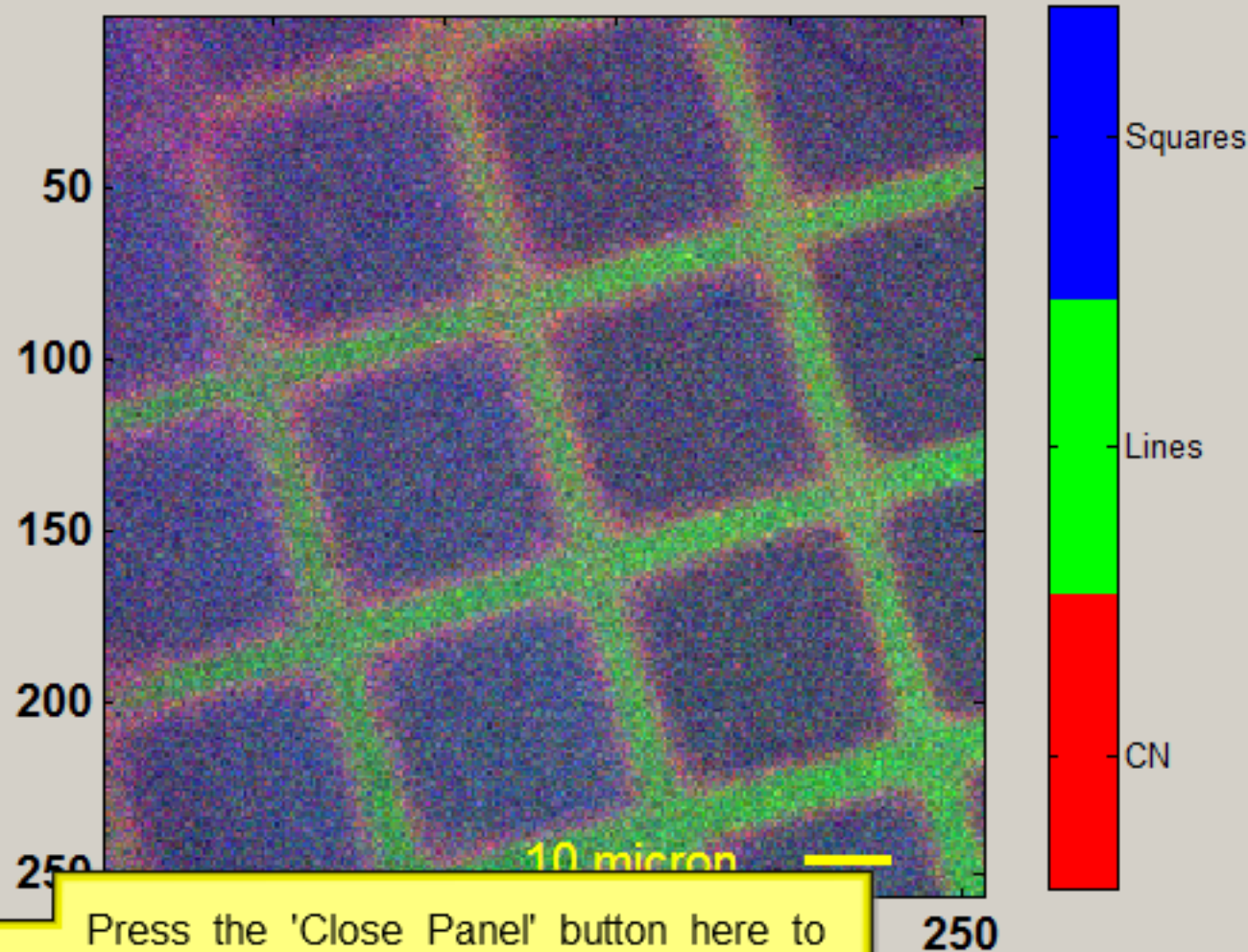
Create G B

Save Overlay

Make Ext

Close Panel

Image Overlay



Scalebar Maker

Show Image Size

Image size (pixels)

X 256

Y 256

Image size (microns)

X 100

Y 100

Scalebar location

Bottom Right

Scalebar color

Yellow

Add Scale Bar

Close panel

Press the 'Close Panel' button here to close all open panels.

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.

