

### Data Selection Panel

Name of Image Matrix

Name of Variable Matrix

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

Select Data

Select Variables

This tutorial will cover how to use the Dice/Classify Image Function from the MVA menu.

This function uses a set of control spectra to classify the data in an image matrix using PCA.

For this a PCA model is created using the control spectra. Then the image matrix is diced into  $n \times n$  "pixels" and each "pixel" is then projected into the PCA model and classified based on its distance from the mean of a group from the control spectra. If the distance between the projected "pixel" and all control groups is greater than 3 times the standard deviation of the given group it is considered unclassified.

This function uses the scatter value defined in Med Biol Eng Comput (2008) 46:985–995

It also uses the knnsearch function written by Yi Cao at Cranfield University on 25 March 2008 found on the Matlab file exchange



### Data Selection Panel

Name of Image Matrix

Name of Variable Matrix

yimage

exactmass

To use this function the user must first load the image matrix that is to be used.



### Data Selection Panel

Name of Image Matrix

Name of Variable Matrix

yimage

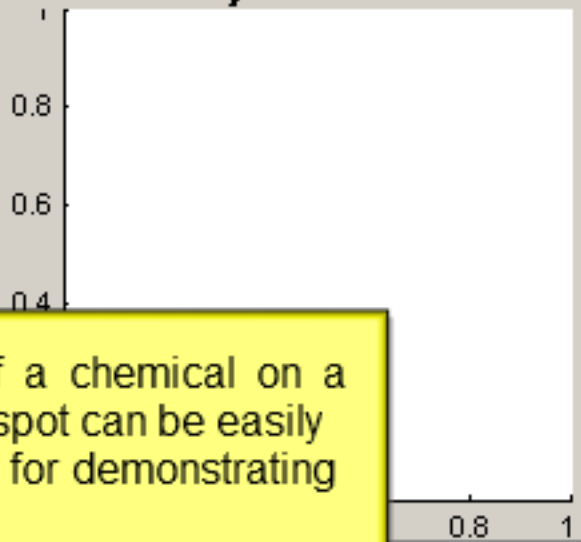
exactmass

Load Selected Data

Image: **yimage**

Variables: **exactmass**

Currently Selected Peaks



Browse all Peak Images

Variable List

Variables to Plot

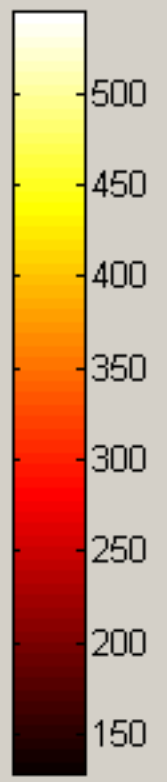
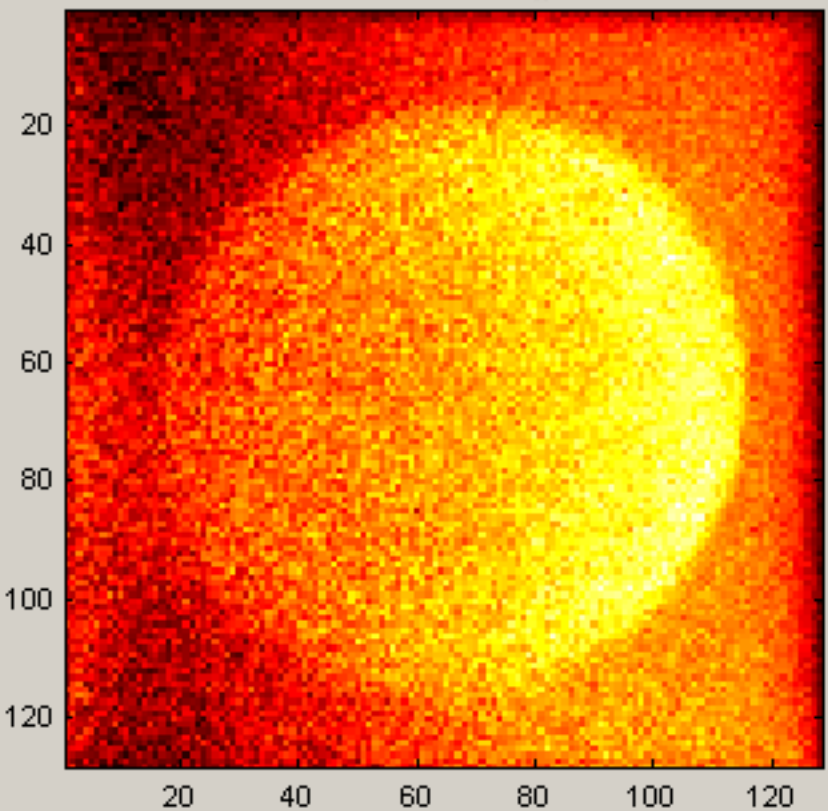
- 265.2372
- 284.8432
- 286.8467
- 300.8412
- 302.8361
- 318.8394
- 332.3159
- 336.8414
- 360.7958
- 397.2474
- 425.2757
- 441.2739
- 469.2973
- 485.2963
- 513.327
- 557.3495
- 601.3774

- 11.0016
- 12.0016
- 13.0016
- 14.0016
- 15.0016
- 16.0016
- 16.0016
- 17.0016
- 17.0271
- 18.0355
- 19.0194
- 22.99
- 23.9848
- 23.9967
- 25.0067
- 26.0149

This data set consists of a spot of a chemical on a substrate. As seen in this image the spot can be easily seen and makes a good controls set for demonstrating the Dice/Classify function.



Counts



Data (actual counts)

Add to Plot

Reset Plot

Name for Combined Selected Variable Image

[Empty text input field]

Save Combined Variable Image

Close Panel

Save Plot to File

Workspace

Name	Value	Min	M
data	<8x266 double>		
exactmass	<266x12 char>		
filenames	<8x12 char>		
headerinfo	<268x4 double>		
labels	<266x12 char>		
maxis	<266x8 char>		
nommass	<266x3 char>		
samplenames	<8x12 char>		
totalcounts	[364151;345780;38... 345780 8...		
yimage	<16384x266 double>		

Data matrix contains control data

Exactmass matrix contains a list of the variables in the data set

Samplenames contains a list of the samplenames

yimage contains the image matrix

Command Window

&gt;&gt; filenames

OFF04

ON01

ON02

ON03

ON04

samplenames =

off

off

off

off

on

on

on

on

&gt;&gt;

The data, samplenames and variables in the data matrix for the controls, and the image to be classified must be loaded in the current Matlab workspace in order to use the Dice/Classify Image function.

The image and control data matrices must be created with the same set of peaks.

The image and control data should contain unmodified peak areas (i.e. no normalization or scaling).



Command History

```

>> guide zcorrectorgui
>> clear
>> clc
>> clear
>> clc
>> zcorrectorgui
>> clear
>> clc
>> what
>> load testdicerdata
>> clc
>> imagegui
>> samplenames
>> clc
>> clear
>> load testdicerdata
>> clc
>> filenames
>> samplenames

```

## Workspace

Stack: Base

Name	Value	Min	M
data	<8x266 double>	0	26
exactmass	<266x12 char>		
filenames	<8x12 char>		

As controls for this data set, we have spectra taken from the chemical (On the spot) and from the substrate (Off the spot).



## Command Window

&gt;&gt; filenames

filenames =

OFF01

&gt;&gt; samplenames

samplenames =

off

off

off

off

on

on

on

on

&gt;&gt;

## Command History

```
guide zcorrectorgui
clear
clc
clear
clc
zcorrectorgui
clear
clc
what
load testdicerdata
clc
imagegui
samplenames
clc
clear
load testdicerdata
clc
filenames
samplenames
```

Name of Image File  
myimage

- PCA
- Export PCA data
- MAF
- Export MAF data
- Dice/Classify Image**
- MIA

**Data Selection Panel**  
Variable Matrix

Open the Dice/Classify Image panel by choosing 'Dice/Classify Image' from the MVA menu.

← →

**Data Selection Panel**

Name of Image Matrix

yimage

Name of Variable Matrix

exactmass

Name of Control Matrix

Samplenames For Control Matrix

Choose a normalization method and then a scaling method. If you change the normalization method you need to re-select the chosen scaling method

Choose Normalization Method

Choose one...

Choose Scaling Method

Choose one...

Run PCA

PCA Summary

PC# %Var %Vartotal

PC#	%Var	%Vartotal

# of PCs to keep in model =

Save Model

"Pixel" size of squares nxn, n=

Dice and Model

Close Panel

This is the Dice/Classify Image panel.

This upper part of the panel is used to build the original PCA model based on the control spectra.

← →



### Data Selection Panel

Name of Image Matrix

Name of Variable Matrix

yimage

exactmass

Name of Control Matrix

Samplenames For Control Matrix

Choose a normalization method and then a scaling method. If you change the normalization method you need to re-select the chosen scaling method

Choose Normalization Method

Choose one...

Choose Scaling Method

Choose one...

Run PCA

PCA Summary

PC#	%Var	%Vartotal

# of PCs to keep in model =

Save Model

"Pixel" size of squares nxn, n=

Dice and Model

Close Panel

← Once the model is created, this part of the panel allows the user to dice and classify the image selected above. →

← →

### Data Selection Panel

Name of Image Matrix

yimage

Name of Variable Matrix

exactmass

Name of Control Matrix

data

Samplenames For Control Matrix

samplenames

Choose a normalization method and then a scaling method. If you change the normalization method you need to re-select the chosen scaling method

Choose Normalization Method

Choose one...

Choose Scaling Method

Choose one...

Run PCA

PCA Summary

PC#	%Var	%Vartotal
-----	------	-----------

--	--	--

# of PCs to keep in model =

Save Model

"Pixel" size of squares nxn, n=

Dice and Model

To use the function, first enter the names of the control data and samplenames that are in the current Matlab workspace.



Close Panel

### Data Selection Panel

Name of Image Matrix

yimage

Name of Variable Matrix

exactmass

Name of Control Matrix

data

Samplenames For Control Matrix

samplenames

Choose a normalization method and then a scaling method. If you change the normalization method you need to re-select the chosen scaling method

Choose Normalization Method

Choose one...

- Choose one...
- None
- Sum of Selected Peaks**

Run PCA

PCA Summary

PC#	%Var	%Vartotal
-----	------	-----------

--	--	--

# of PCs to keep in model =

Save Model

"Pixel" size of squares nxn, n=

Dice and Model

Close Panel

Choose a normalization method. This will be applied to the control data and the image matrix.

Here we will choose to normalize to the 'Sum of Selected Peaks'



### Data Selection Panel

Name of Image Matrix

yimage

Name of Variable Matrix

exactmass

Name of Control Matrix

data

Samplenames For Control Matrix

samplenames

Choose a normalization method and then a scaling method. If you change the normalization method you need to re-select the chosen scaling method

Choose Normalization Method

Sum of Selected Peaks

Choose Scaling Method

Choose one...

- Choose one...
- None
- Mean Center
- Autoscale
- Square root scaling**

Choose a scaling method. This will be applied to the control data and the image matrix.

Here we will choose 'Square root scaling' (takes the square root of the data and then mean centers.

← →

# of PCs to keep in model =

Save Model

"Pixel" size of squares nxn, n=

Dice and Model

Close Panel

### Data Selection Panel

Name of Image Matrix

Name of Variable Matrix

yimage

exactmass

Name of Control Matrix

data

Samplenames For Control Matrix

samplenames

Choose a normalization method and then a scaling method. If you change the normalization method you need to re-select the chosen scaling method

Choose Normalization Method

Sum of Selected Peaks

Choose Scaling Method

Square root scaling

Run PCA

PCA Summary

PC#	%Var	%Vartotal

# of PCs to keep in model =

Save Model

"Pixel" size of squares nxn, n=

Dice and Model

Close Panel

Press the 'Run PCA' button to create the model based on the control spectra.



### Data Selection Panel

Name of Image Matrix

Name of Variable Matrix

yimage

exactmass

Name of Control Matrix

data

Samplenames For Control Matrix

samplenames

Choose a normalization method and then a scaling method. If you change the normalization method you need to re-select the chosen scaling method

Choose Normalization Method

Sum of Selected Peaks

Choose Scaling Method

Square root scaling

Run PCA

PCA Summary

PC#	%Var	%Vartotal
1	94.9	94.9
2	3.1	98
3	1.2	99.2
4	0.4	99.7
5	0.2	99.8
6	0.1	99.9
7	0.1	100
8	0	100

# of PCs to keep in model =

Save Model

"Pixel" size of squares nxn, n=

Dice and Model

### Plot PCA Scores and Loadings

For Model Data

X-Axis

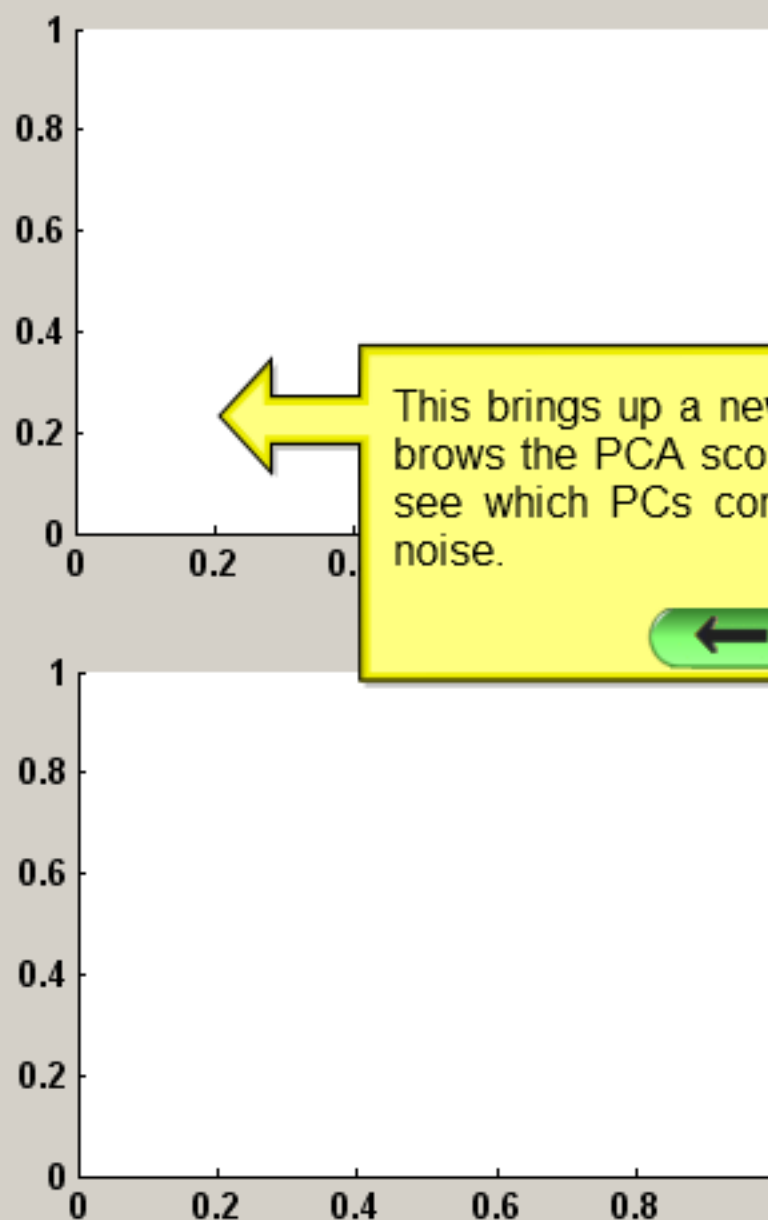
Y-Axis

PC#

PC#

Plot Scores

Plot Loads



Close Panel

### Data Selection Panel

Name of Image Matrix:  Name of Variable Matrix:

Name of Control Matrix:

Samplenames For Control Matrix:

Choose a normalization method and then a scaling method. If you change the normalization method you need to re-select the chosen scaling method

Choose Normalization Method:

Choose Scaling Method:

PC#	%V	%V
1	94.9	94.9
2	3.1	98
3	1.2	99.2
4	0.4	99.7
5	0.2	99.8
6	0.1	99.9
7	0.1	100
8	0	100

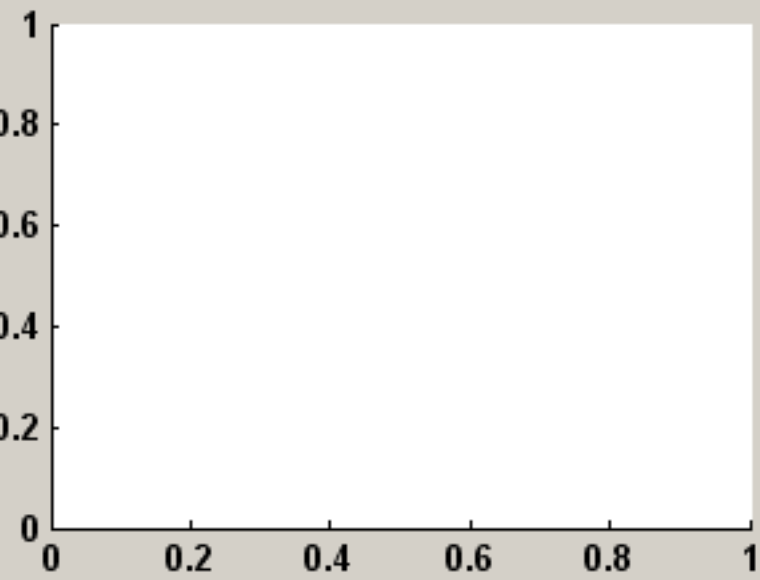
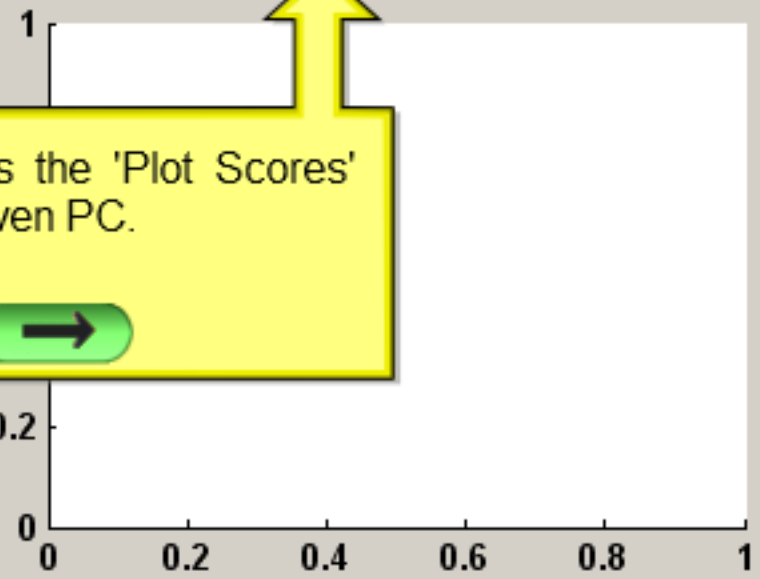
# of PCs to keep in model =

"Pixel" size of squares nxn, n=

### Plot PCA Scores and Loadings

For Model Data

X-Axis:  Y-Axis:



Choose a PC to plot and press the 'Plot Scores' button to see the scores for the given PC.



### Data Selection Panel

Name of Image Matrix:  Name of Variable Matrix:

Name of Control Matrix:

Samplenames For Control Matrix:

Choose a normalization method and then a scaling method. If you change the normalization method you need to re-select the chosen scaling method

Choose Normalization Method:

Choose Scaling Method:

PCA Summary

PC#	%Var	%Vartotal
1	94.9	94.9
2	3.1	98
3	1.2	99.2
4	0.4	99.7
5	0.2	99.8
6	0.1	99.9
7	0.1	100
8	0	100

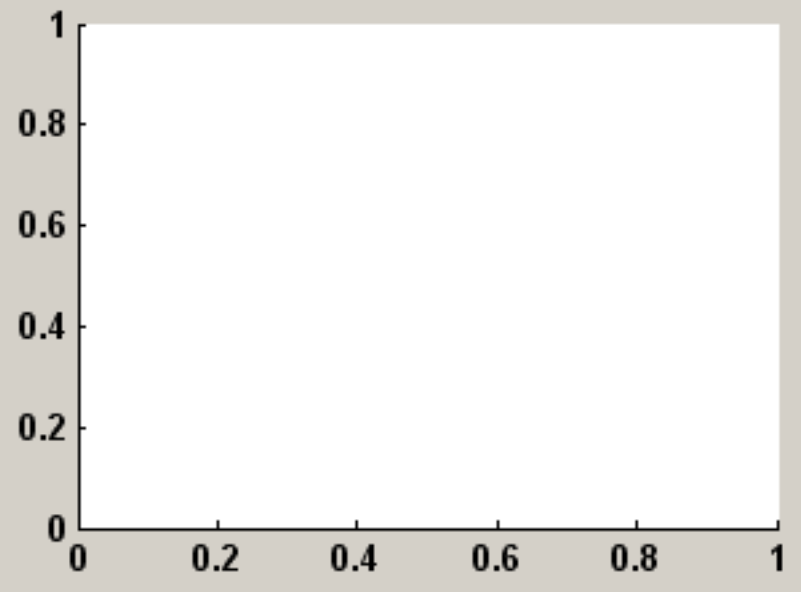
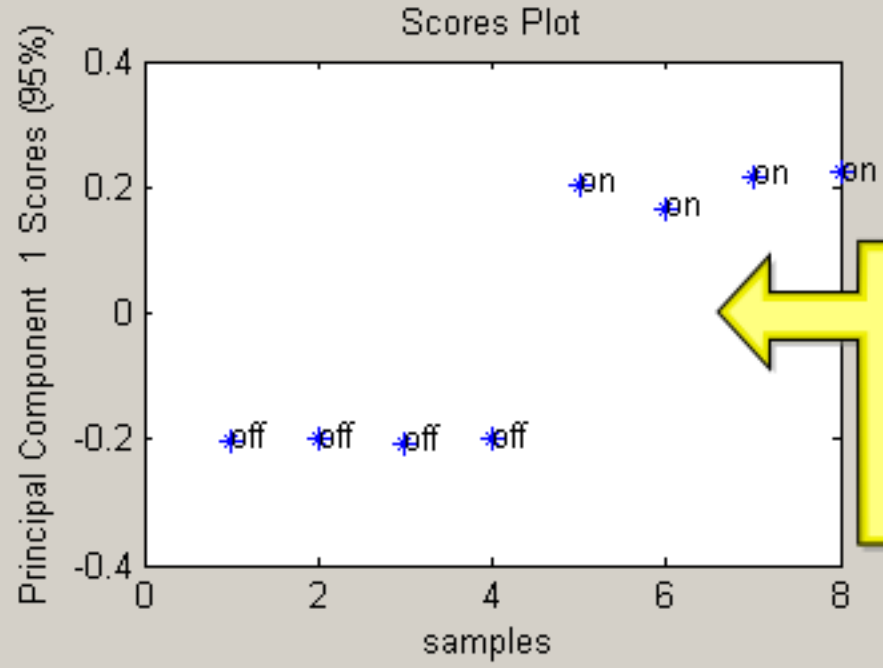
# of PCs to keep in model =

"Pixel" size of squares nxn, n=

### Plot PCA Scores and Loadings

For Model Data

X-Axis:  Y-Axis:



PC1 clearly separates the control spectra.





### Data Selection Panel

Name of Image Matrix

Name of Variable Matrix

yimage

exactmass

Name of Control Matrix

data

Samplenames For Control Matrix

samplenames

Choose a normalization method and then a scaling method. If you change the normalization method you need to re-select the chosen scaling method

Choose Normalization Method

Sum of Selected Peaks

Choose Scaling Method

Square root scaling

Run PCA

PCA Summary

PC#	%Var	%Vartotal
1	94.9	94.9
2	3.1	98
3	1.2	99.2
4	0.4	99.7
5	0.2	99.8
6	0.1	99.9
7	0.1	100
8	0	100

# of PCs to keep in model =

Save Model

"Pixel" size of squares nxn, n=

Dice and Model

### Plot PCA Scores and Loadings

For Model Data

X-Axis

Y-Axis

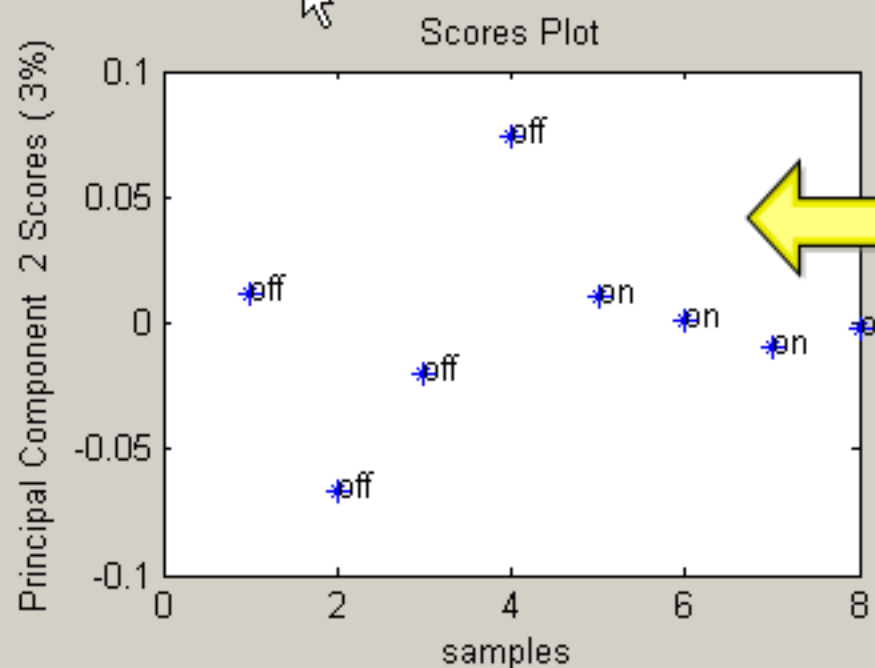
samp/var

2

Plot Scores

Plot Loads

Close Panel



PC2 looks like it is showing scatter in the 'off' samples.



### Data Selection Panel

Name of Image Matrix

Name of Variable Matrix

yimage

exactmass

Name of Control Matrix

data

Samplenames For Control Matrix

samplenames

Choose a normalization method and then a scaling method. If you change the normalization method you need to re-select the chosen scaling method

Choose Normalization Method

Sum of Selected Peaks

Choose Scaling Method

Square root scaling

Run PCA

PCA Summary

PC#	%Var	%Vartotal
1	94.9	94.9
2	3.1	98
3	1.2	99.2
4	0.4	99.7
5	0.2	99.8
6	0.1	99.9
7	0.1	100
8	0	100

# of PCs to keep in model = 1

Save Model

"Pixel" size of squares nxn, n=

Dice and Model

### Plot PCA Scores and Loadings

For Model Data

X-Axis

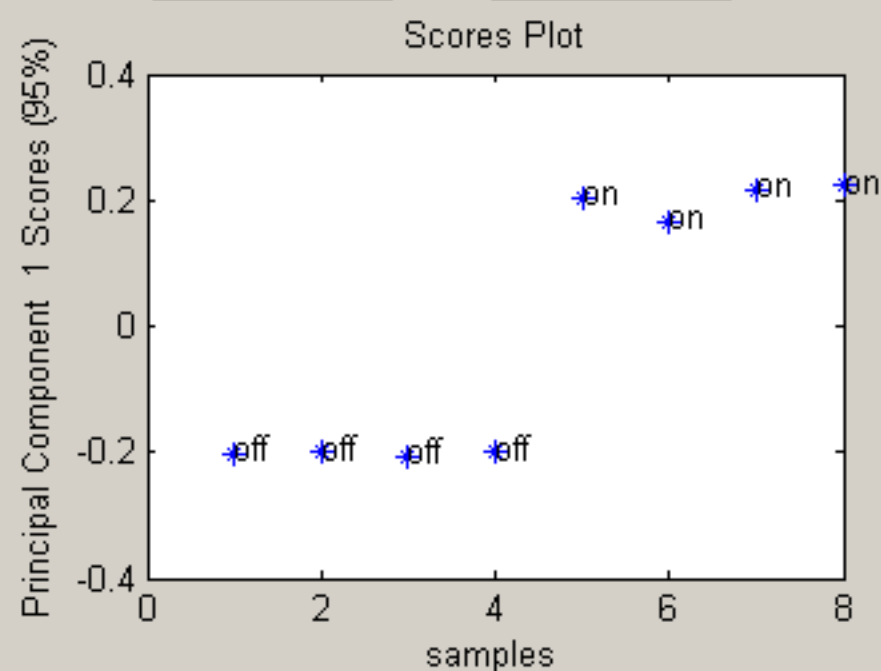
samp/var

Y-Axis

1

Plot Scores

Plot Loads



Close Panel

To start let's look at how the classification works with a 1 PC model. Enter the number of PCs to keep and press the 'Save Model' button.



1

### Data Selection Panel

Name of Image Matrix

Name of Variable Matrix

yimage

exactmass

Name of Control Matrix

data

Samplenames For Control Matrix

samplenames

Choose a normalization method and then a scaling method. If you change the normalization method you need to re-select the chosen scaling method

Choose Normalization Method

Sum of Selected Peaks

Choose Scaling Method

Square root scaling

Run PCA

PCA Summary

PC# %Var %Vartotal

PC#	%Var	%Vartotal
1	94.9	94.9
2	3.1	98
3	1.2	99.2
4	0.4	99.7
5	0.2	99.8
6	0.1	99.9
7	0.1	100
8	0	100

# of PCs to keep in model = 1

Save Model

"Pixel" size of squares nxn, n=

Acceptable pixel sizes include:

1 2 4 8 16 32 64 128 256 512  
1024 2048 4096 8192

Dice and Model

Close Panel

Once the model is saved the PCA scores and loadings plot box closes. This is so the classification image can be shown.



### Data Selection Panel

Name of Image Matrix

Name of Variable Matrix

yimage

exactmass

Name of Control Matrix

data

Samplenames For Control Matrix

samplenames

Choose a normalization method and then a scaling method. If you change the normalization method you need to re-select the chosen scaling method

Choose Normalization Method

Sum of Selected Peaks

Choose Scaling Method

Square root scaling

Run PCA

PCA Summary

PC#	%Var	%Vartotal
1	94.9	94.9
2	3.1	98
3	1.2	99.2
4	0.4	99.7
5	0.2	99.8
6	0.1	99.9
7	0.1	100
8	0	100

# of PCs to keep in model = 1

Save Model

"Pixel" size of squares nxn, n= 2

Acceptable pixel sizes include:

1 2 4 8 16 32 64 128 256 512  
1024 2048 4096 8192

Dice and Model

Close Panel

For this function a "Pixel" is defined as an n x n set of original pixels that will be summed together and projected into the model.

If a value of 1 is used the every pixel in the image is projected into the control model. If a value of 2 is used then the image matrix is subdivided into groups of pixels 2 pixels wide and 2 pixels tall ( which are summed together and then projected into the control model). After being classified each original pixel from within the 2 x 2 area is assigned the same classification value.

Using larger "Pixel" sizes speeds up the classification process but degrades the resulting image resolution.

A list of acceptable 'Pixel' sizes is shown here. The pixels must be square so this shows what values can be used for a 'Pixel'.

Enter the desired value and press the 'Dice and Model' button.



### Data Selection Panel

Name of Image Matrix

Name of Variable Matrix

yimage

exactmass

Name of Control Matrix

data

Samplenames For Control Matrix

samplenames

Choose a normalization method and then a scaling method. If you change the normalization method you need to re-select the chosen scaling method

Choose Normalization Method

Sum of Selected Peaks

Choose Scaling Method

Square root scaling

Run PCA

PCA Summary

PC# %Var %Vartotal

PC#	%Var	%Vartotal
1	94.9	94.9
2	3.1	98
3	1.2	99.2
4	0.4	99.7
5	0.2	99.8
6	0.1	99.9
7	0.1	100
8	0	100

# of PCs to keep in model = 1

Save Model

"Pixel" size of squares nxn, n= 2

Acceptable pixel sizes include:

1 2 4 8 16 32 64 128 256 512  
1024 2048 4096 8192

Dice and Model

Close Panel

A progress bar appears and shows the time remaining for the classification.



6% Progress

Classifying "pixels"...

6 %

Estimated time remaining: 00:00:00

### Data Selection Panel

Name of Image Matrix

Name of Variable Matrix

yimage

exactmass

Name of Control Matrix

data

Samplenames For Control Matrix

samplenames

Choose a normalization method and then a scaling method. If you change the normalization method you need to re-select the chosen scaling method

Choose Normalization Method

Sum of Selected Peaks

Choose Scaling Method

Square root scaling

Run PCA

PCA Summary

PC#	%Var	%Vartotal
1	94.9	94.9
2	3.1	98
3	1.2	99.2
4	0.4	99.7
5	0.2	99.8
6	0.1	99.9
7	0.1	100
8	0	100

# of PCs to keep in model = 1

Save Model

"Pixel" size of squares nxn, n= 2

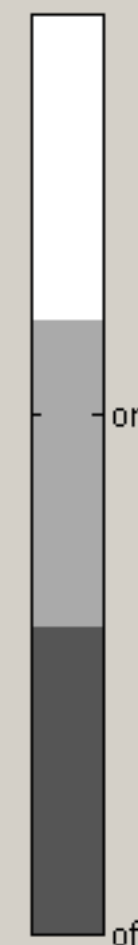
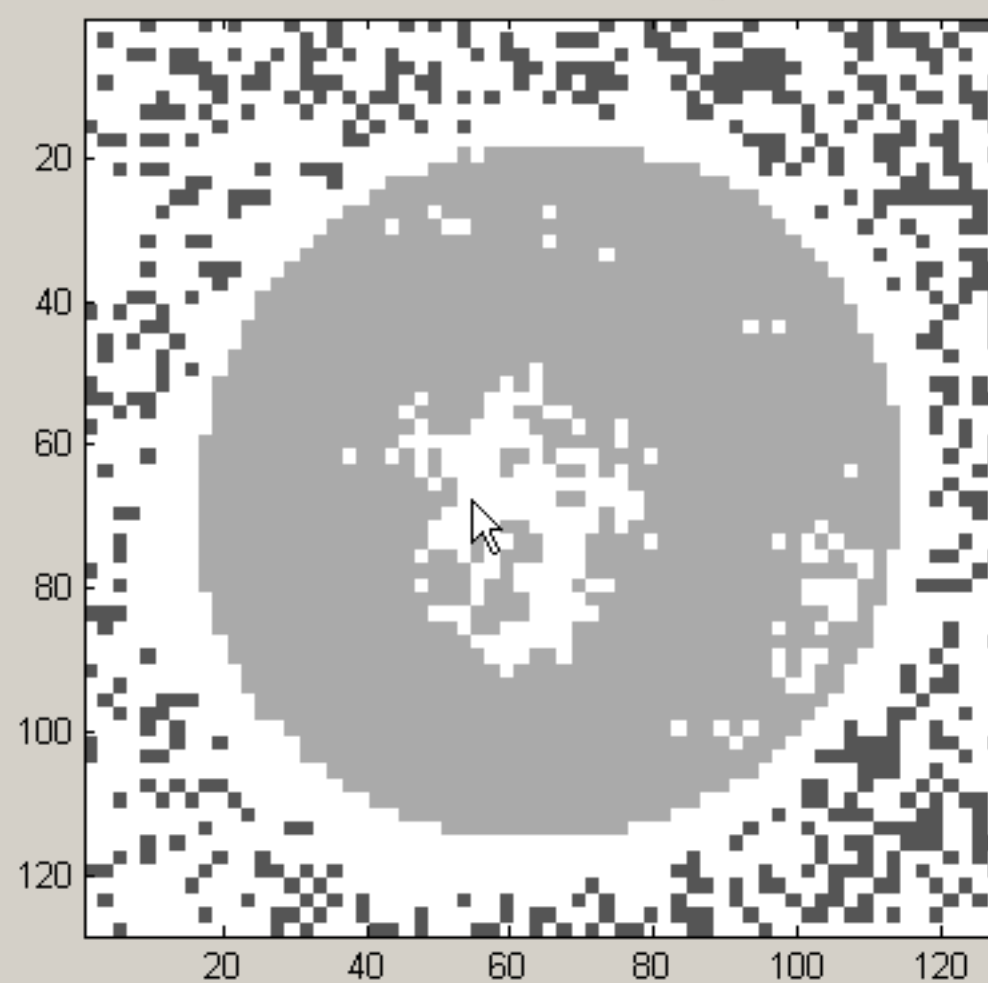
Acceptable pixel sizes include:

1 2 4 8 16 32 64 128 256 512  
1024 2048 4096 8192

Dice and Model

Close Panel

When the function finishes the calculations the 'classification image' is shown.



Save Image To File

### Data Selection Panel

Name of Image Matrix

Name of Variable Matrix

yimage

exactmass

Name of Control Matrix

data

Samplenames For Control Matrix

samplenames

Choose a normalization method and then a scaling method. If you change the normalization method you need to re-select the chosen scaling method

Choose Normalization Method

Sum of Selected Peaks

Choose Scaling Method

Square root scaling

Run PCA

PCA Summary

PC#

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8

# of PC

In this image light grey corresponds to "Pixels" that were classified with the 'On' control.

Dark grey corresponds to "Pixels" that classified with the 'Off' control.

White correspond with "Pixels" that were not classified with any of the controls. This means the distance of the "Pixel" to the model groups was greater than the matching tolerance (3 standard deviations from the mean of the group).



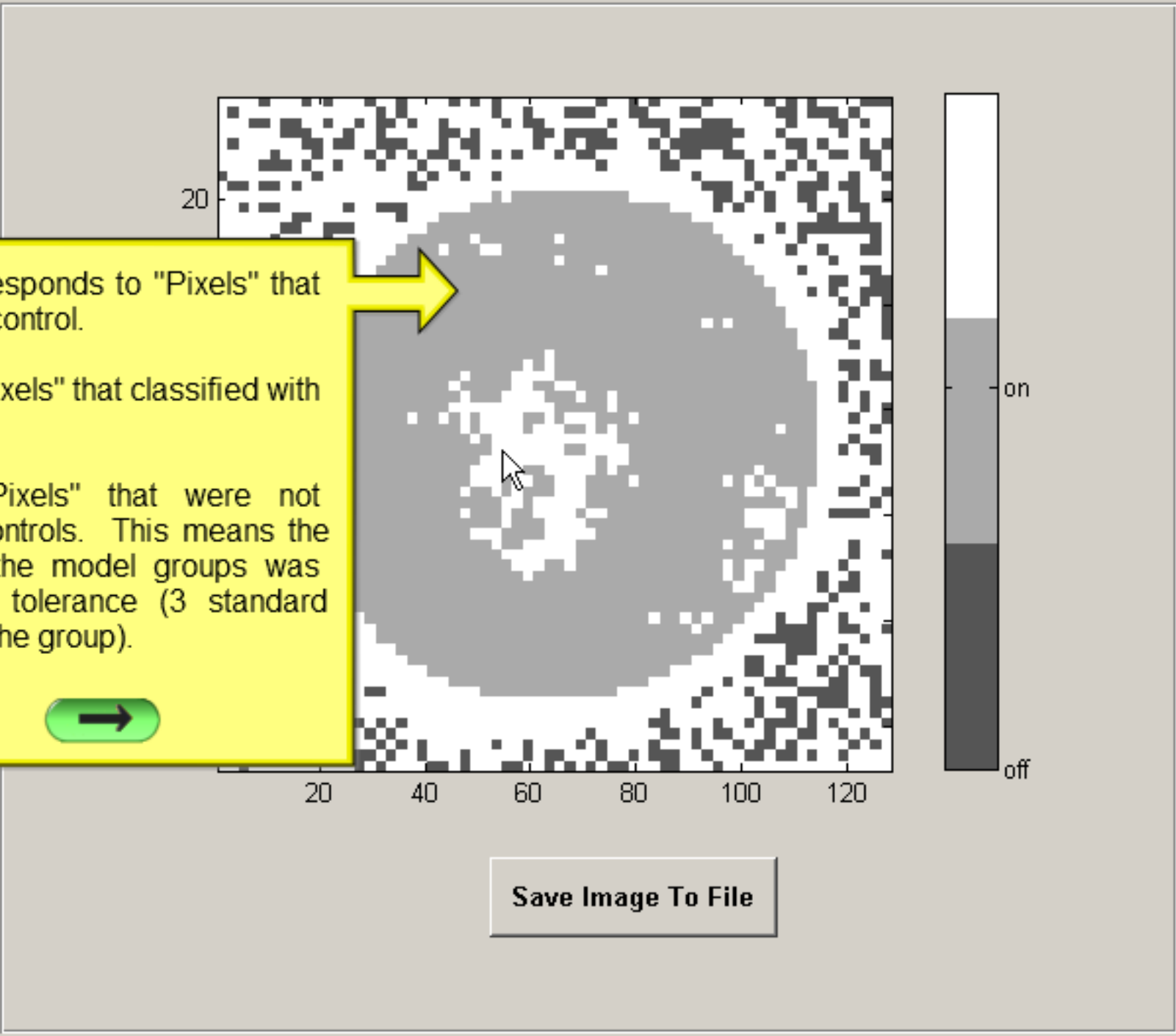
"Pixel" size of squares nxn, n= 2

Acceptable pixel sizes include:

- 1 2 4 8 16 32 64 128 256 512
- 1024 2048 4096 8192

Dice and Model

Close Panel



Save Image To File

### Data Selection Panel

Name of Image Matrix:

Name of Variable Matrix:

#### Name of Control Matrix

#### Samplenames For Control Matrix

Choose a normalization method and then a scaling method. If you change the normalization method you need to re-select the chosen scaling method

#### Choose Normalization Method

#### Choose Scaling Method

PCA Summary

PC#	%Var	%Vartotal
1	94.9	94.9
2	3.1	98
3	1.2	99.2
4	0.4	99.7
5	0.2	99.8
6	0.1	99.9
7	0.1	100
8	0	100

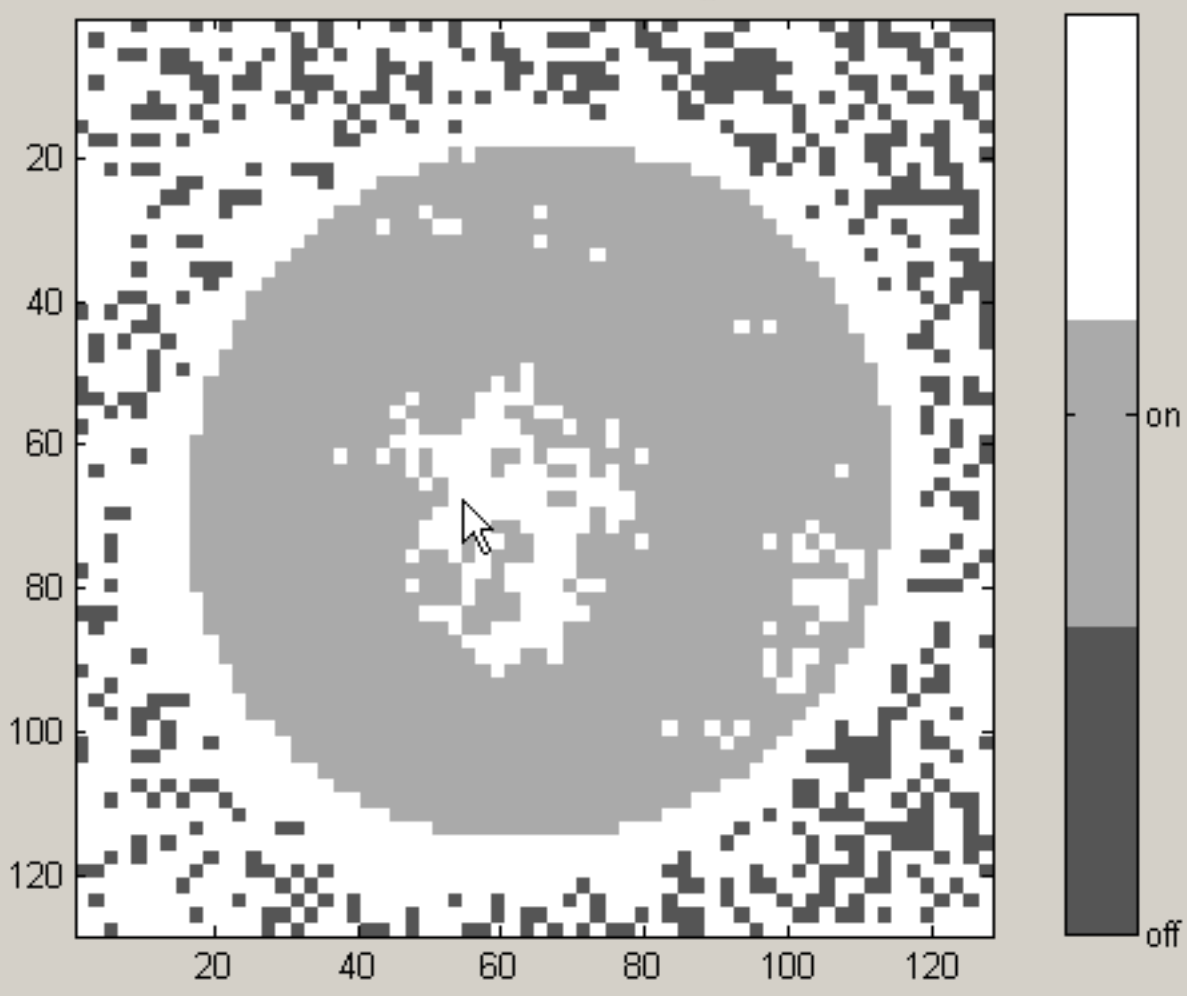
# of PCs to keep in model =

"Pixel" size of squares nxn, n=

Acceptable pixel sizes include:

1 2 4 8 16 32 64 128 256 512  
1024 2048 4096 8192

As can be seen the classification is good, but let's see what happens if we change the number of PCs in the PCA model.





### Data Selection Panel

Name of Image Matrix

Name of Variable Matrix

yimage

exactmass

Name of Control Matrix

data

Samplenames For Control Matrix

samplenames

Choose a normalization method and then a scaling method. If you change the normalization method you need to re-select the chosen scaling method

Choose Normalization Method

Sum of Selected Peaks

Choose Scaling Method

Square root scaling

Run PCA

PCA Summary

PC#	%Var	%Vartotal
1	94.9	94.9
2	3.1	98
3	1.2	99.2
4	0.4	99.7
5	0.2	99.8
6	0.1	99.9
7	0.1	100
8	0	100

# of PCs to keep in model = 2

Save Model

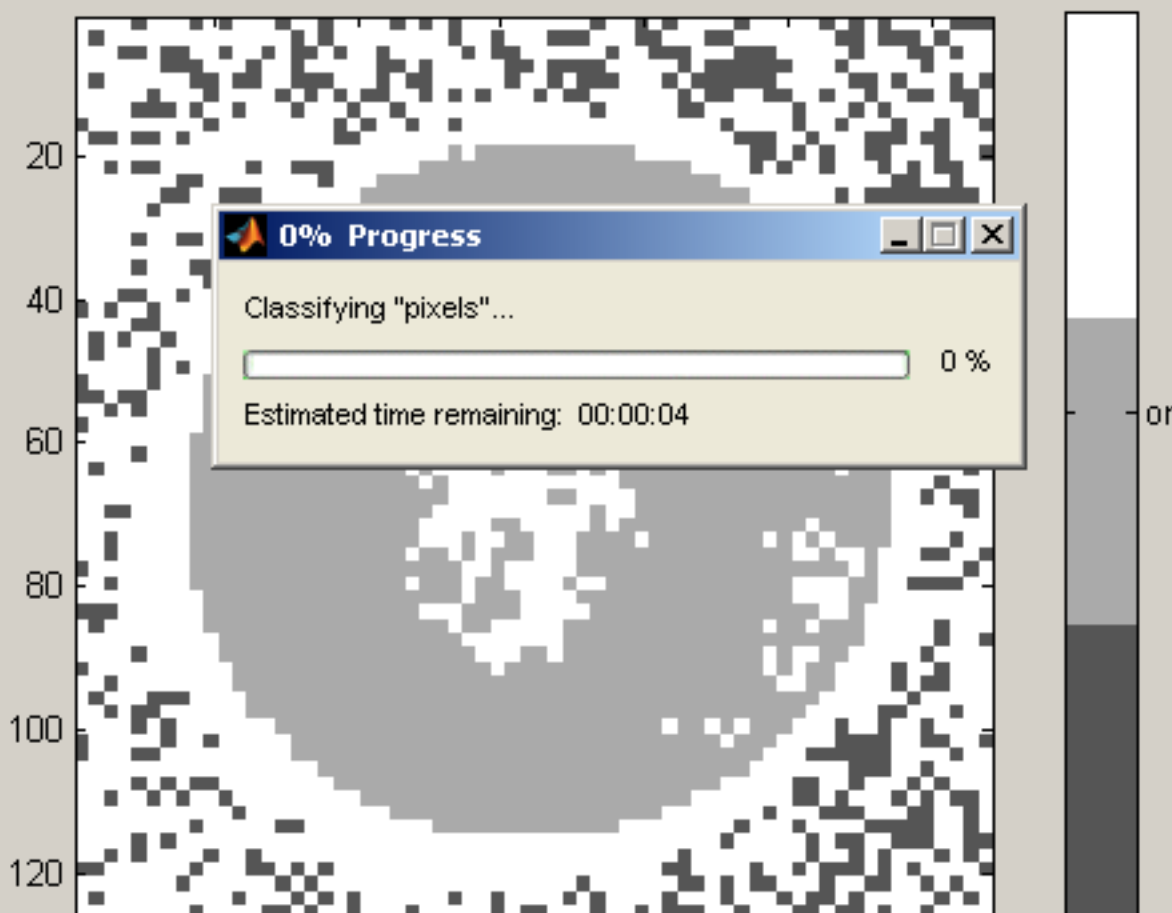
"Pixel" size of squares nxn, n= 2

Acceptable pixel sizes include:

1 2 4 8 16 32 64 128 256 512  
1024 2048 4096 8192

Dice and Model

Close Panel



Let's see what a 2 PC model does to the classification.

Enter 2 in the "Pixel" box and press the "Dice and Model" button.



### Data Selection Panel

Name of Image Matrix

Name of Variable Matrix

yimage

exactmass

Name of Control Matrix

data

Samplenames For Control Matrix

samplenames

Choose a normalization method and then a scaling method. If you change the normalization method you need to re-select the chosen scaling method

Choose Normalization Method

Sum of Selected Peaks

Choose Scaling Method

Square root scaling

Run PCA

PCA Summary

PC#	%Var	%Vartotal
1	94.9	94.9
2	3.1	98
3	1.2	99.2
4	0.4	99.7
5	0.2	99.8
6	0.1	99.9
7	0.1	100
8	0	100

# of PCs to keep in model = 2

Save Model

"Pixel" size of squares nxn, n= 2

Acceptable pixel sizes include:  
1 2 4 8 16 32 64 128 256 512  
1024 2048 4096 8192

Dice and Model

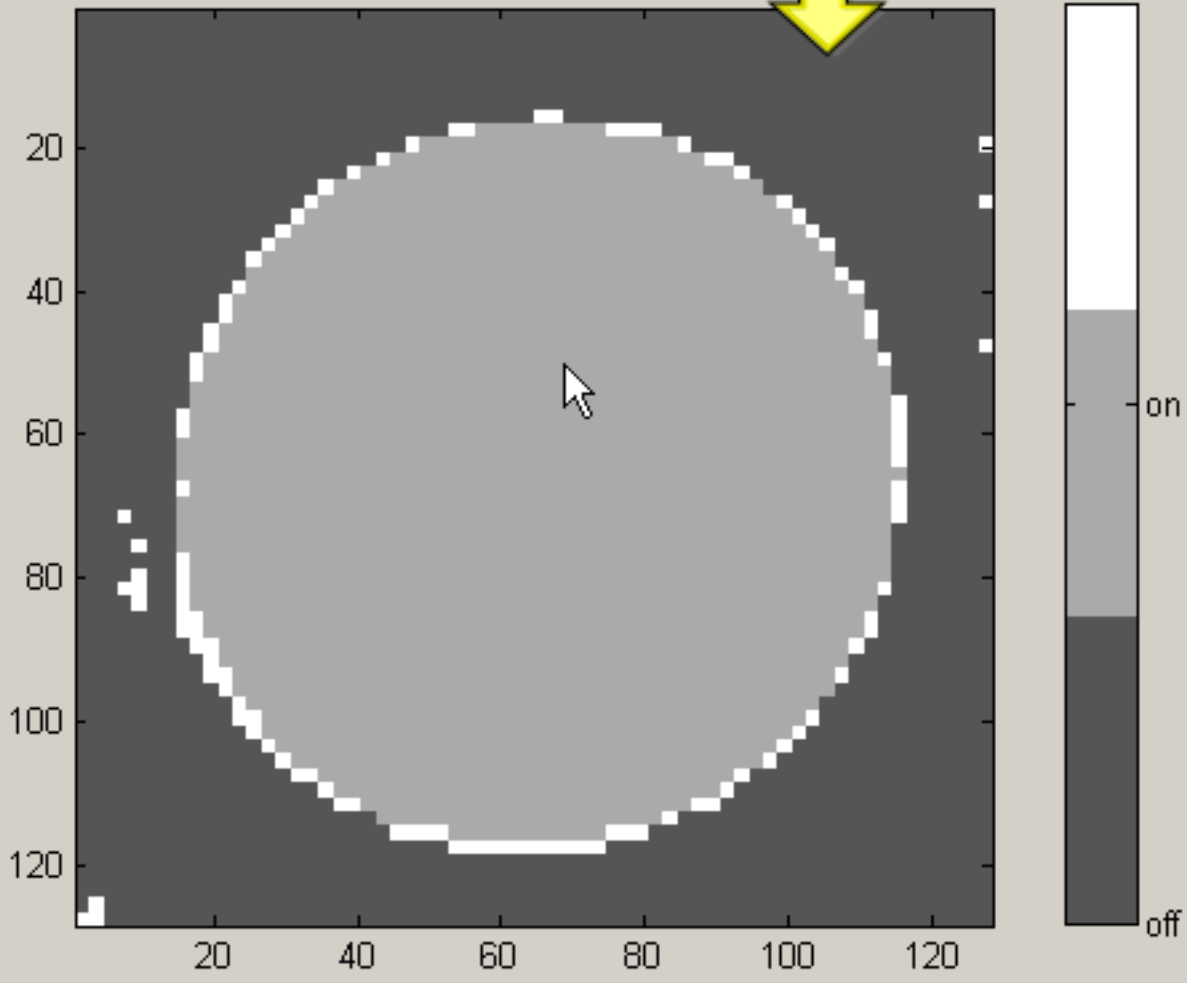
The classification is redone and the new classification image is shown.

As can be seen the classification has improved.

Of course one would have to decide which model is more realistic. Saving more PCs in a model can improve the classification, but can result in overfitting the data and creating a model that is too specific to the current data set.



Close Panel



Save Image To File

### Data Selection Panel

Name of Image Matrix

Name of Variable Matrix

yimage

exactmass

Name of Control Matrix

data

Samplenames For Control Matrix

samplenames

Choose a normalization method and then a scaling method. If you change the normalization method you need to re-select the chosen scaling method

Choose Normalization Method

Sum of Selected Peaks

Choose Scaling Method

Square root scaling

Run PCA

PCA Summary

PC#	%Var	%Vartotal
1	94.9	94.9
2	3.1	98
3	1.2	99.2
4	0.4	99.7
5	0.2	99.8
6	0.1	99.9
7	0.1	100
8	0	100

# of PCs to keep in model = 2

Save Model

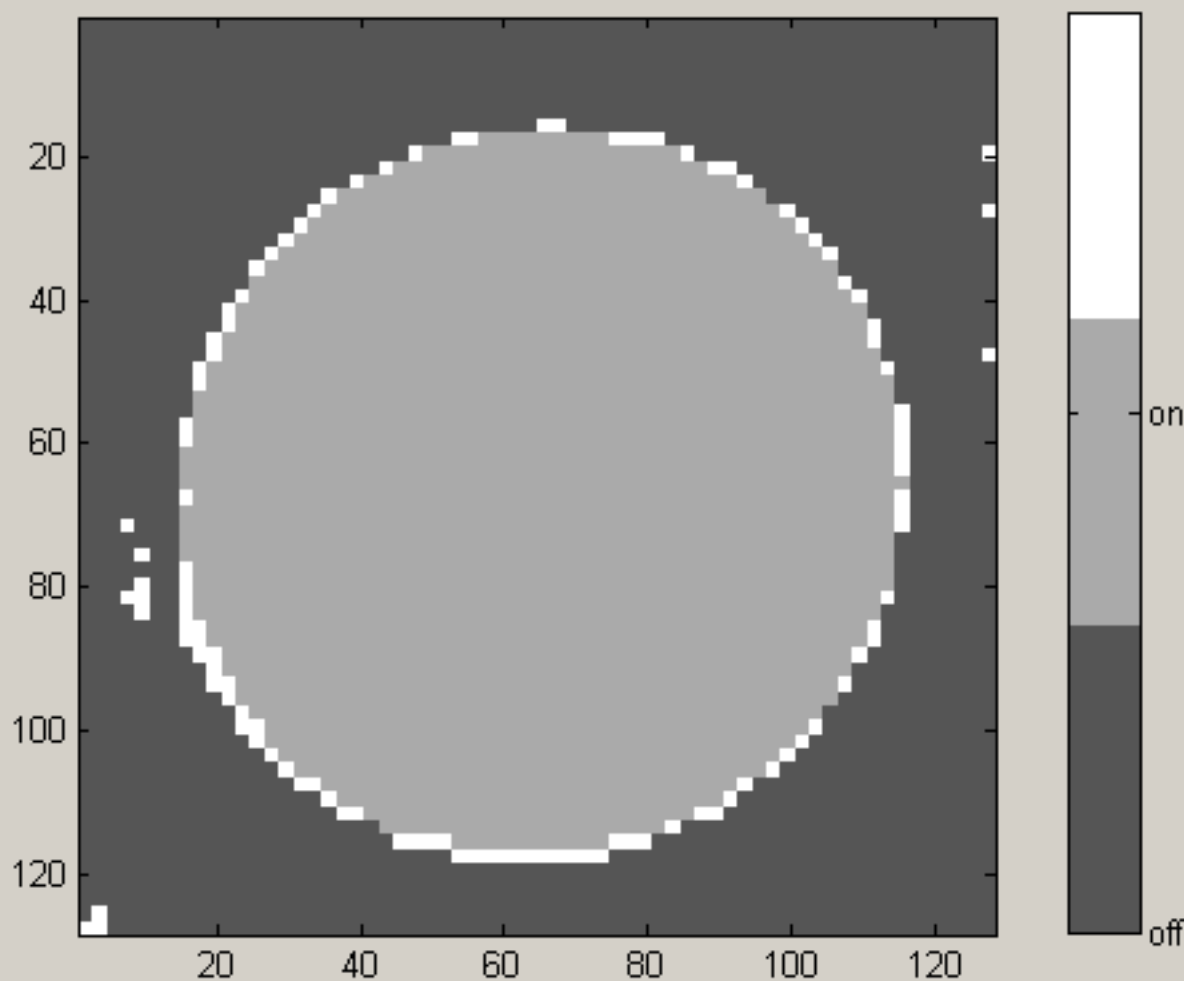
"Pixel" size of squares nxn, n= 2

Acceptable pixel sizes inc

1 2 4 8 16 32 64 1024 2048 4096

Dice and Mod

Close Panel



The classification image can be saved to a file by pressing the 'Save Image To File' button.

Save Image To File



Save picture as

Save in: work

- CoolImage.jpg
- default.jpg
- GreyScaleLines.jpg
- OverlayXYSnapshot.jpg
- RGBOverlay.jpg
- ScoresImage.jpg

File name: ClassifiedImage

Save as type: jpeg (\*.jpg)

Save Cancel

Close Panel

Select the location to save the file, give it a name and press the 'Save' button.

Run PCA

PCA Summary

PC#	%Var	%Vartotal
1	94.9	94.9
2	3.1	98
3	1.2	99.2
4	0.4	99.7
5	0.2	99.8
6	0.1	99.9
7	0.1	100
8	0	100

# of PCs to keep in model = 2

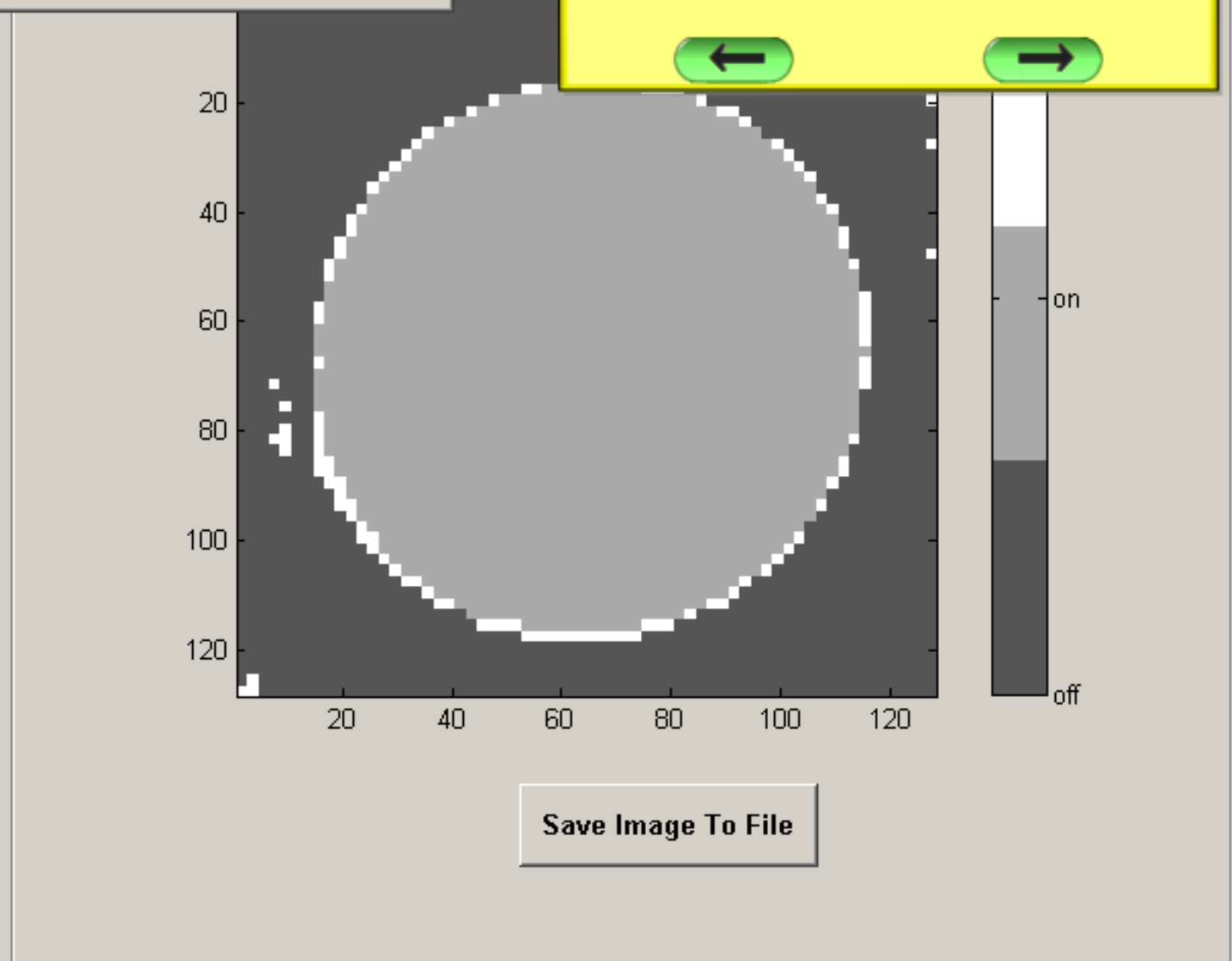
Save Model

"Pixel" size of squares nxn, n= 2

Acceptable pixel sizes include:

1 2 4 8 16 32 64 128 256 512  
1024 2048 4096 8192

Dice and Model



### Data Selection Panel

Name of Image  
yimage

The image is saved in the directory chosen.

1200 x 900 x 24 BPP 9/40 62 % 39.91 KB / 3.09 MB 6/14/2011 / 12:17:14

Date Modified
3/2/2011 4:59 PM
5/11/2010 2:36 PM
3/26/2010 4:34 PM
9/2/2010 4:45 PM
9/2/2010 4:45 PM
12/21/2010 1:36 PM
12/21/2010 1:57 PM
1/31/2011 1:48 PM
3/17/2010 3:03 PM
2/1/2011 11:18 AM
3/17/2010 3:11 PM
10/13/2010 11:56 .
1/4/2010 4:48 PM
4/29/2010 2:21 PM
10/11/2010 1:10 PM
3/31/2007 10:49 A
7/8/2010 2:21 PM
11/2/2010 4:29 PM
1/27/2010 1:10 PM
3/13/2010 12:56 PM
10/13/2010 11:56 .
3/23/2010 10:24 A
5/4/2011 10:10 AM
7/27/2010 11:44 A
10/11/2010 4:40 PM
1/4/2010 4:45 PM
2/28/2011 5:10 PM
11/8/2007 11:45 A
5/8/2011 5:11 PM
3/23/2011 10:55 A
3/23/2011 10:54 A
12/20/2010 11:11 .
7/23/2010 5:02 PM
10/13/2010 11:56 .
1/3/2011 5:25 PM
10/11/2010 2:15 PM
10/11/2010 3:39 PM
10/13/2010 11:57 .
6/14/2011 12:17 PM

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P

# of

"Pixel

Accept

1 2

### Data Selection Panel

Name of Image Matrix:

Name of Variable Matrix:

#### Name of Control Matrix

#### Samplenames For Control Matrix

Choose a normalization method and then a scaling method. If you change the normalization method you need to re-select the chosen scaling method

#### Choose Normalization Method

#### Choose Scaling Method

Run PCA

PCA Summary

PC#	%Var	%Vartotal
1	94.9	94.9
2	3.1	98
3	1.2	99.2
4	0.4	99.7
5	0.2	99.8
6	0.1	99.9
7	0.1	100
8	0	100

# of PCs to keep in model =

Save Model

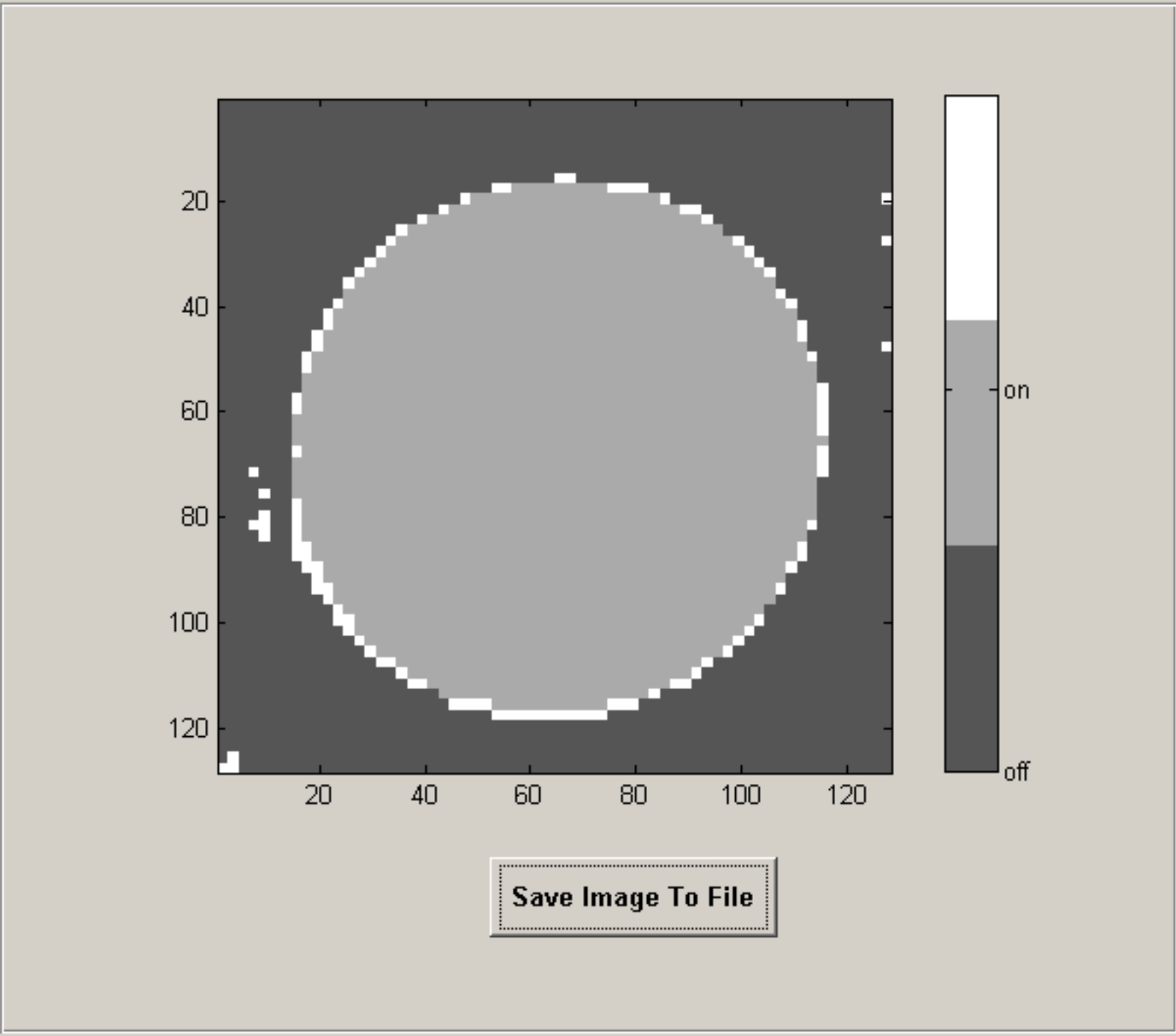
"Pixel" size of squares nxn, n=

Acceptable pixel sizes include:

1 2 4 8 16 32 64 128 256 512  
1024 2048 4096 8192

Dice and Model

Press the 'Close Panel' button to close the panel.



### Data Selection Panel

Name of Image Matrix

Name of Variable Matrix

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.

