

This tutorial will discuss how to use the new 3D PCA Tools. This function is in BETA.

So far you can run PCA using Poisson scaling. Other scaling options and options will be added in the next release.

Thank you for your patience in this process.

To access the panel, press the 'PCA Tools' button.

Overlay Tools

3D Tools

Color Overlay

2D Profiles

PCA Tools

Close

☐ If you want to save the movie frames check this box before creating the movie.

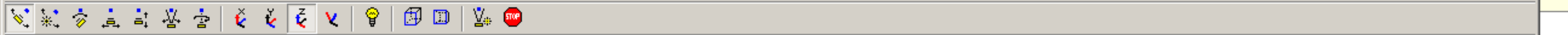
Create XY Corr Slice Movie

Create XZ Corr Slice Movie

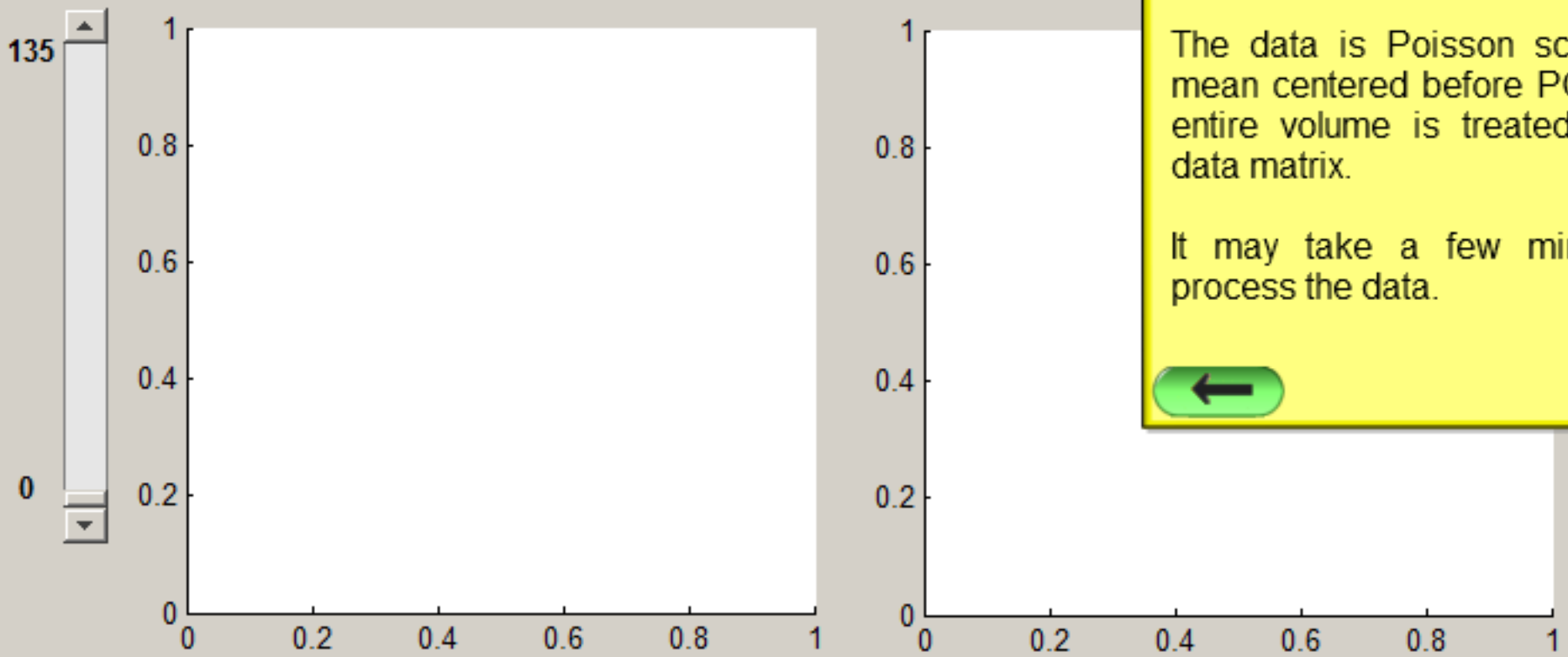
Create YZ Corr Slice Movie

Save Corr XZ

Save Corr YZ



Run PCA on 3D data



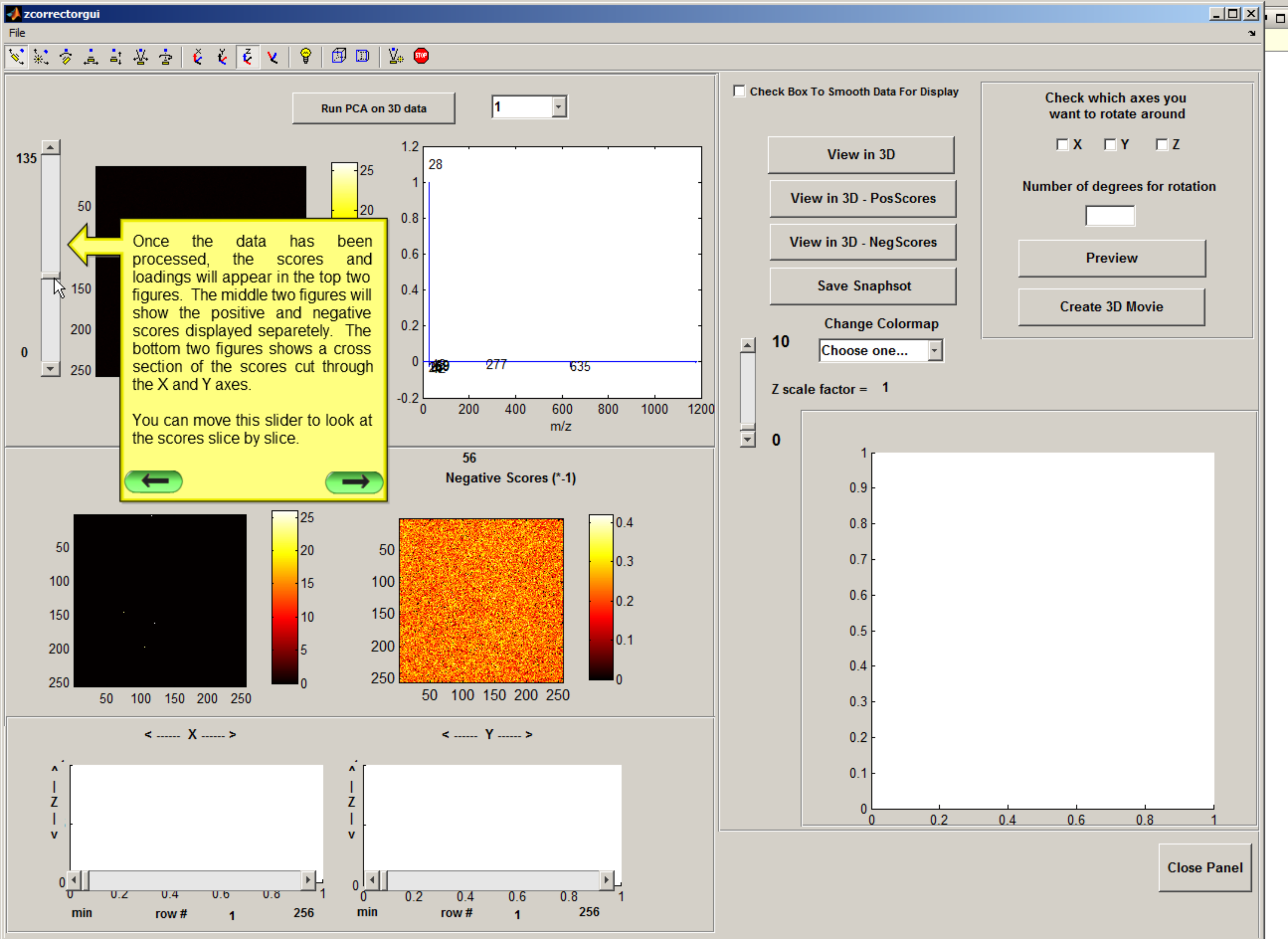
Press the 'Run PCA on 3D data' button.

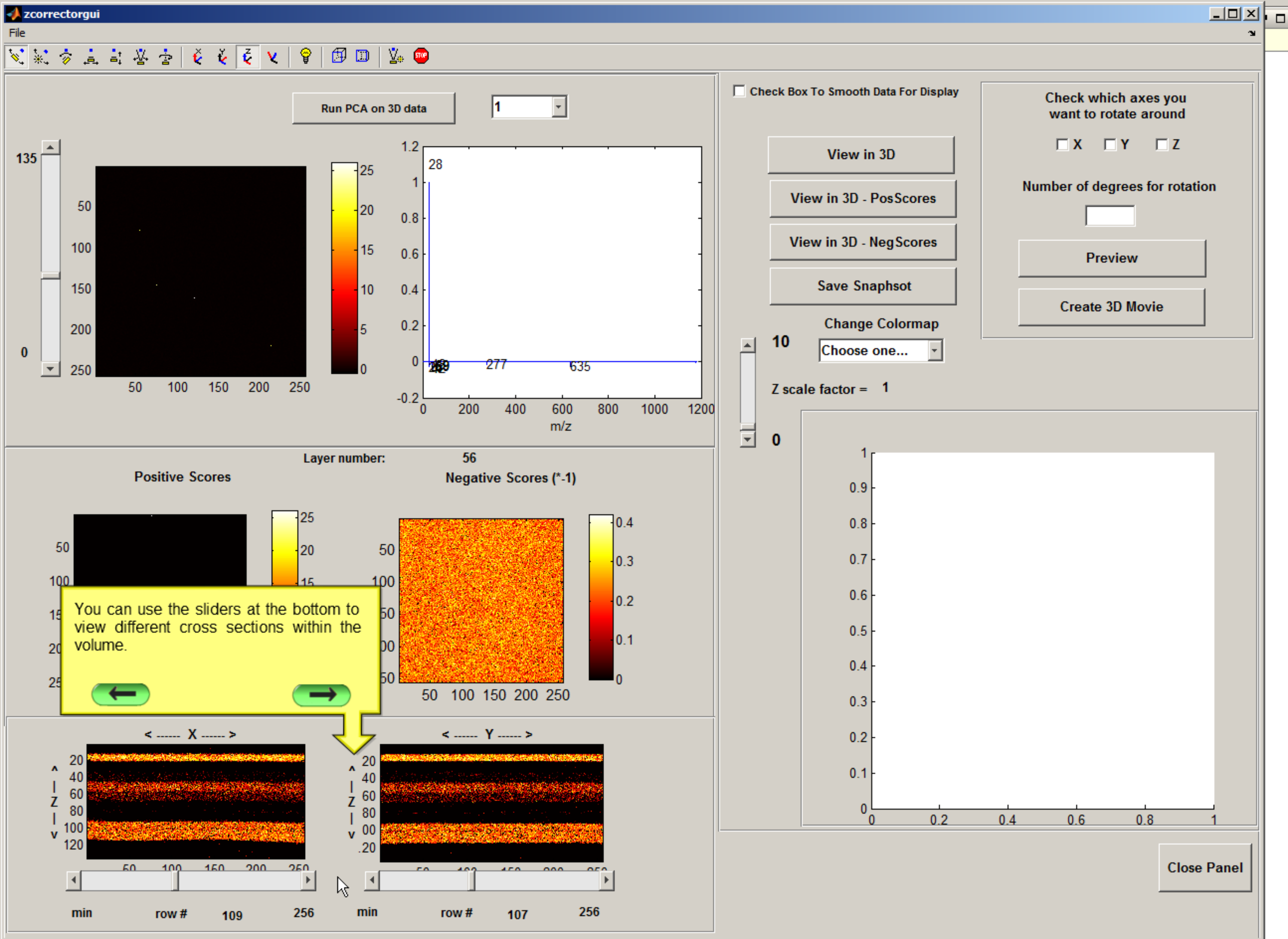
The data is Poisson scaled and mean centered before PCA. The entire volume is treated as one data matrix.

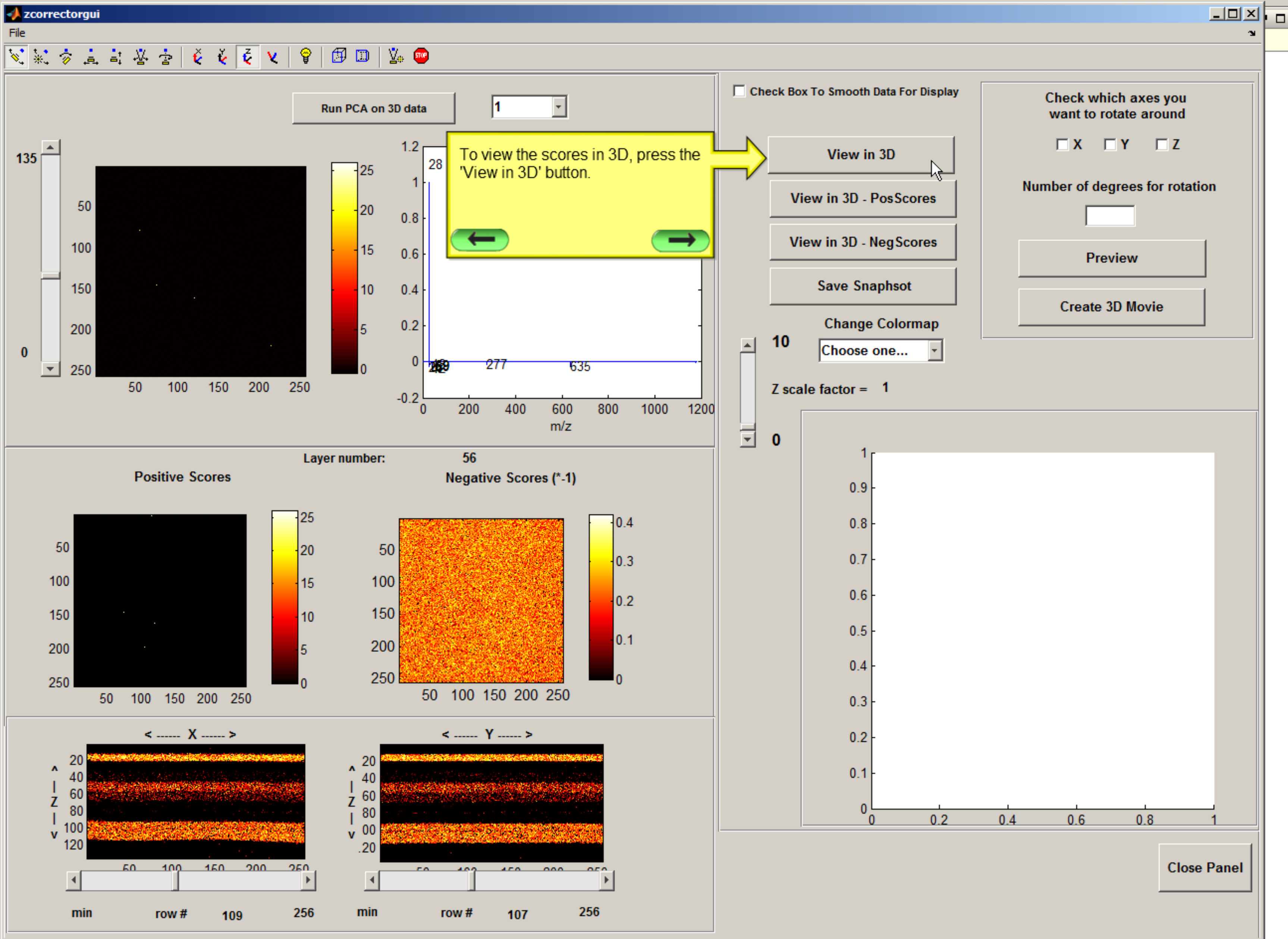
It may take a few minutes to process the data.

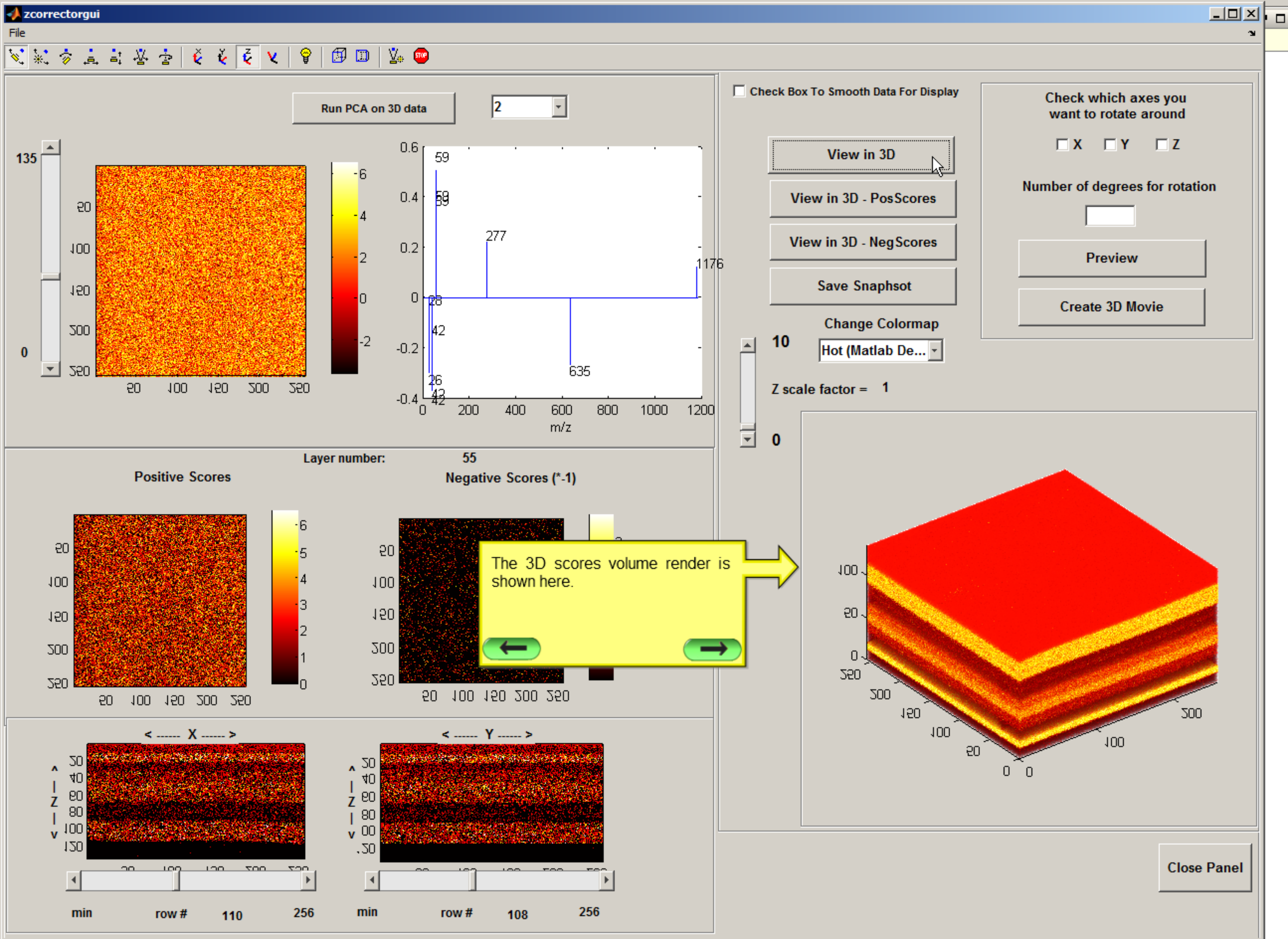


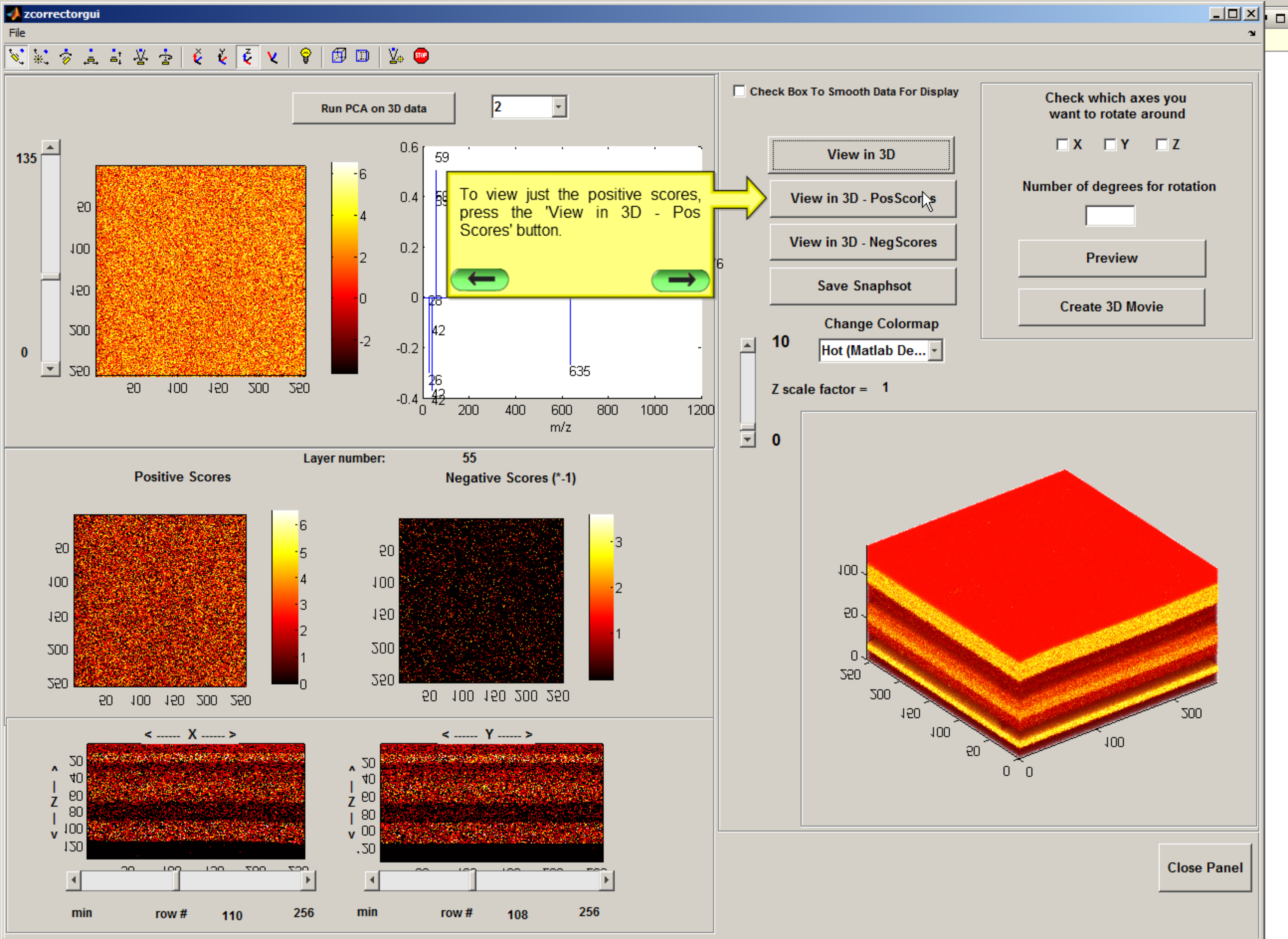
Close Panel

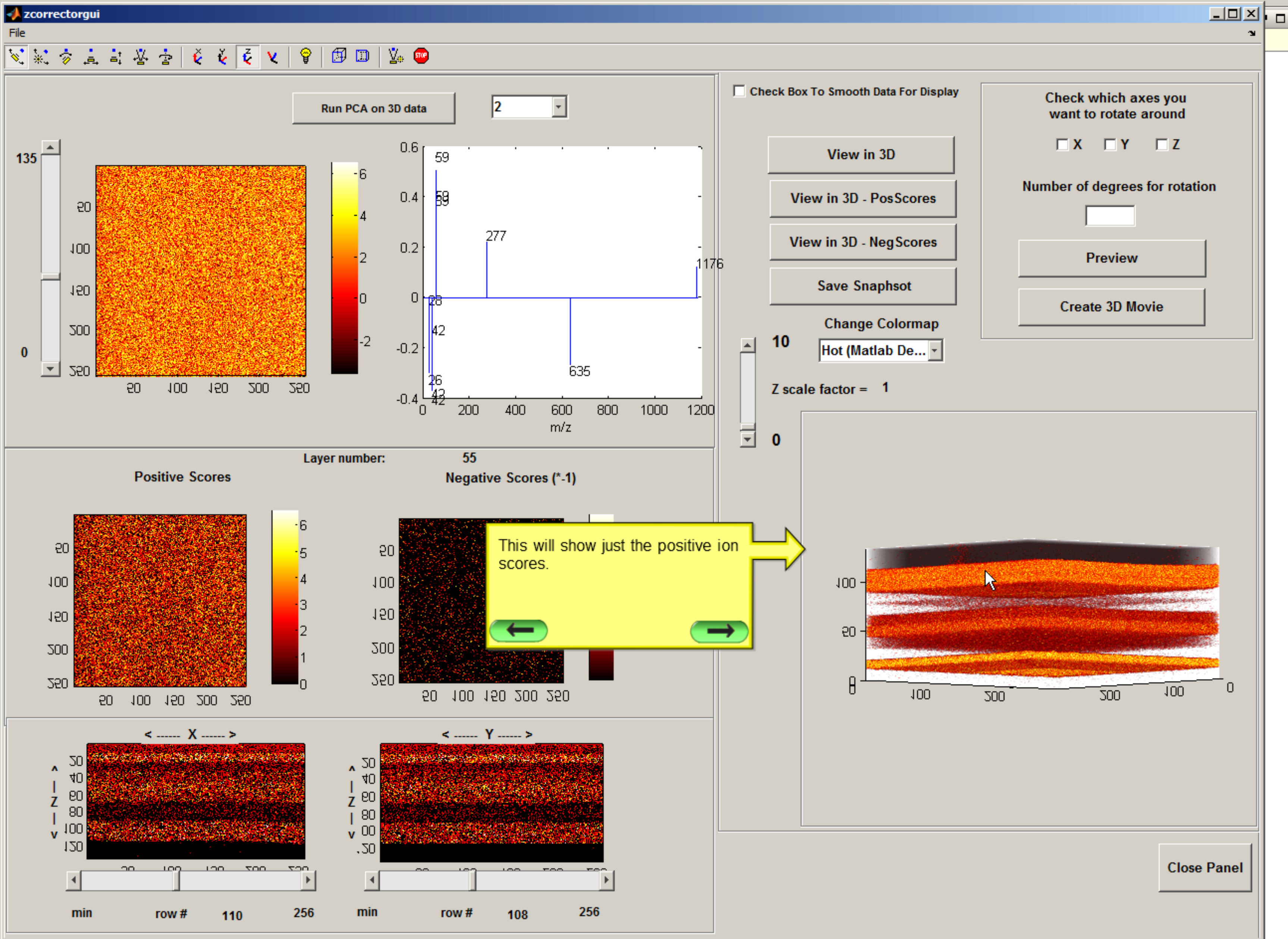


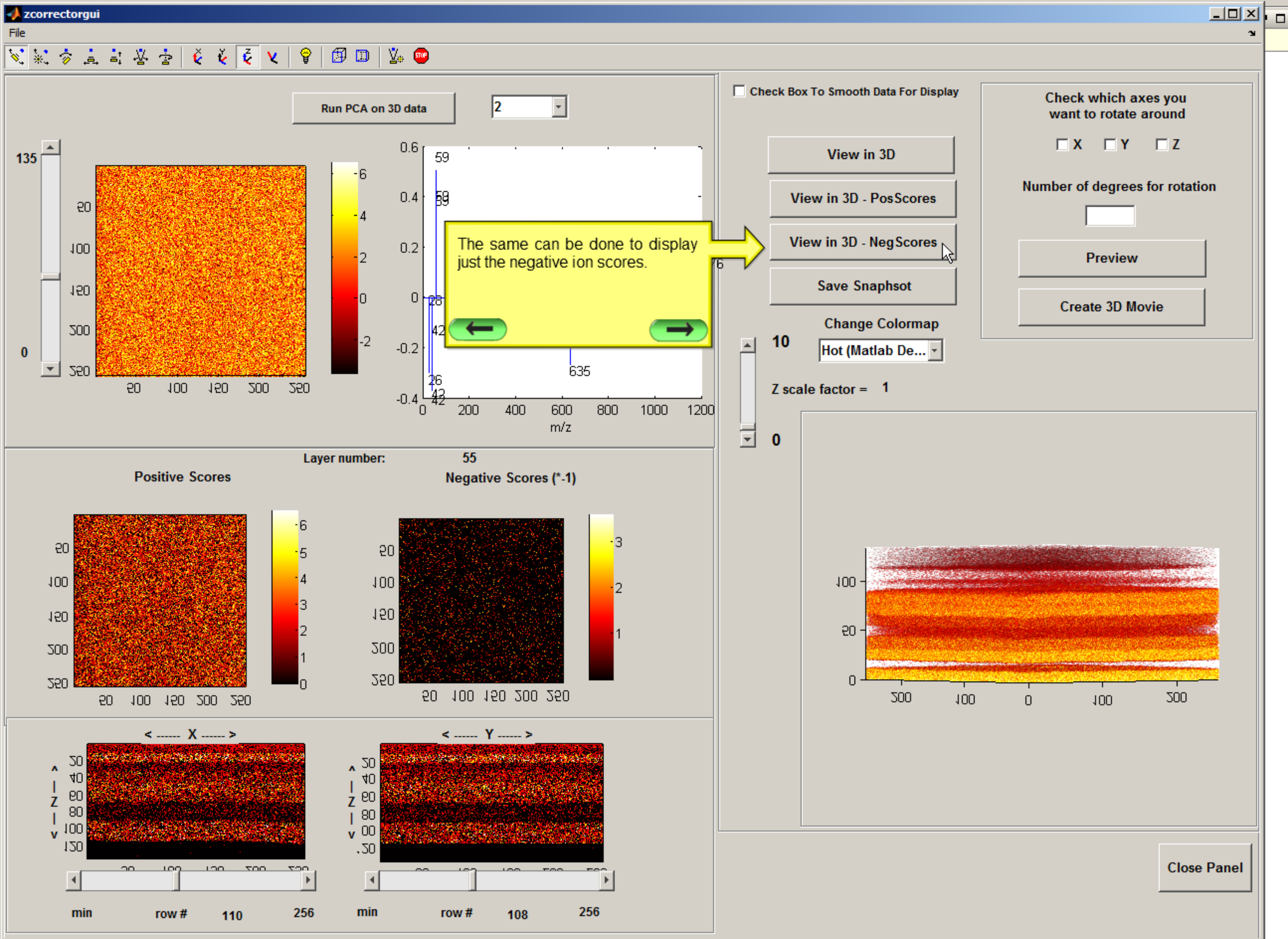


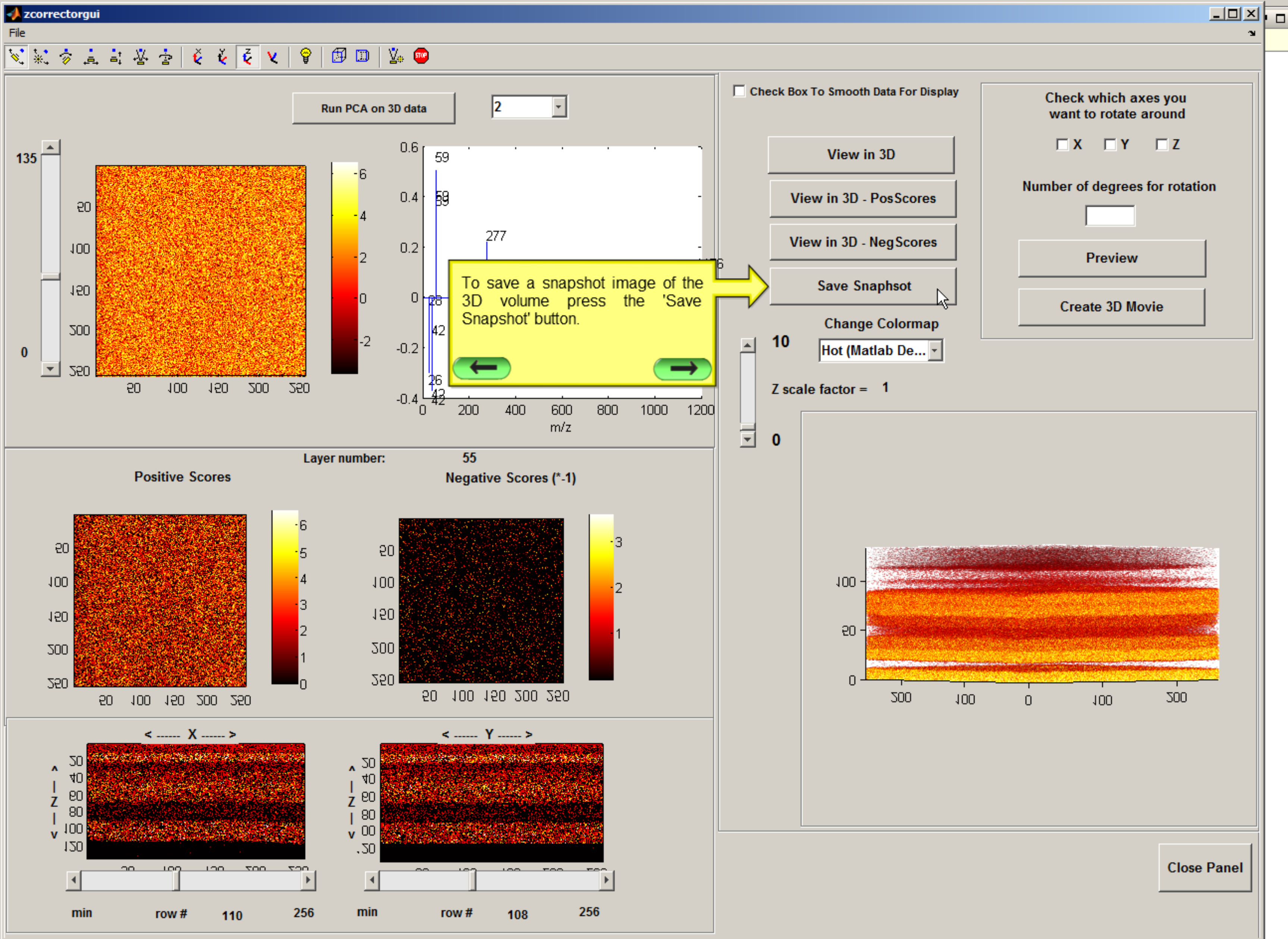


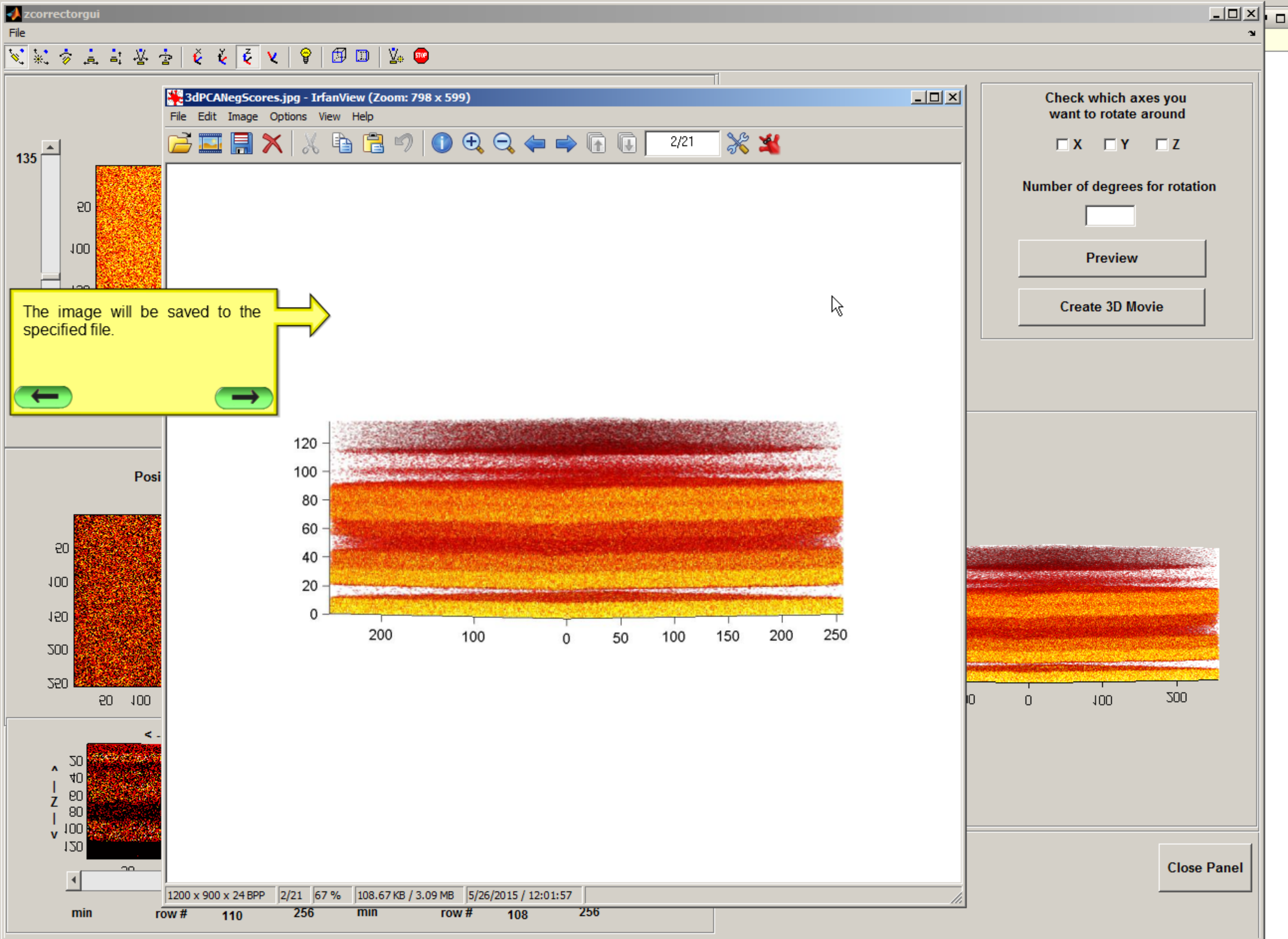












The image will be saved to the specified file.

Check which axes you want to rotate around

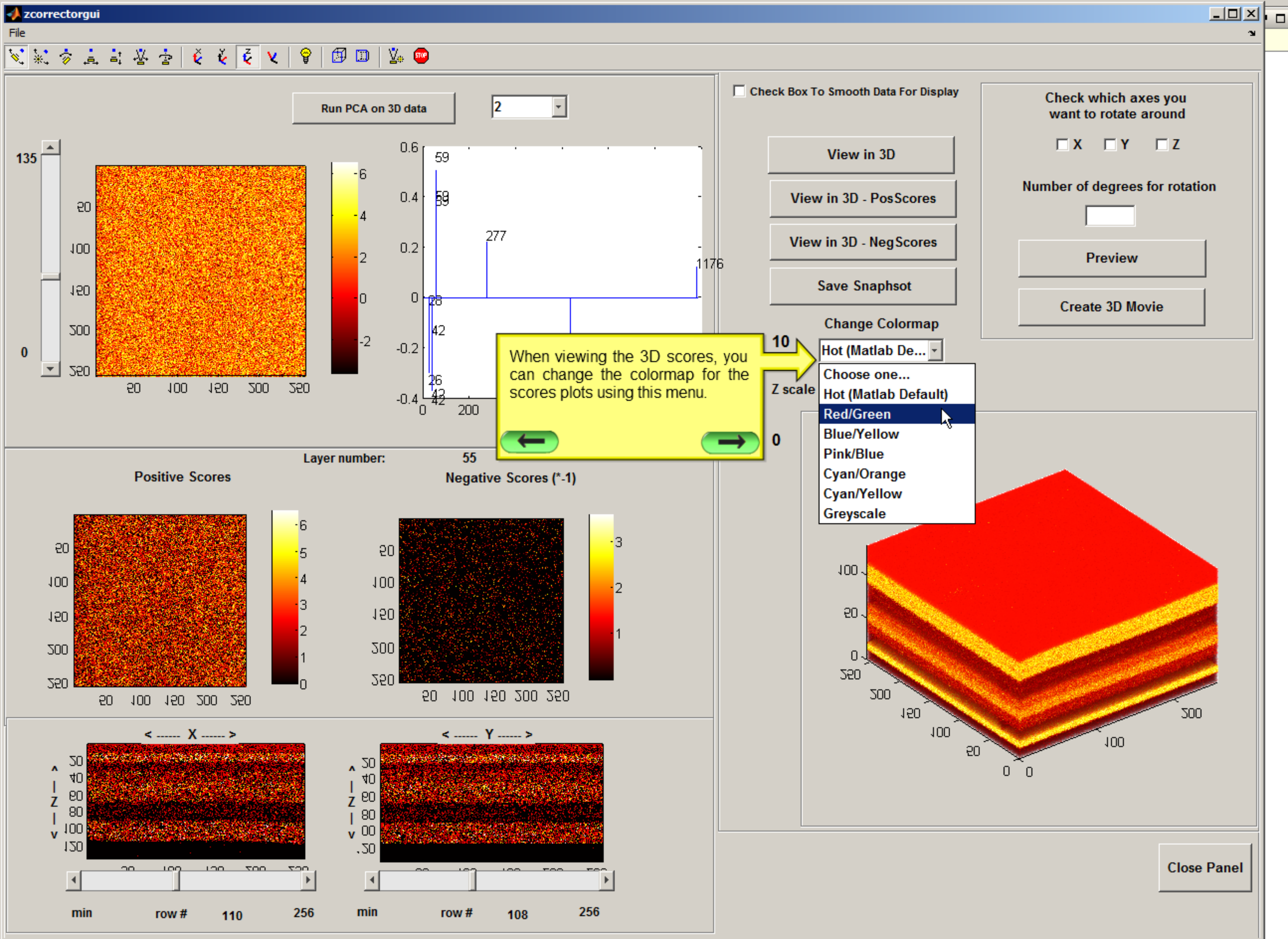
☐ X ☐ Y ☐ Z

Number of degrees for rotation

Preview

Create 3D Movie

Close Panel



2

☐ X ☐ Y ☐ Z

Number of degrees for rotation

Preview

Create 3D Movie

Red/Green

Z scale factor = 1

0

55

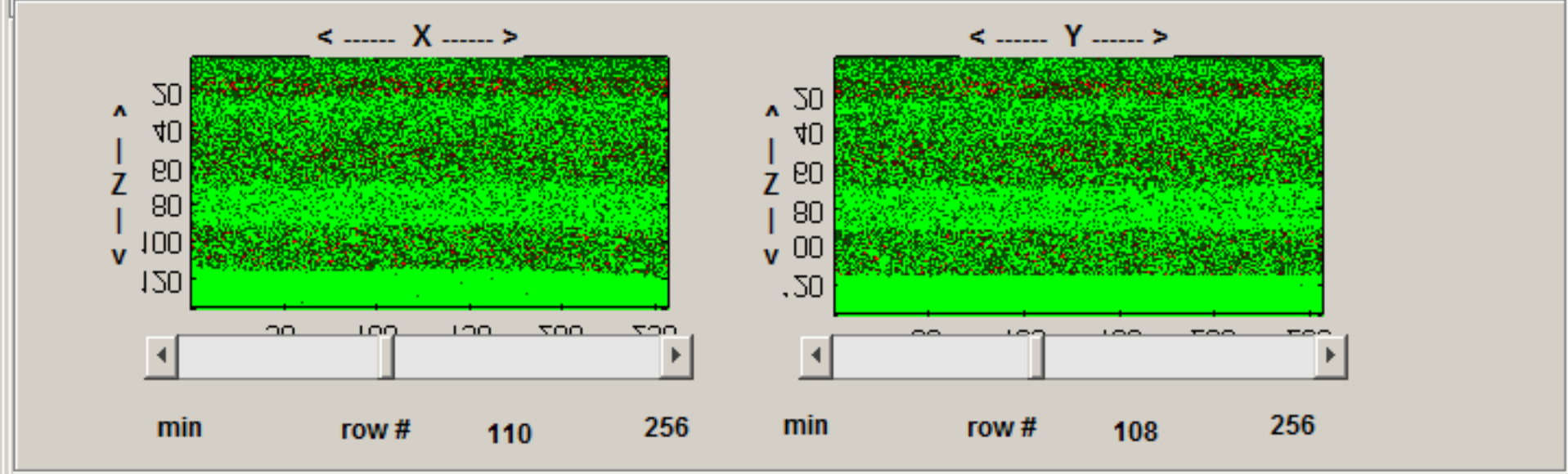
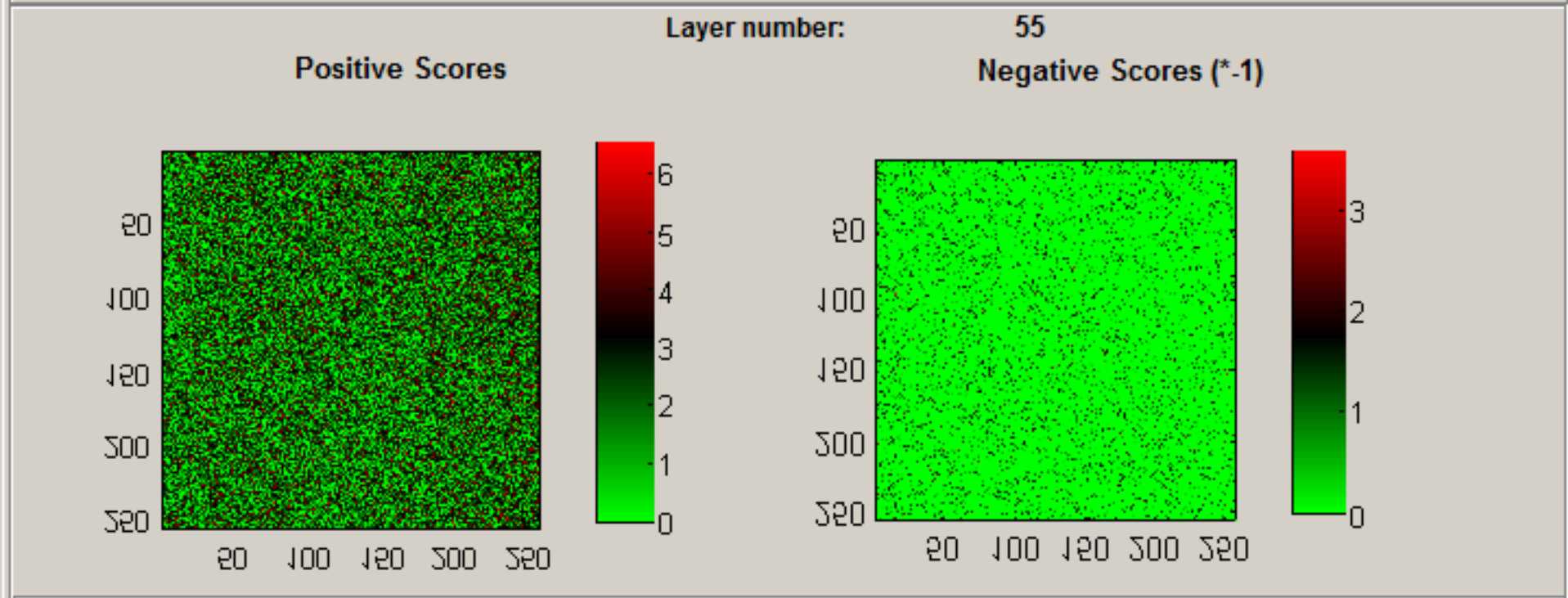
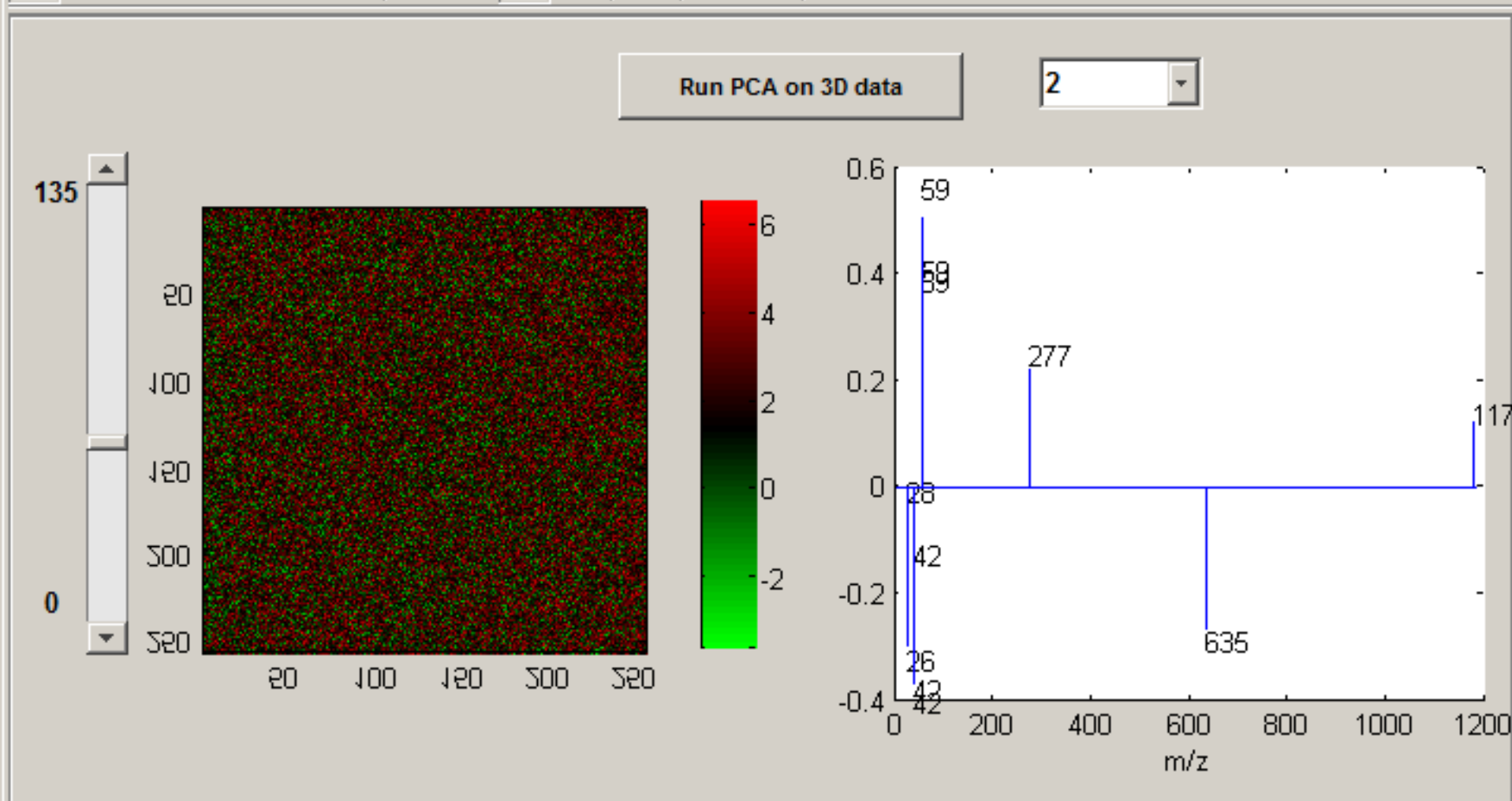
Negative Scores (*-1)

Please note that the display of the 2D positive and negative ion scores in the middle figures on the left will not be correct.

I am working on a fix for this.

A 3D visualization of a volume, likely representing a 500x500x100 grid. The volume is composed of alternating layers of red and green, suggesting a binary or categorical data distribution. The axes are labeled with values 0, 100, 200, 300, and 400. A white mouse cursor is visible on the top surface of the volume.

Close Panel



☐ Check Box To Smooth Data For Display

View in 3D

These controls can be used to make a 3D movie of the volume rotating around various axes.



Check which axes you want to rotate around

☒ X ☐ Y ☐ Z

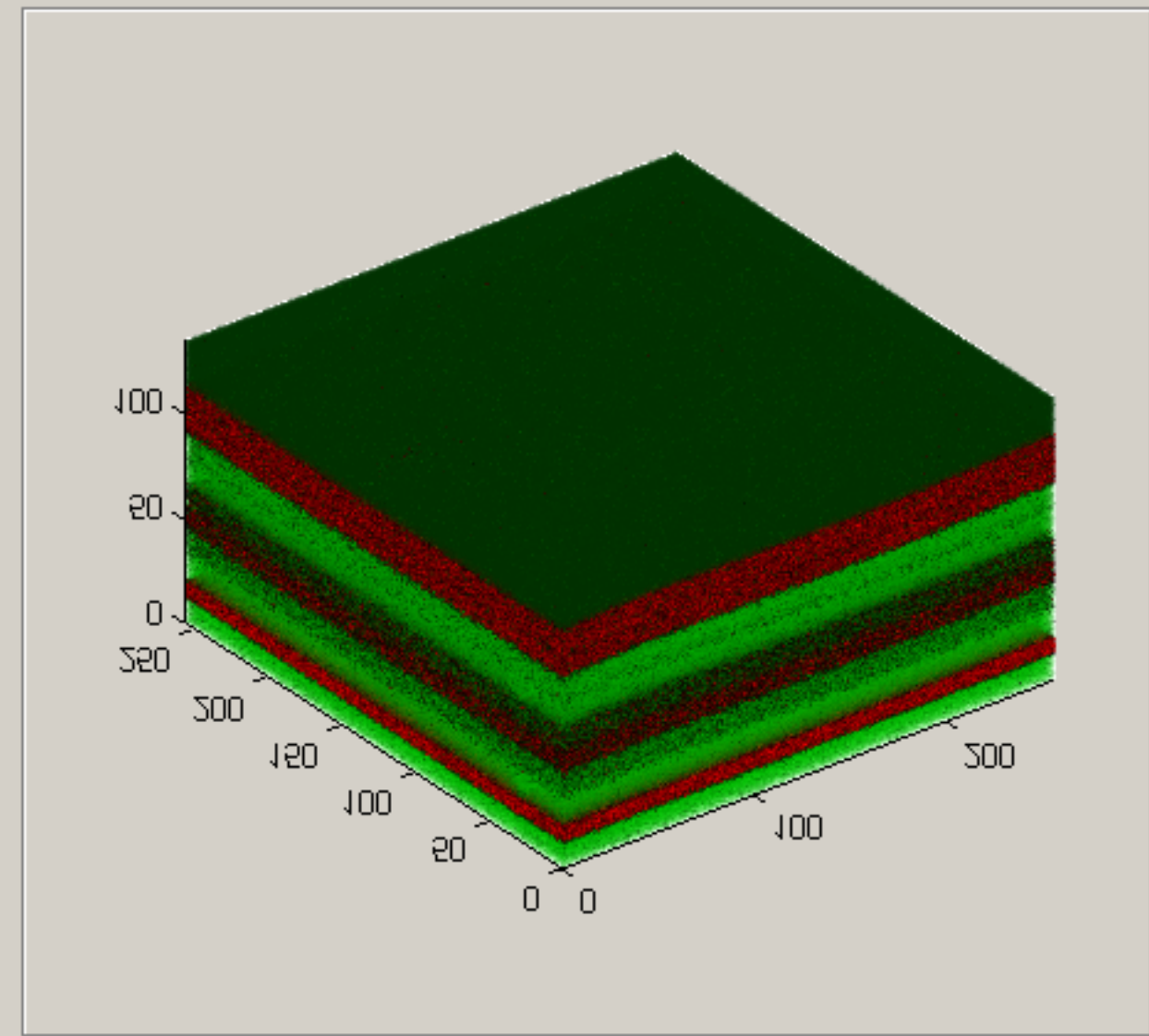
Number of degrees for rotation

Preview

Create 3D Movie

Change Colormap

Z scale factor = 1



Close Panel

