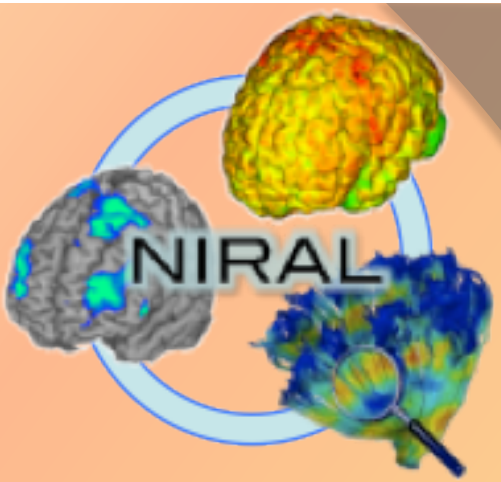

FIBERVIEWER LIGHT TUTORIAL

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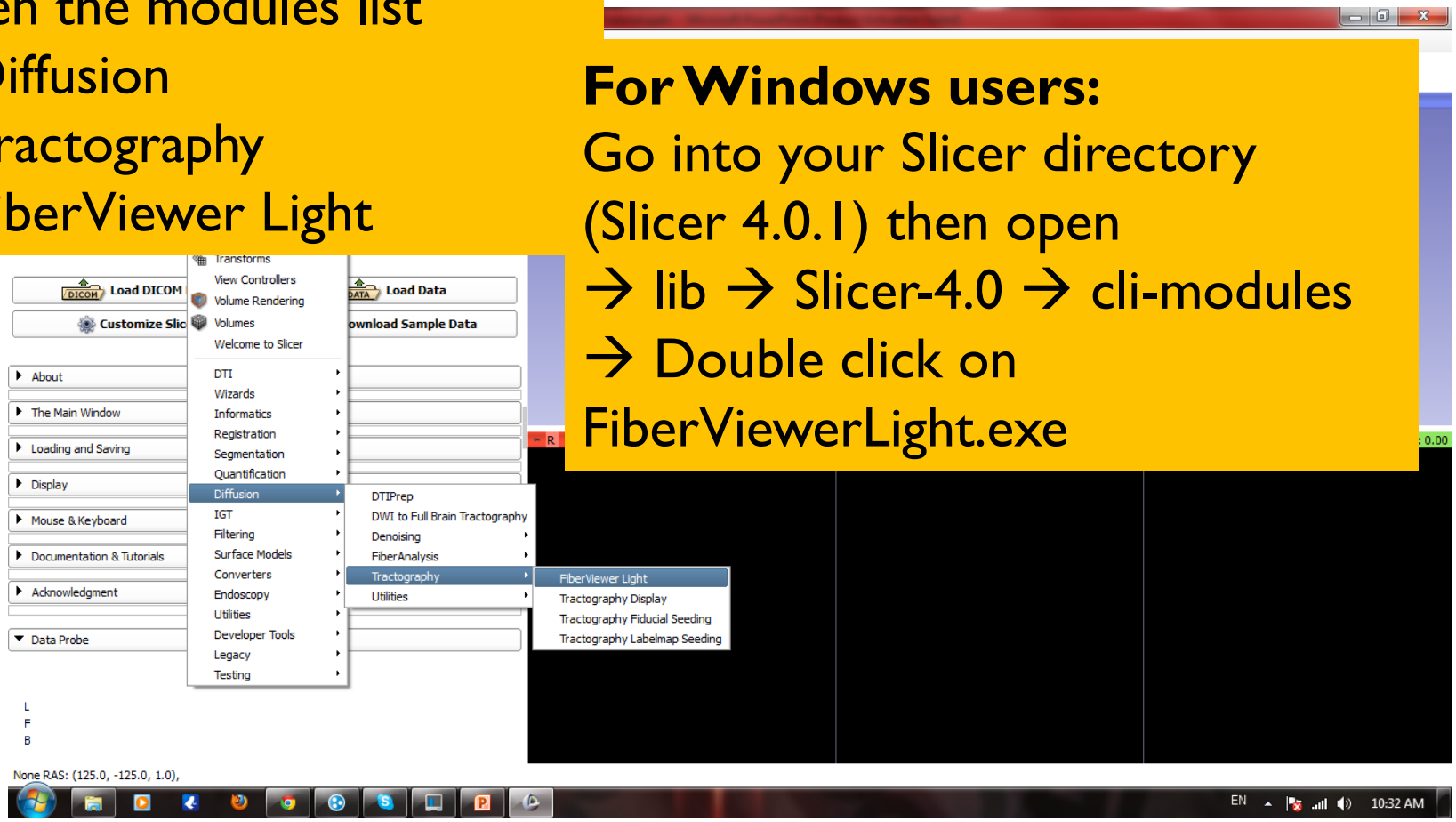
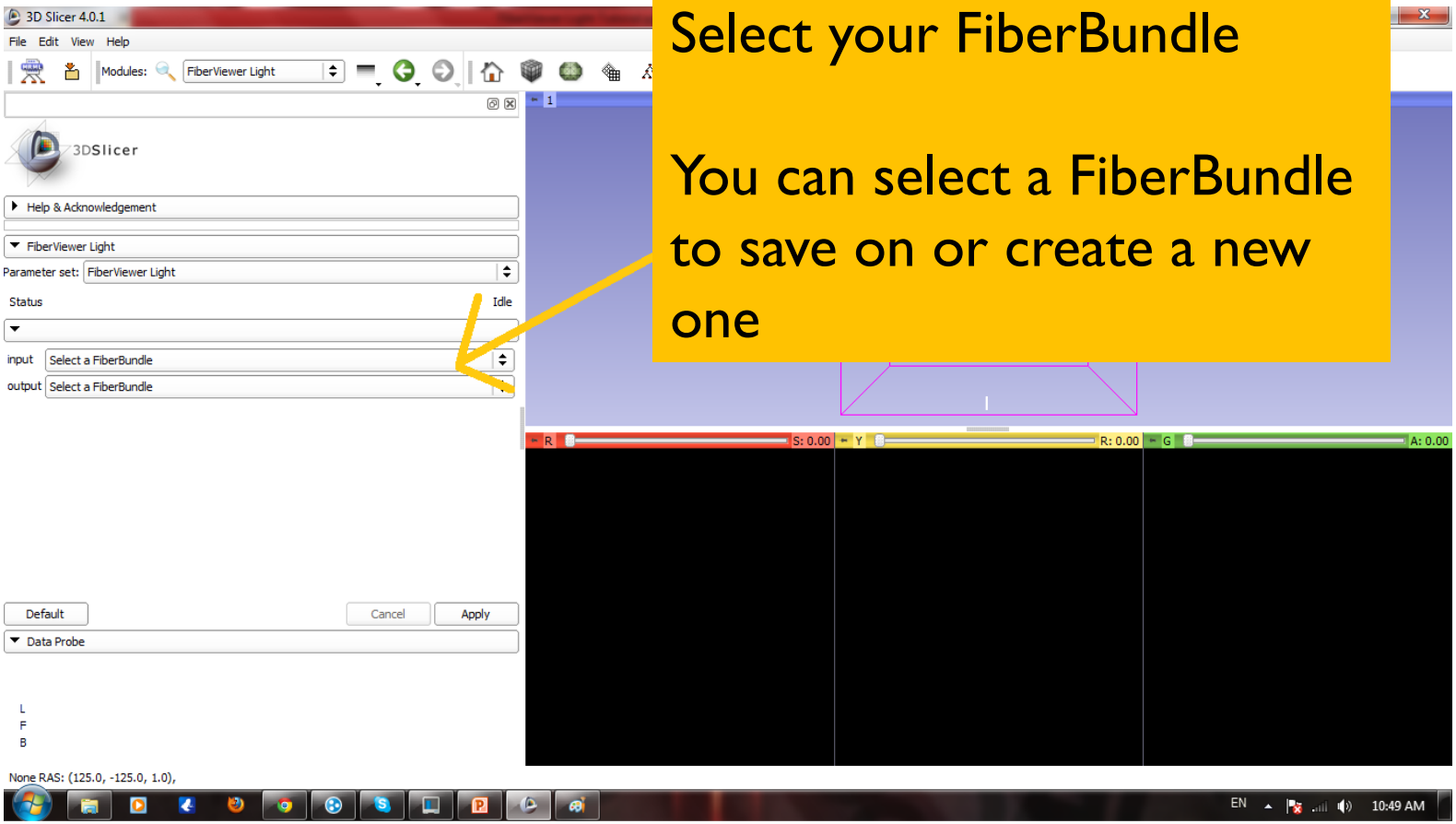
Launch from Slicer

For Linux and Mac users:
Open the modules list
→Diffusion
→Tractography
→FiberViewer Light

For Windows users:
Go into your Slicer directory (Slicer 4.0.1) then open
→ lib → Slicer-4.0 → cli-modules
→ Double click on FiberViewerLight.exe



Launch from Slicer

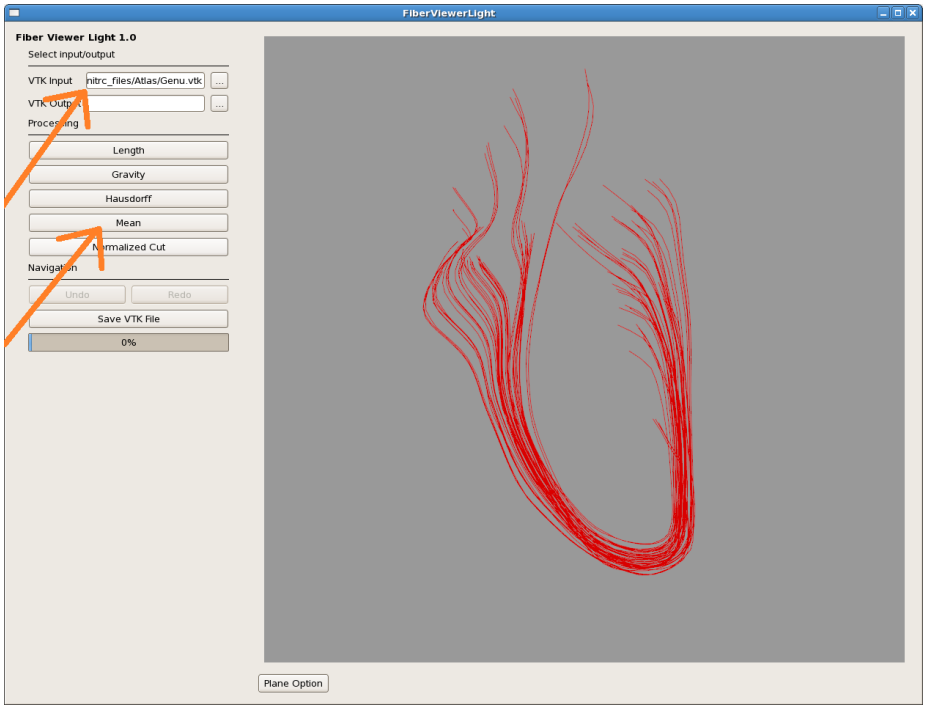


For Linux and Mac users:
Select your FiberBundle

You can select a FiberBundle to save on or create a new one

Getting Started

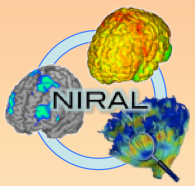
- From GUI :
  - Select a VTK Input File
  - Choose the Clustering Method



- From Command Line :

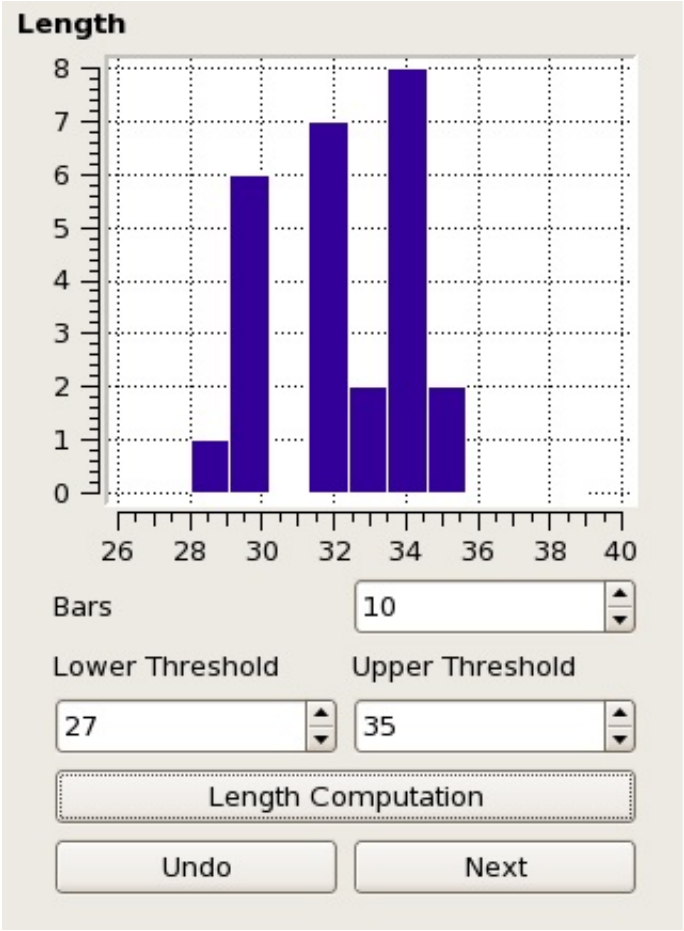
./FiberViewerLight -i input_name -o output_name

Clustering



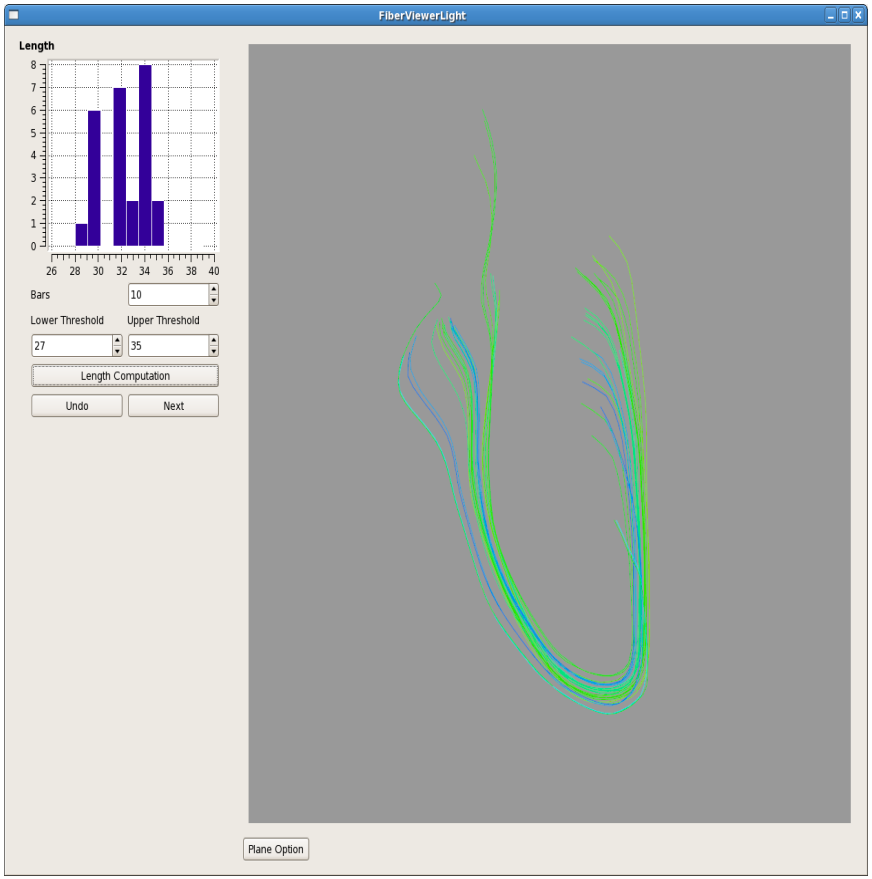
Length Method

- Fiber extremities is Threshold default values
- Bars option is the number of bars that will be used on the histogram if none of the fibers were thresholded
- Click on Apply Threshold to display the thresholded fiber
- Click Next or Undo to go back to the main screen, Next will keep changes



Length Method

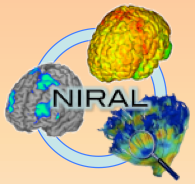
- Colors go from blue (shortest) to red (longest)



Gravity, Hausdorff and Mean Methods

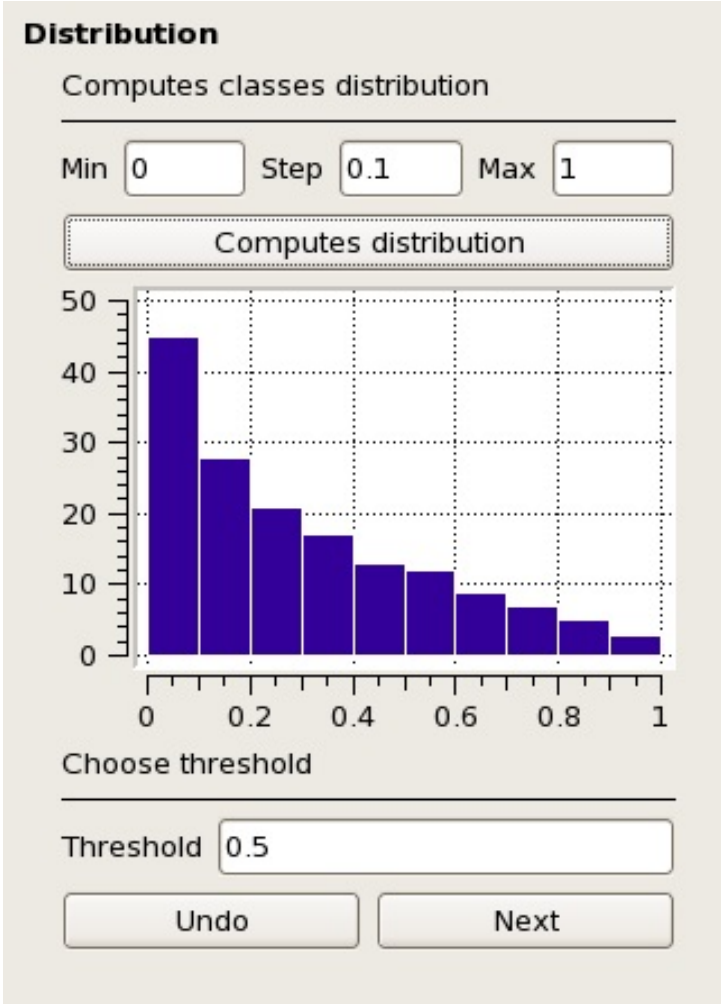
- Same general approach for each method

- Algorithm based on gravity, Hausdorff or mean pairwise distance matrix :
  - Distance between each center of gravity
  - Maximum of pair wise distances of two fibers
  - Mean of pair wise distances between two fibers



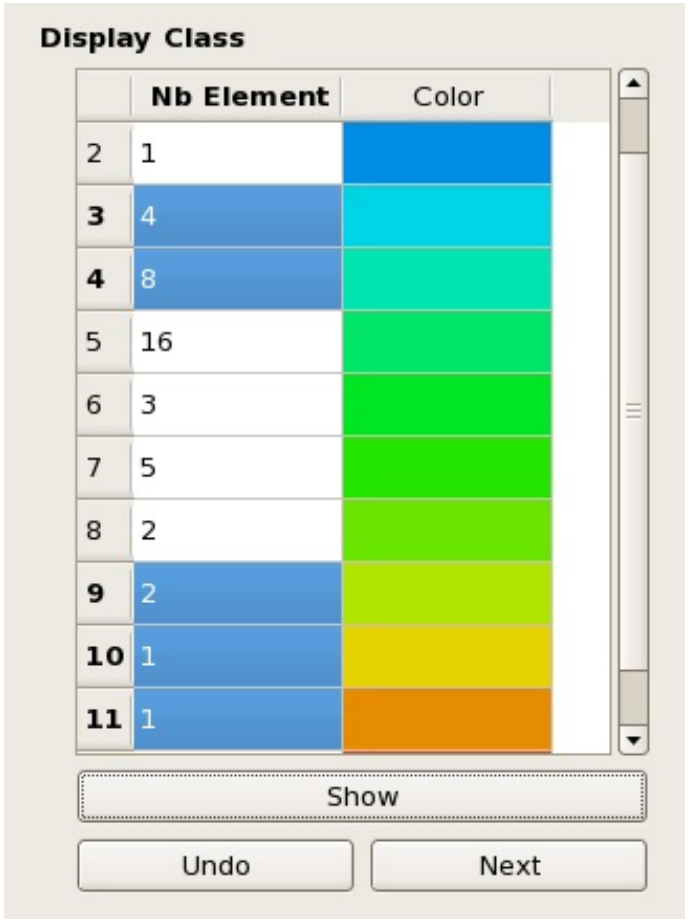
Gravity, Hausdorff and Mean Methods

- Clicking on "Compute Distribution" will generate histogram
- There will be (Max – Min)/Step bars from Min to Max
- Click on Next to display generated classes with Threshold value parameter



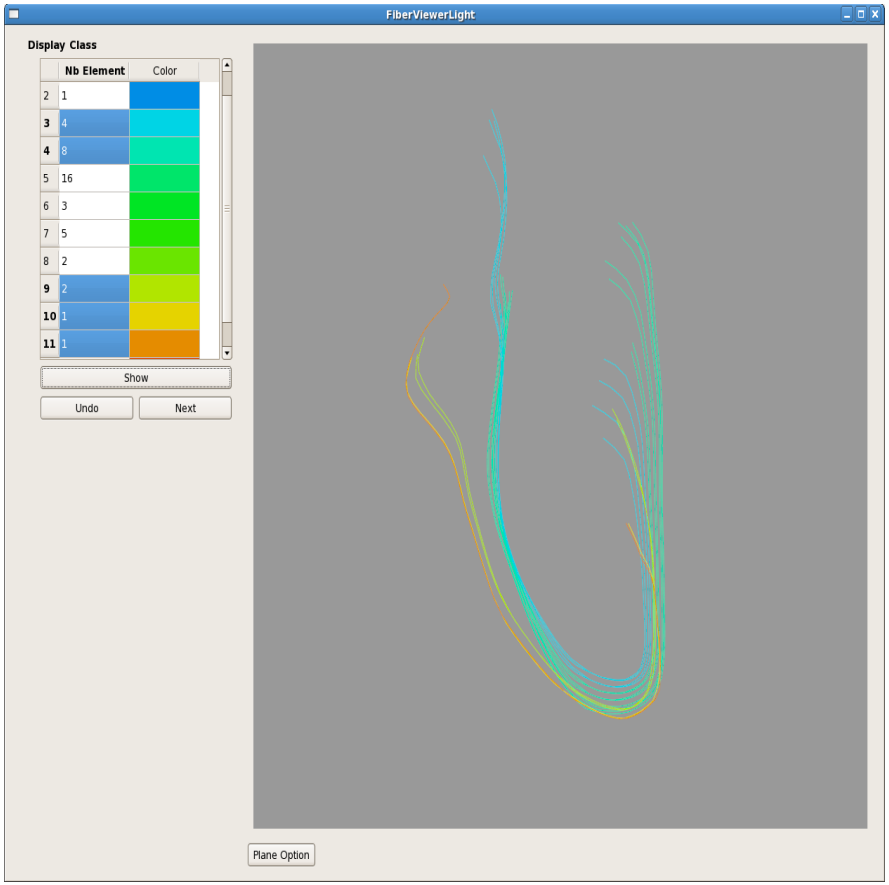
Cluster Selector

- Structure of the table : Number of elements of Idth class and associated color
- Click on the number of elements to select class
- Click again to deselect a class



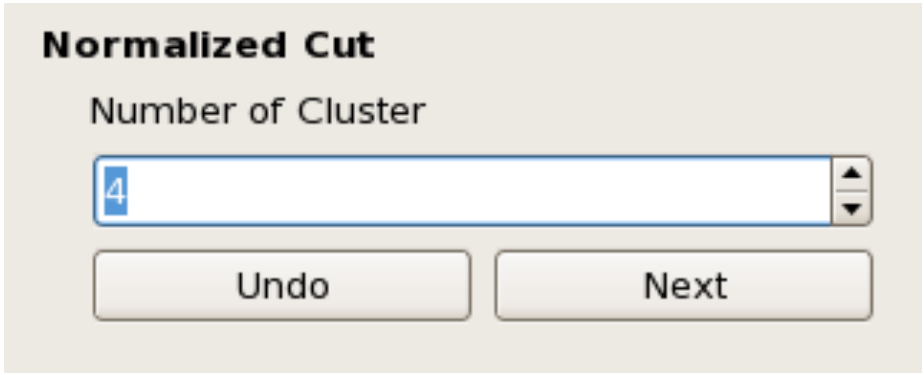
Cluster Selector

- Click on "Show" to display selected clusters only
- "Undo" to go back to the Distribution panel
- "Next" to keep changes and go back to main menu



Normalized Cut

- Choose the number of cluster which will be the number of classes
- Pairwise mean distance based algorithm

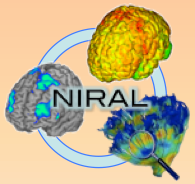


Saving your VTK File

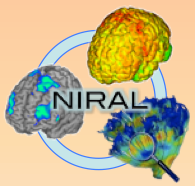
- When you are done :
  - Enter a VTK Filename on the main menu

  Or

  - Click on "Save VTK" on the main menu and it will open a browser.
- If there is a VTK Filename specified on the main menu, each time you will click on "Save VTK", it will update the VTK output file

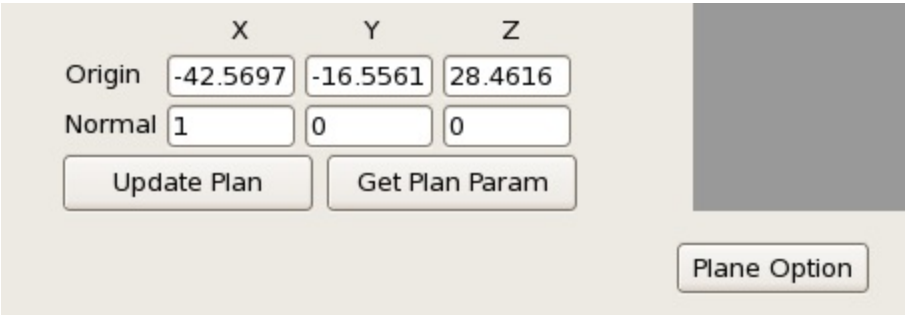


Visualization



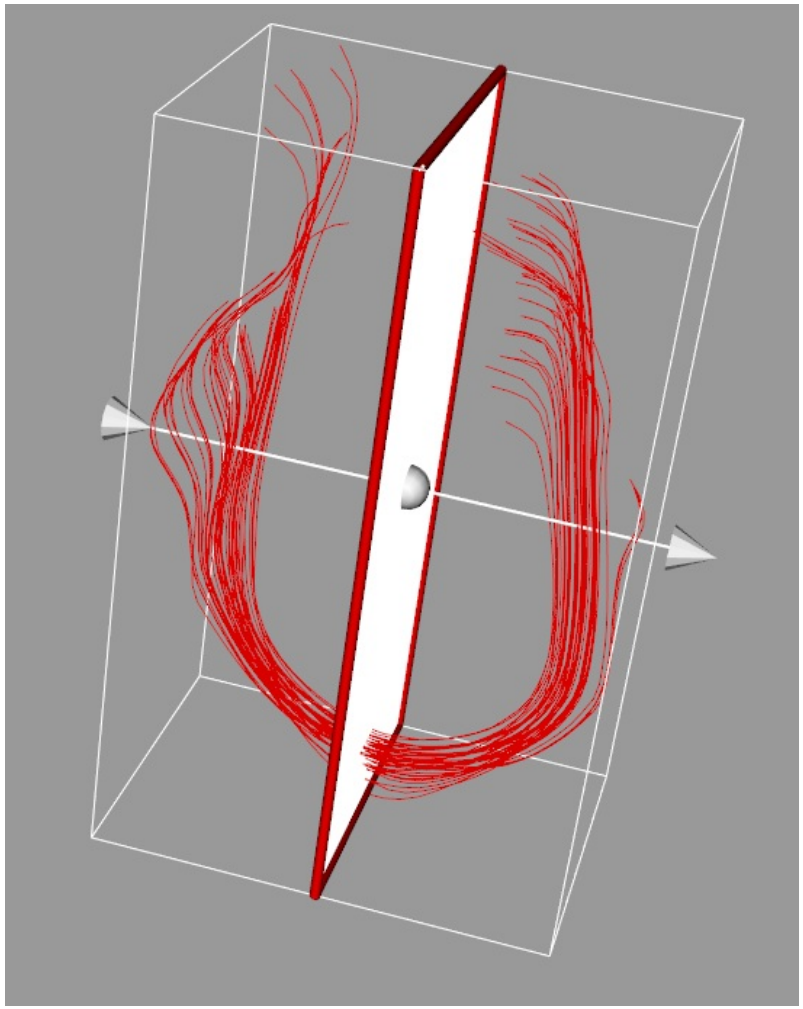
Plane Settings

- Display a plane by clicking on Plane Option button
- Default display : Center of gravity
- Change origin and normal settings and update thanks to the corresponding button
- Retrieve coordinates by clicking "Get Plan Param" button



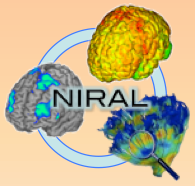
Plane Settings

- Translate the plan by dragging it
- Rotate the plan by dragging the normal arrow



General Visualization Controls

- Drag to rotate the view
- Shift + Drag to translate the fiber
- Ctrl + Drag to rotate on the perpendicular axe to the screen
- Right dragging or wheel to zoom in or out



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