Slicer4 Minute

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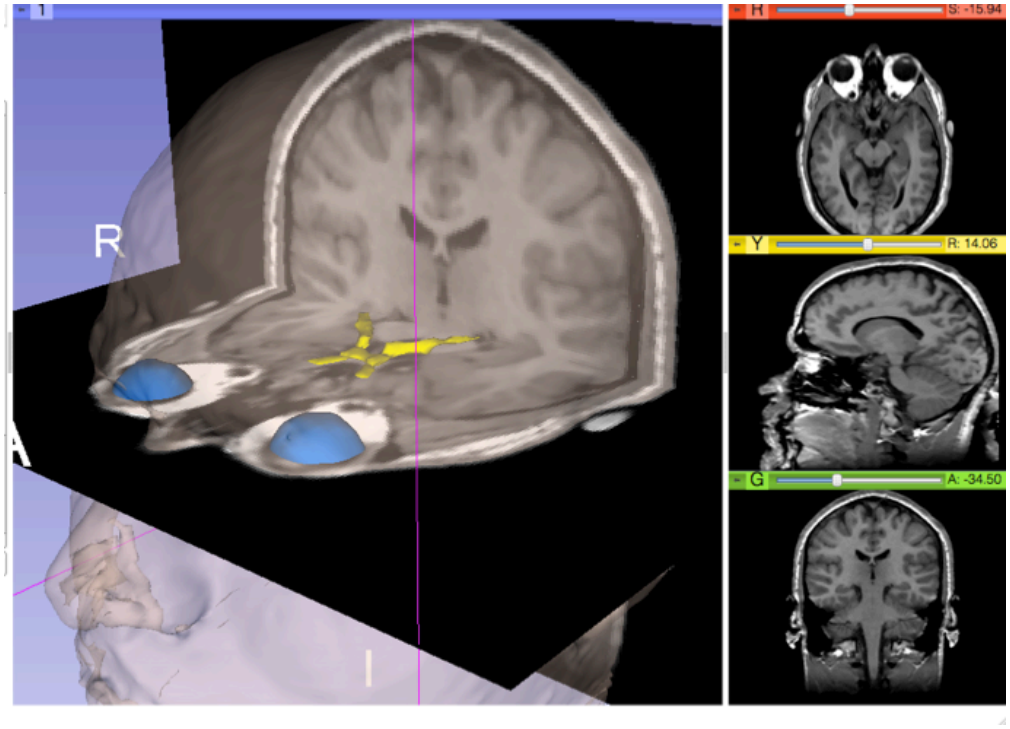
Slicer4 minute tutorial



This tutorial is a 4-minute introduction to the 3D visualization capabilities of the Slicer3 software for medical image analysis.

Slicer4 software & dataset

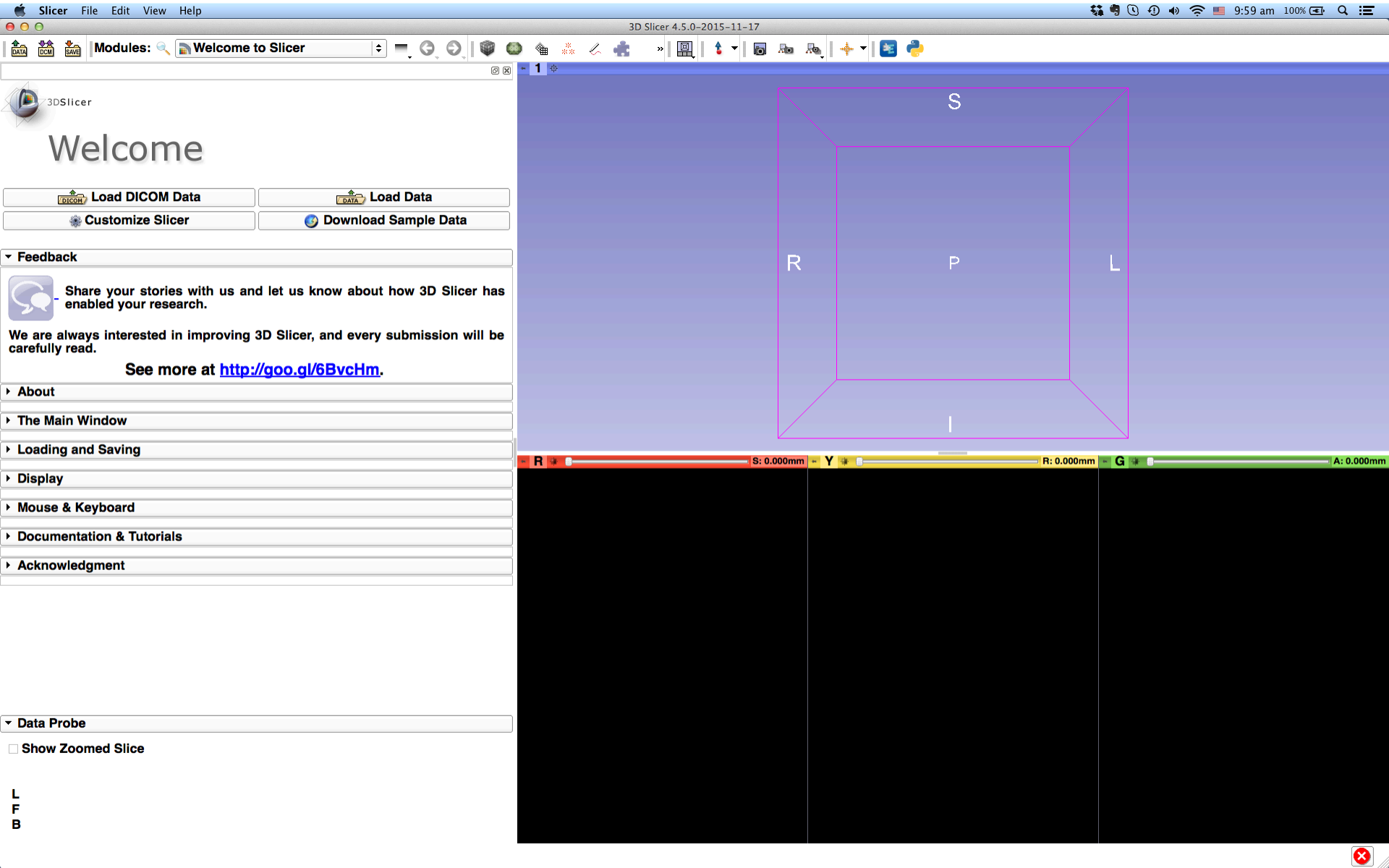
- Download the Slicer4 software available at

http://download.slicer.org/

- Download the Slicer4minute dataset available at

http://www.slicer.org/slicerWiki/index.php/Documentation/4.5/Training

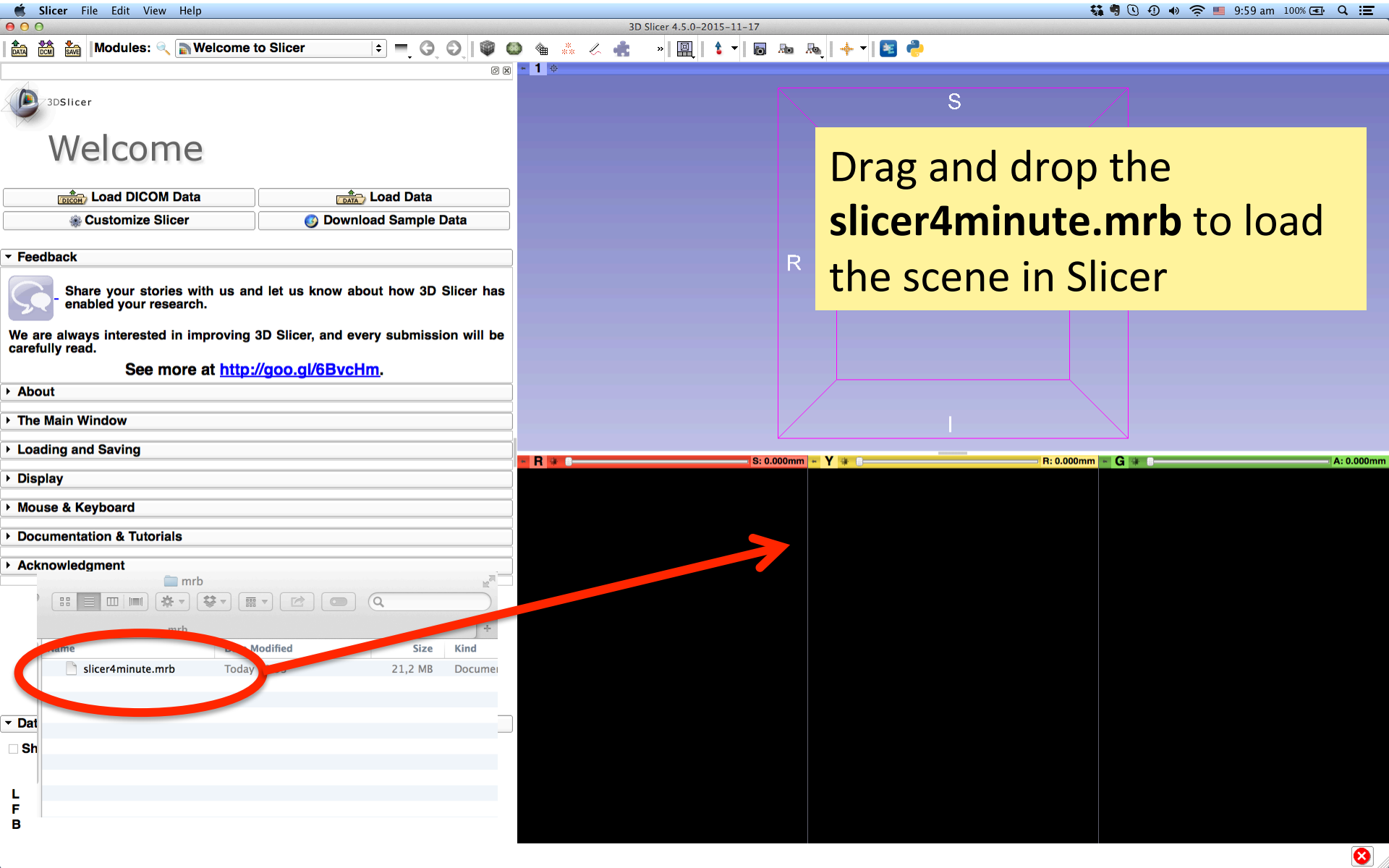
3D Slicer version 4.5



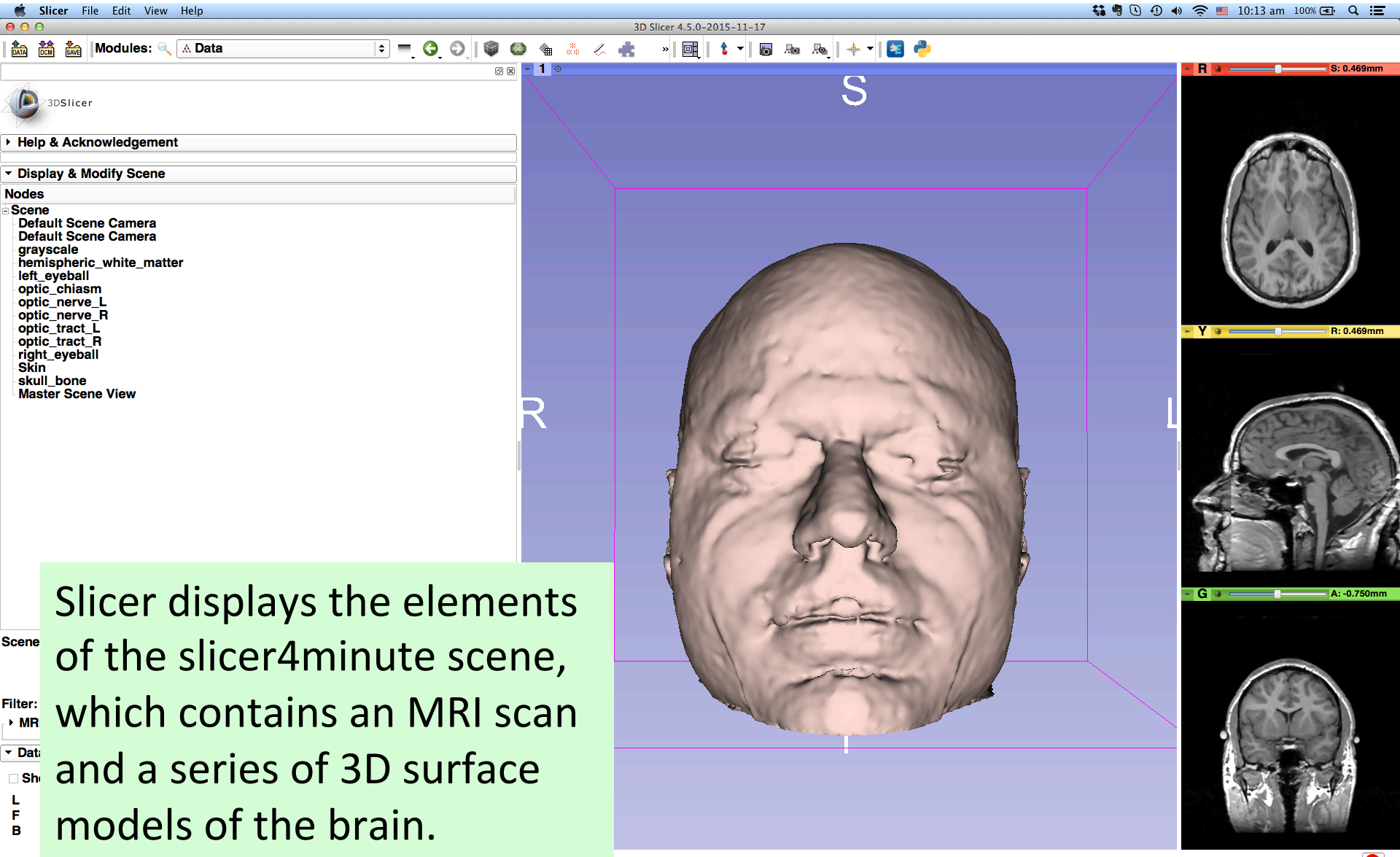
3D Slicer Scene

- A Slicer scene is a MRML (Medical Reality Modeling Language) file which contains a list of elements loaded into Slicer (volumes, models, fiducials, transforms, etc.)
- In the following example, we uses a scene ‘Slicer4minute.mrml’ composed of an MRI scan and 3D models of the head.
- The scene file and datasets have been saved as an ‘.mrb’ (Medical Reality Bundle) file.
- The MRB file format is Slicer’s archive file format.

3D Slicer version 4.5

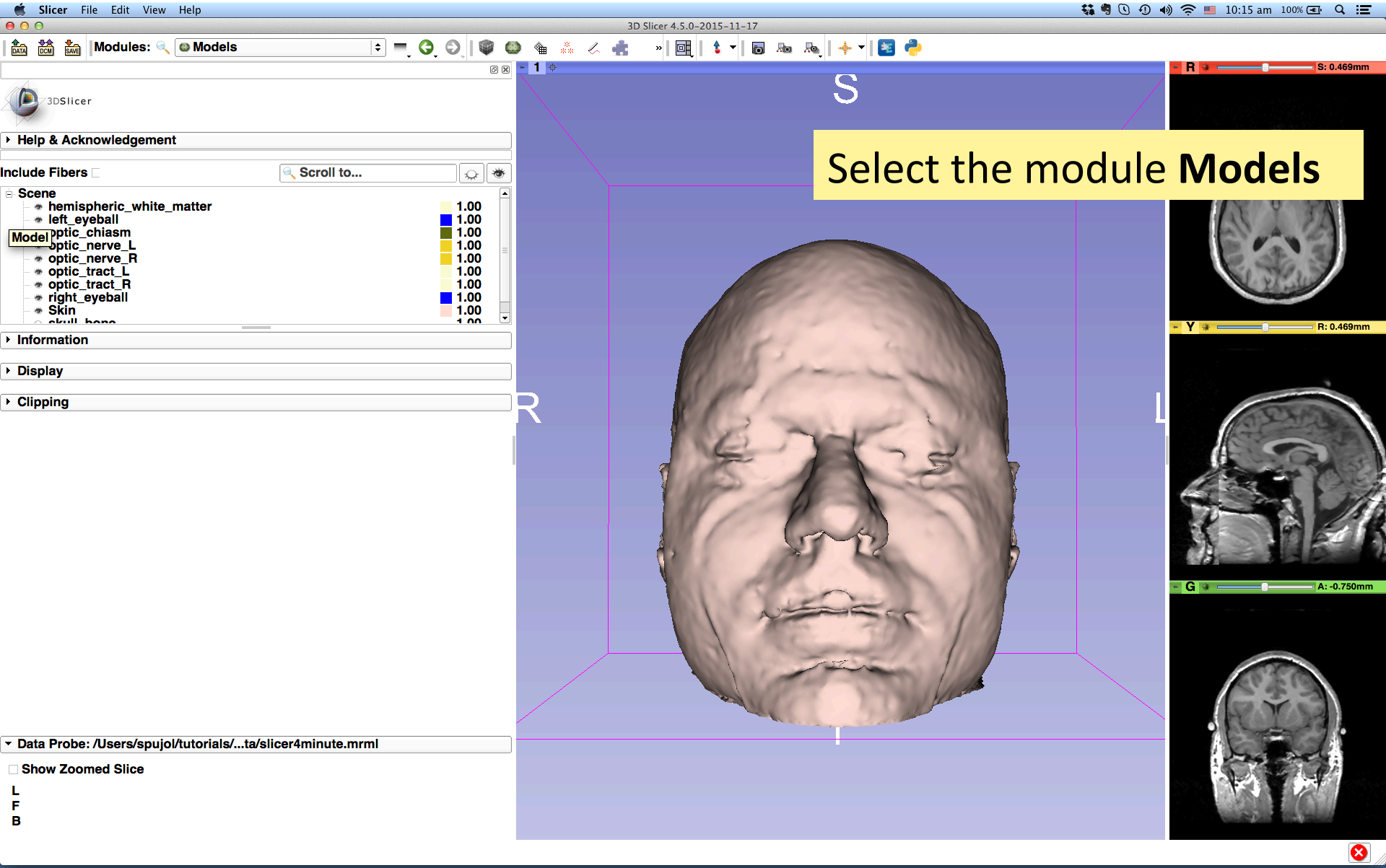


Slicer4minute Scene

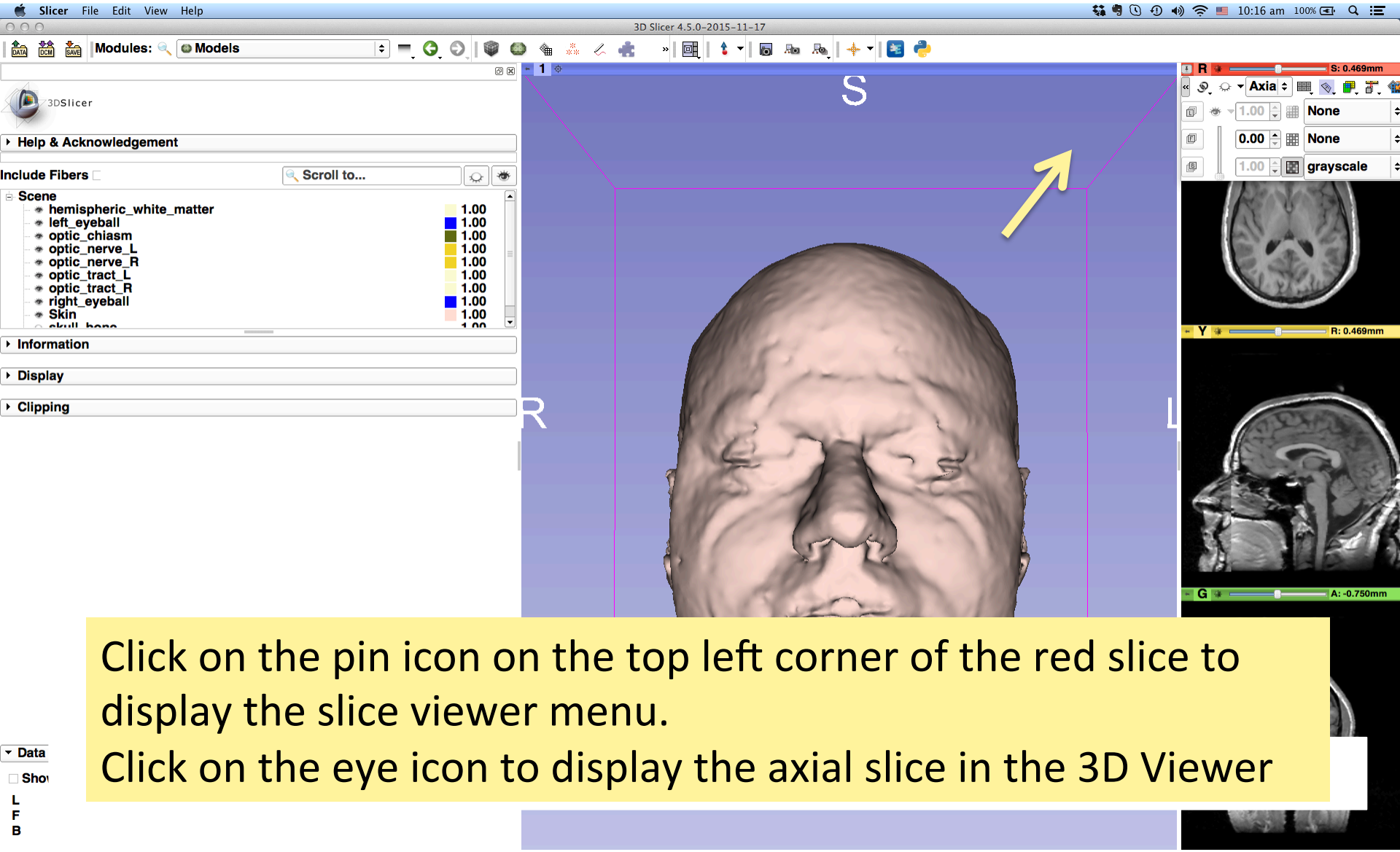


Slicer displays the elements of the slicer4minute scene, which contains an MRI scan and a series of 3D surface models of the brain.

3D Visualization



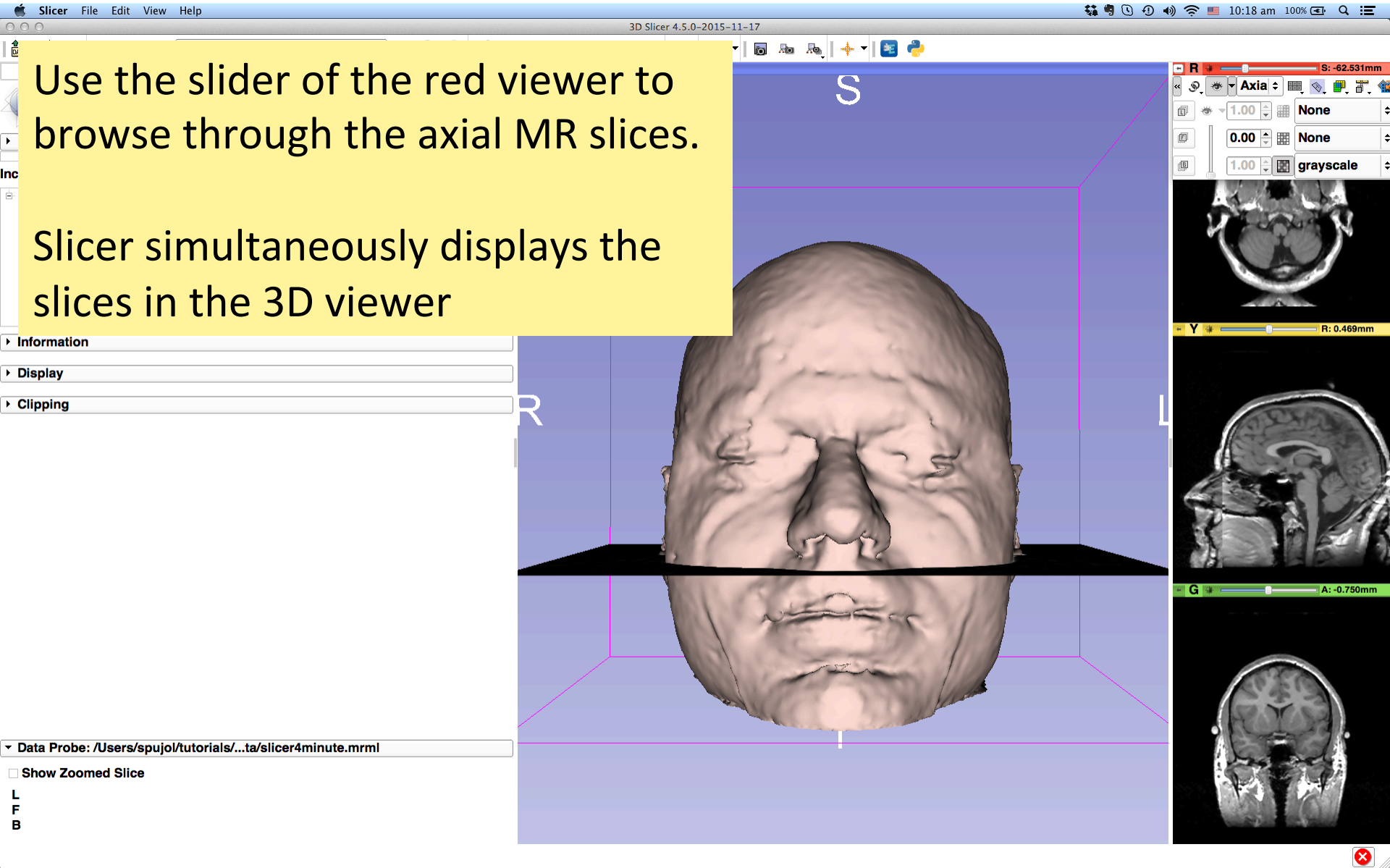
3D Visualization



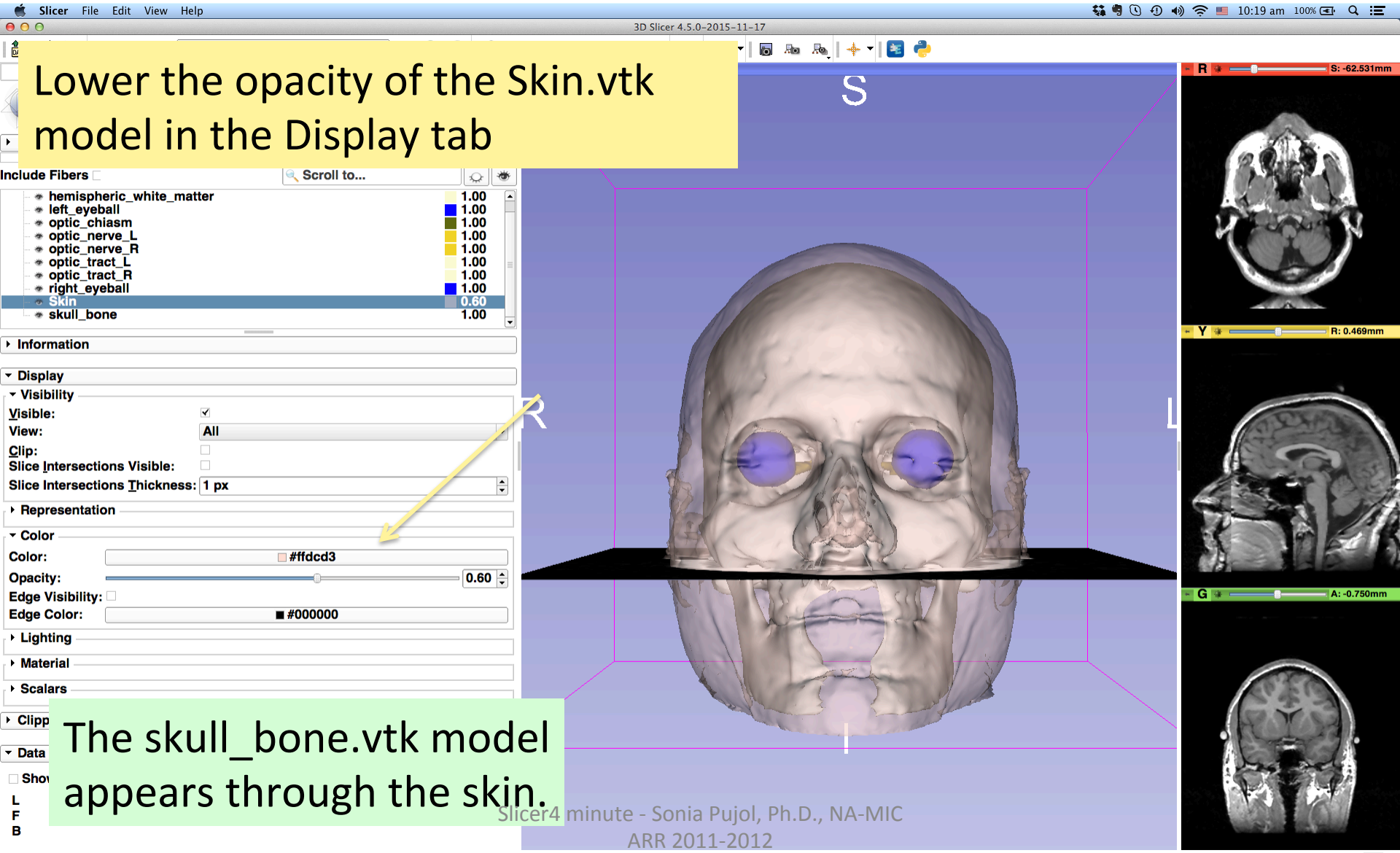
Click on the pin icon on the top left corner of the red slice to display the slice viewer menu.

Click on the eye icon to display the axial slice in the 3D Viewer

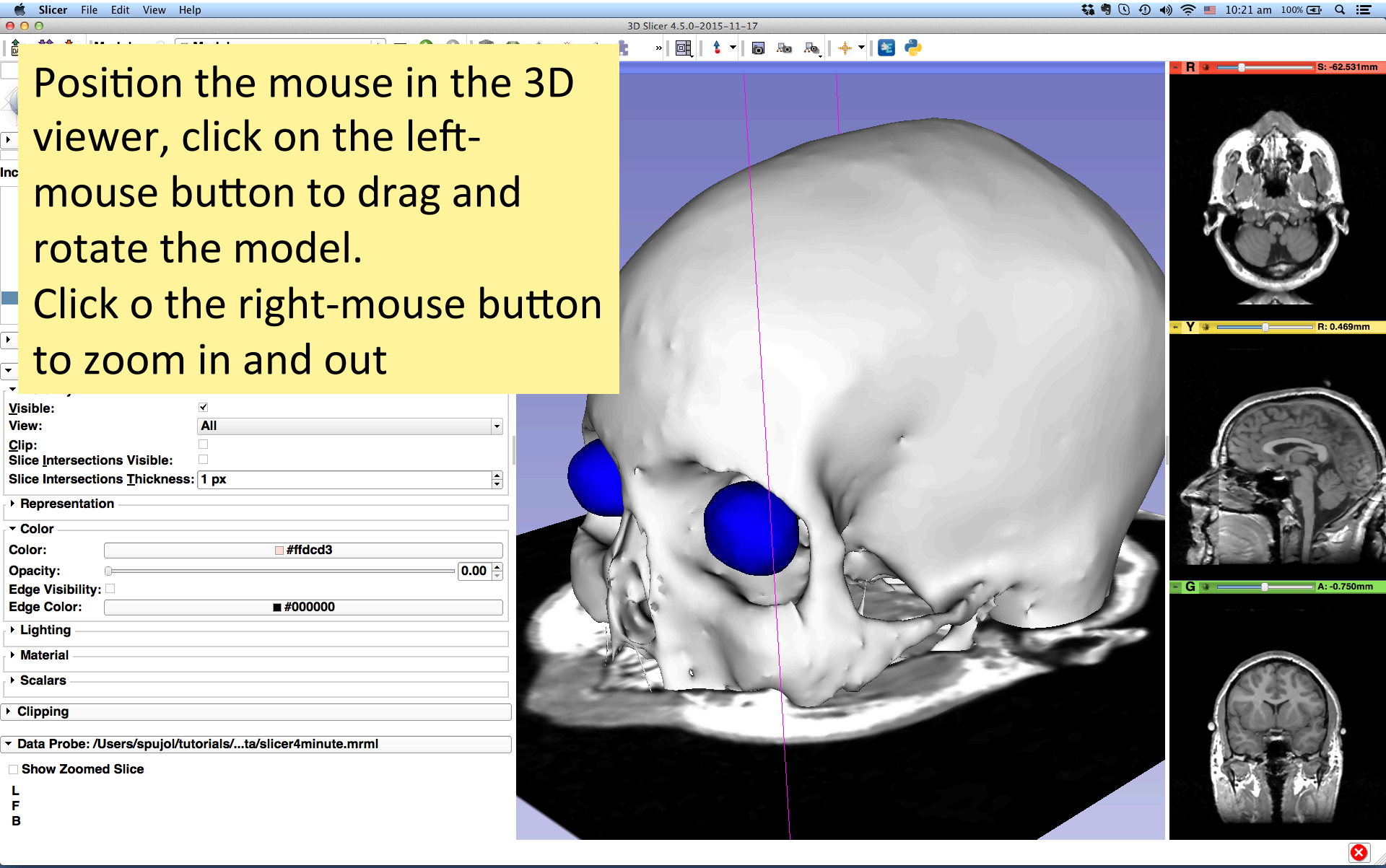
3D Visualization



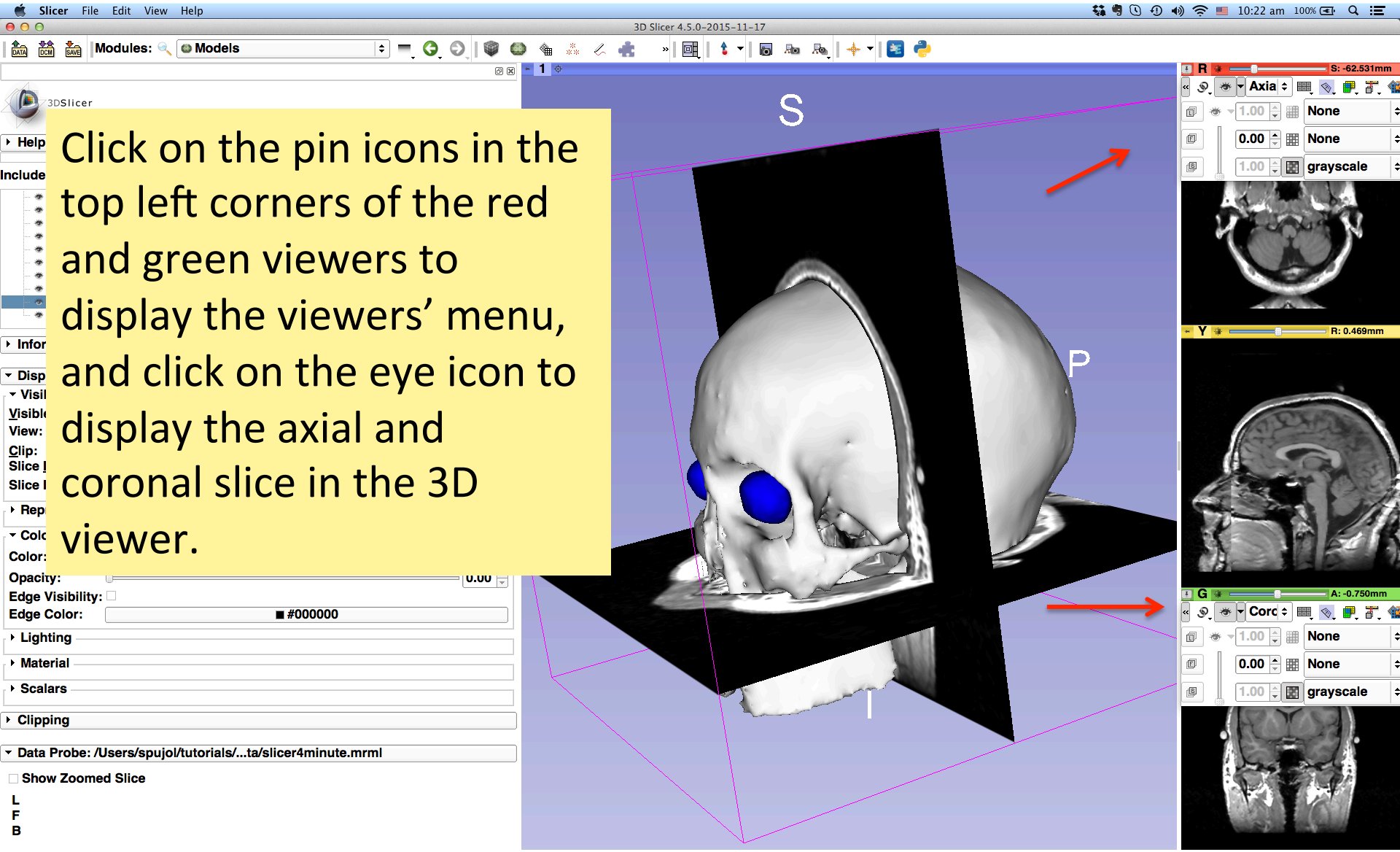
3D Visualization



3D Visualization

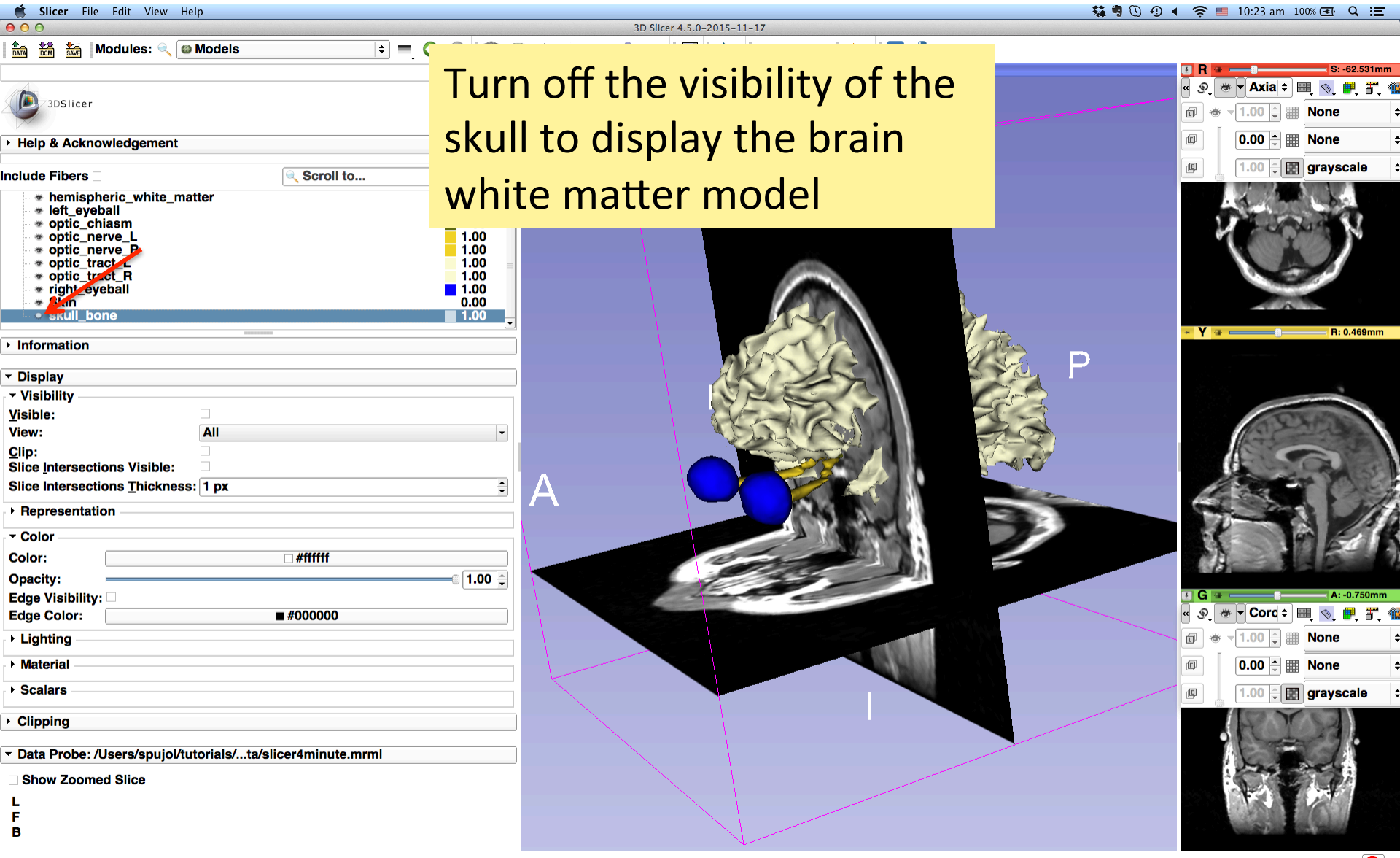


Anatomical Views



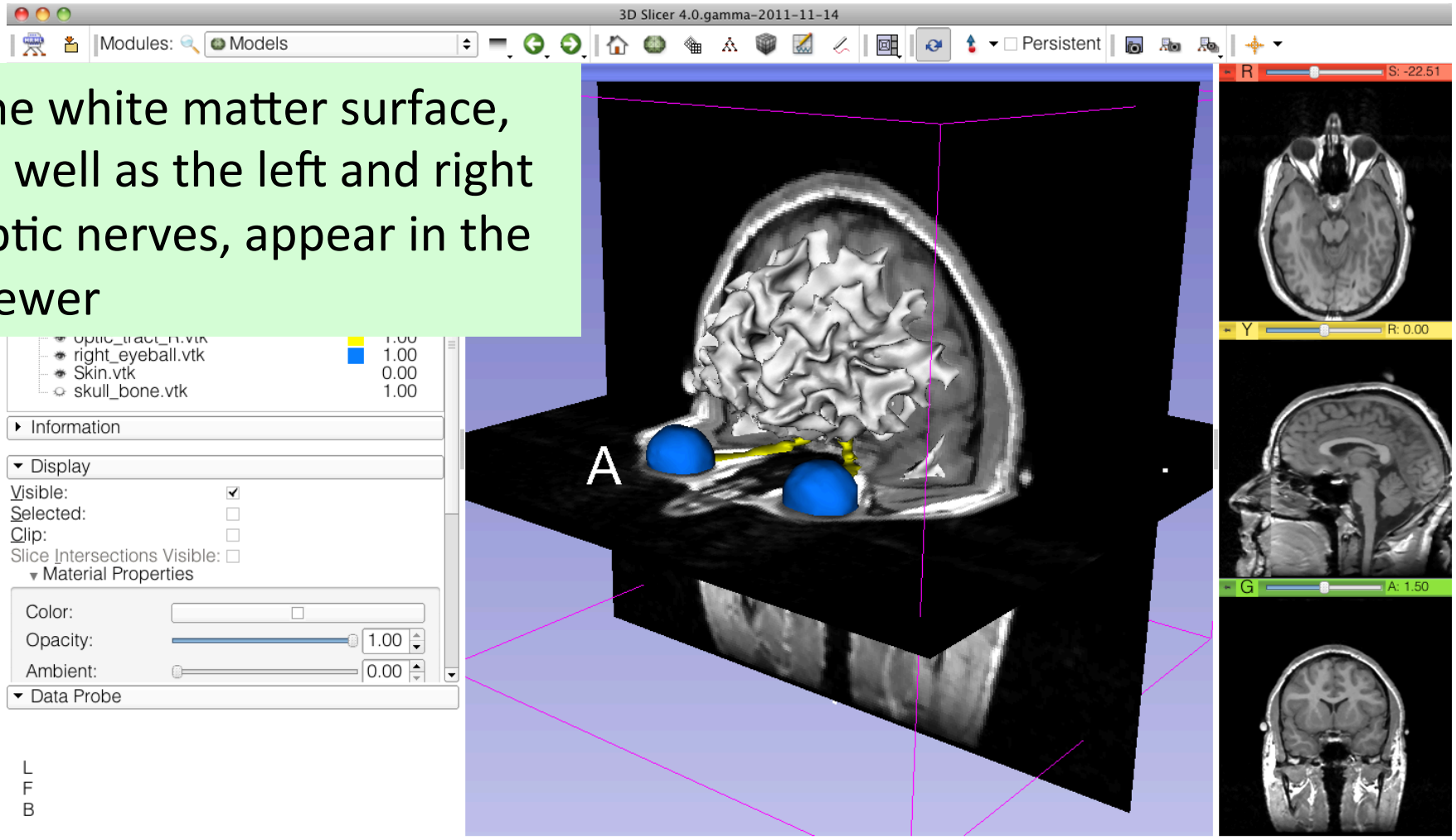
Click on the pin icons in the top left corners of the red and green viewers to display the viewers' menu, and click on the eye icon to display the axial and coronal slice in the 3D viewer.

3D Visualization

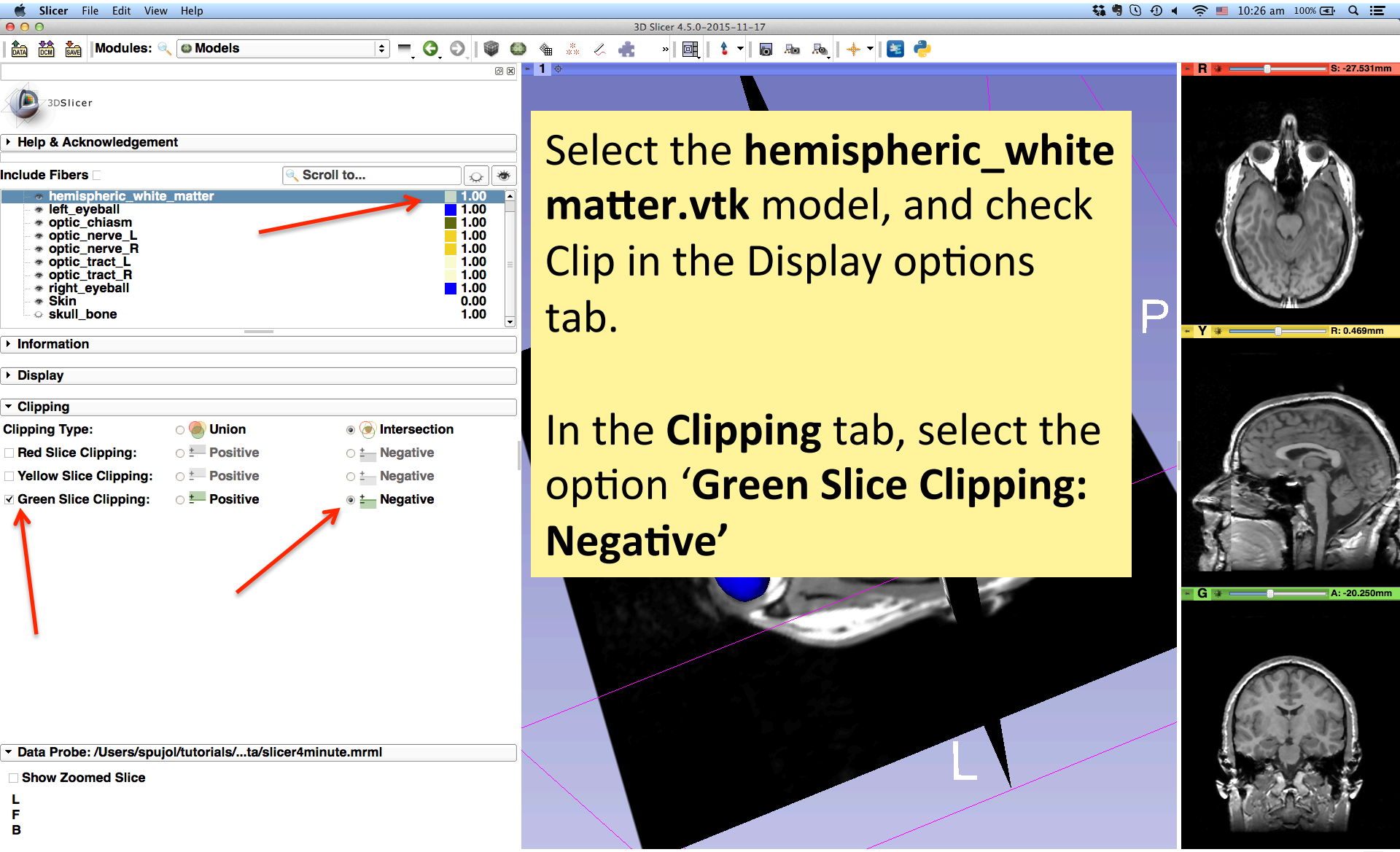


3D Visualization

The white matter surface, as well as the left and right optic nerves, appear in the viewer



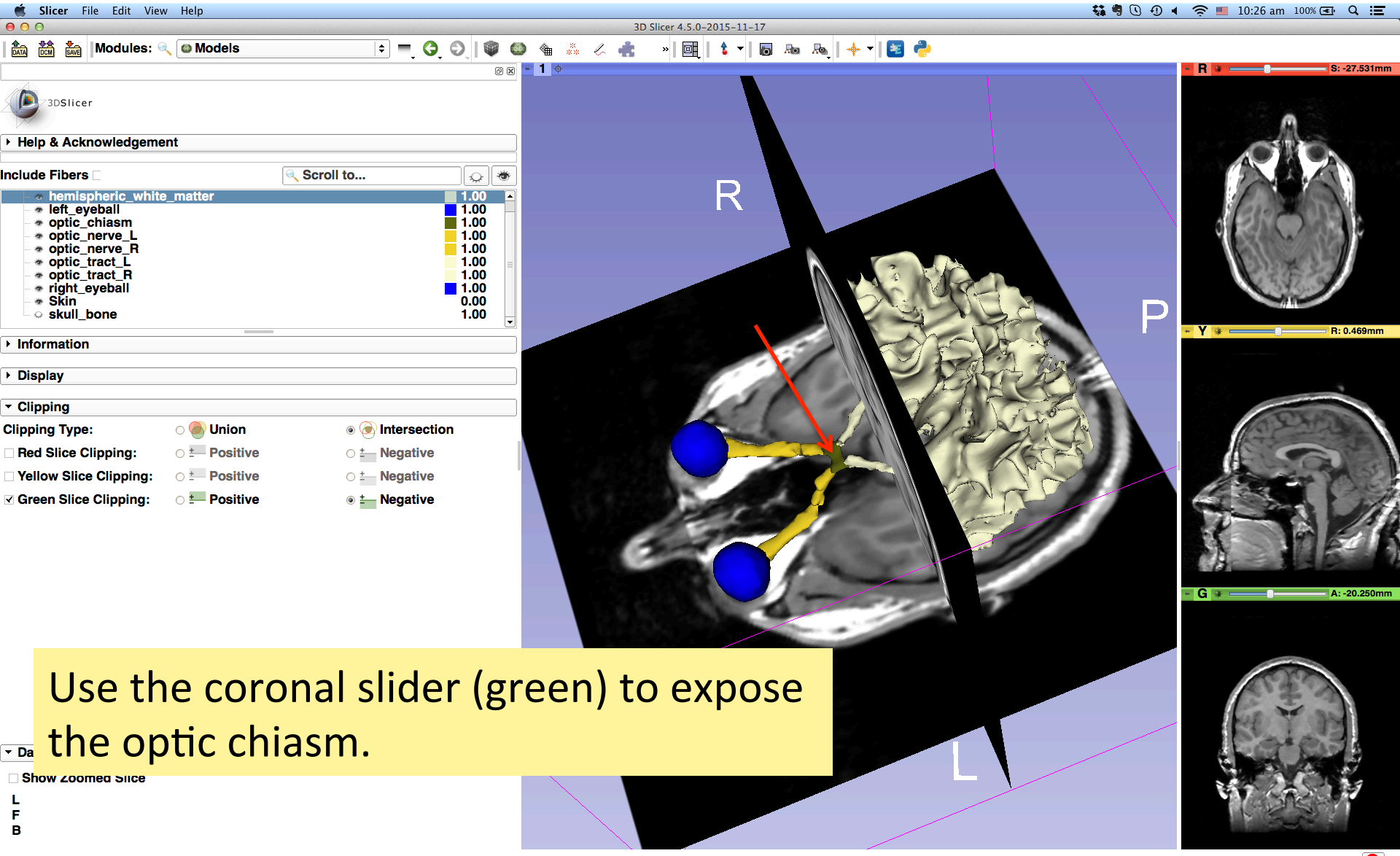
3D Visualization



Select the **hemispheric_white matter.vtk** model, and check Clip in the Display options tab.

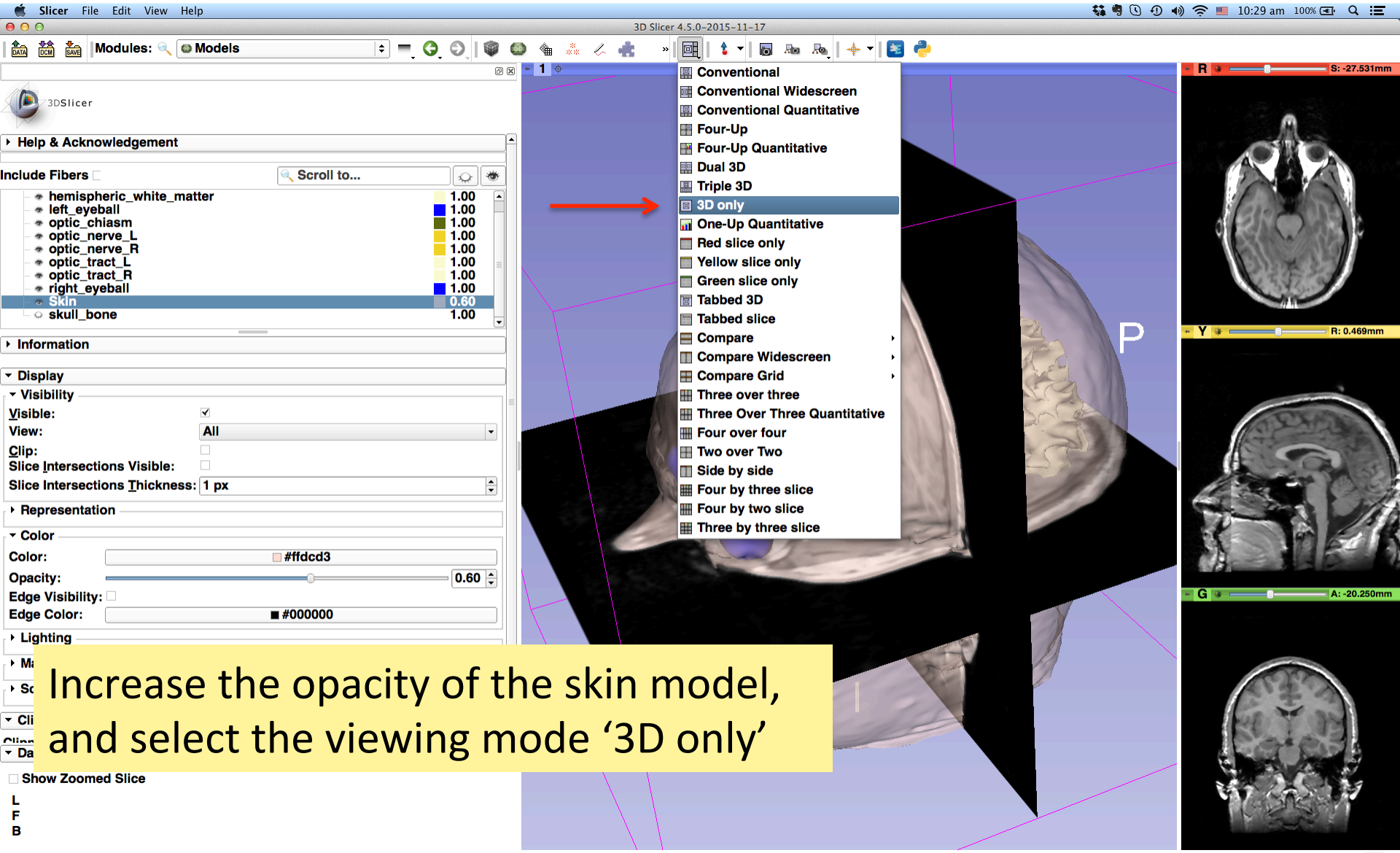
In the **Clipping** tab, select the option '**Green Slice Clipping: Negative**'

3D Visualization



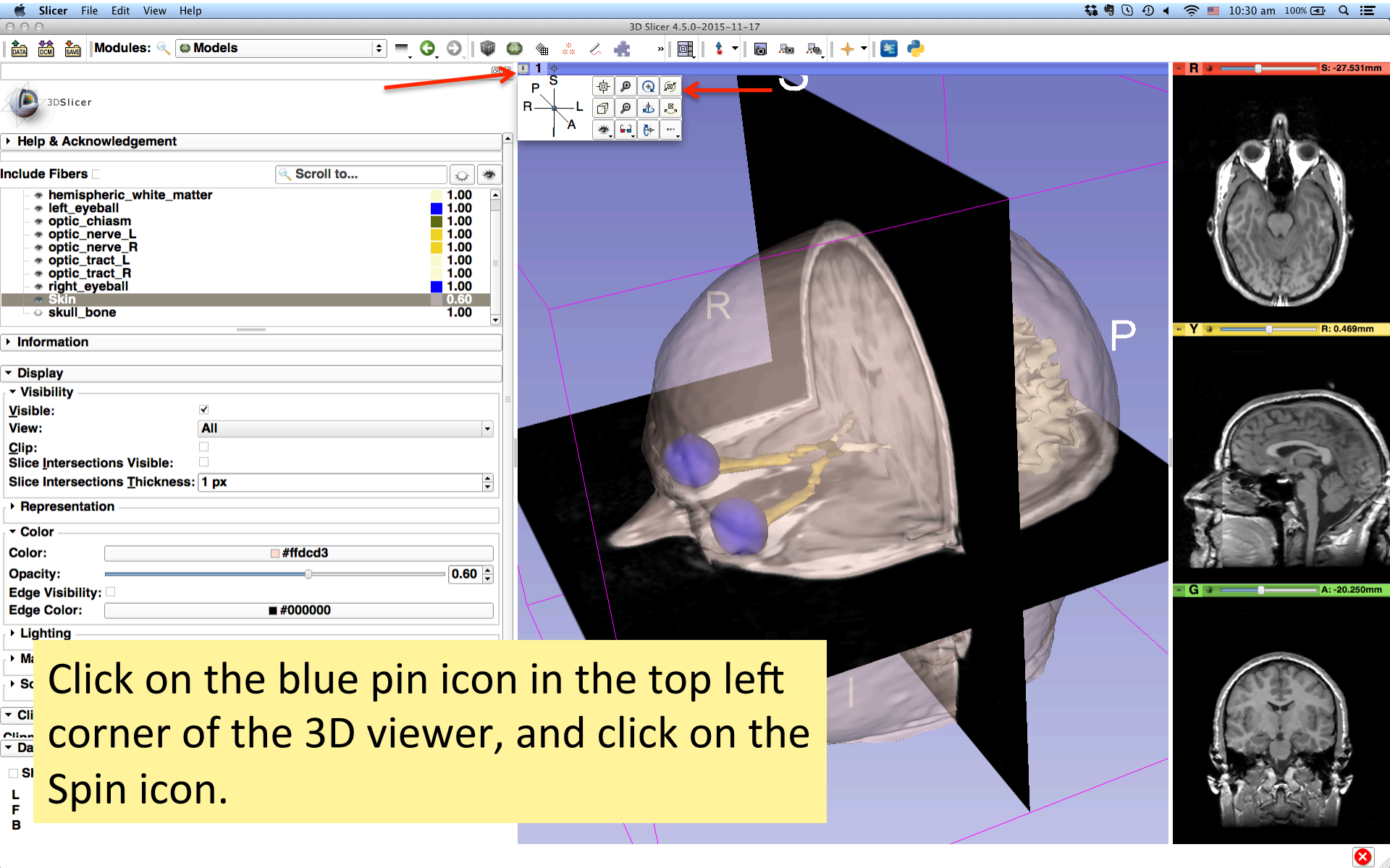
Use the coronal slider (green) to expose the optic chiasm.

3D Visualization



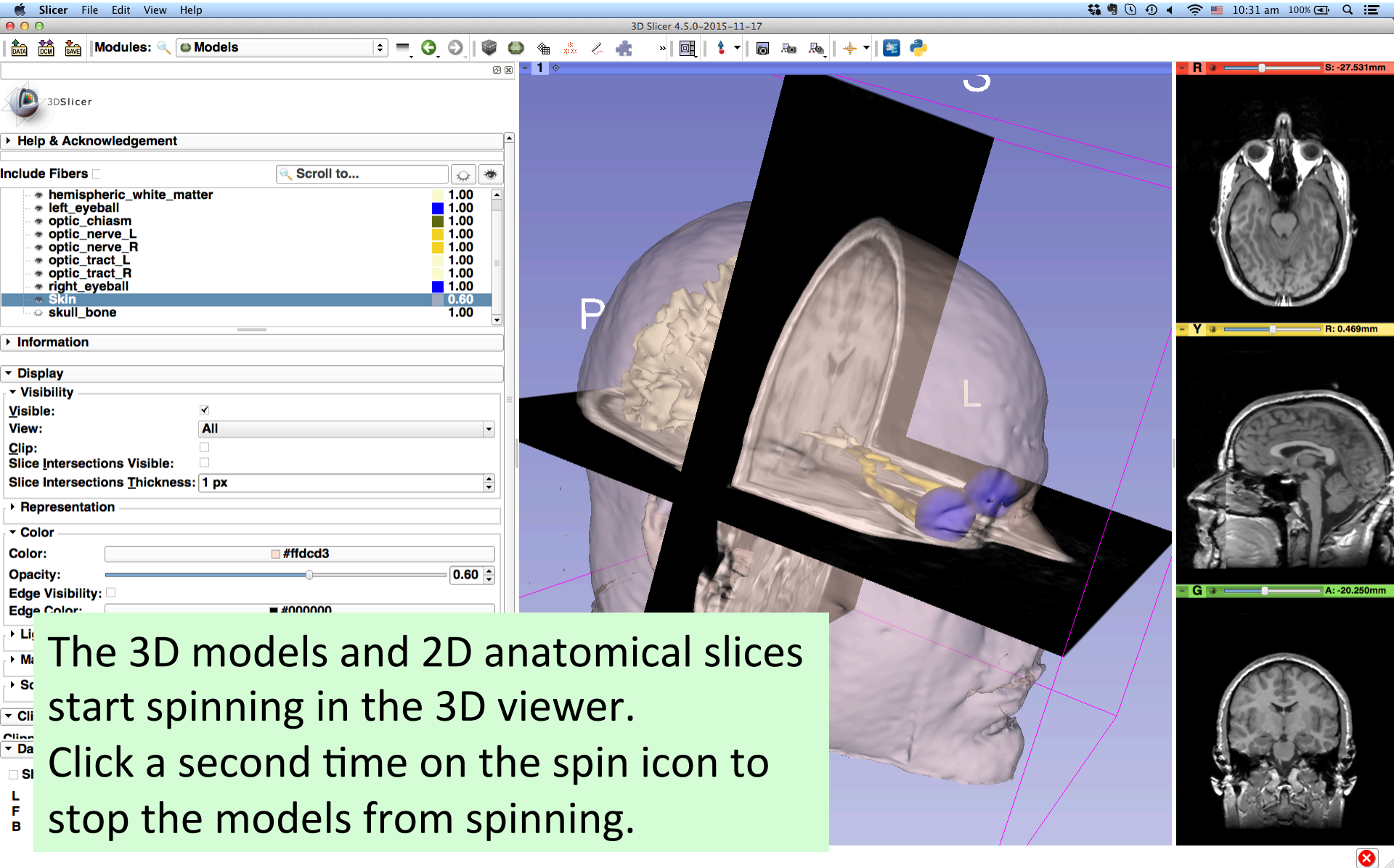
Increase the opacity of the skin model, and select the viewing mode '3D only'

3D Visualization



Click on the blue pin icon in the top left corner of the 3D viewer, and click on the Spin icon.

3D Visualization



The 3D models and 2D anatomical slices start spinning in the 3D viewer.
Click a second time on the spin icon to stop the models from spinning.

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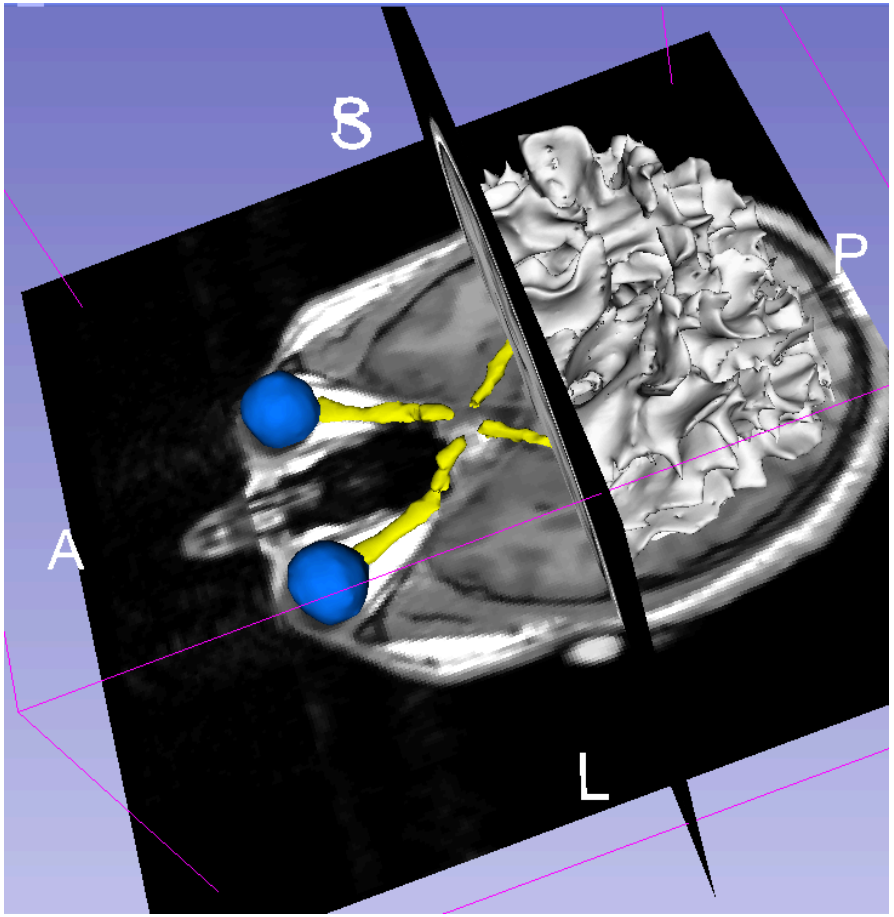

This tutorial was a short introduction to the interactive 3D visualization functionalities of Slicer.

The Slicer4 training compendium contains a catalog of training materials on the software.