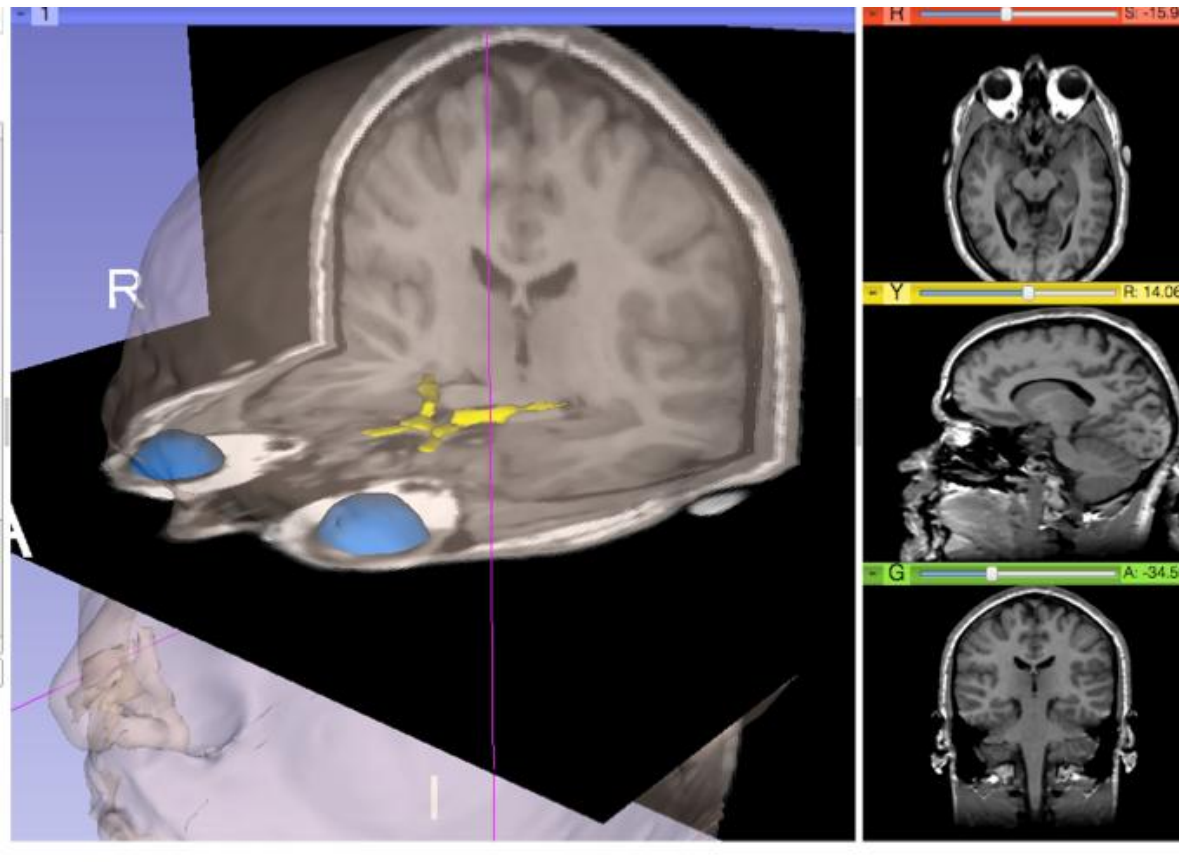# Slicer4Minute Tutorial

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Slicer4 minute tutorial

This tutorial is a 4-minute introduction to the 3D visualization capabilities of the Slicer4 software for medical image analysis.

Slicer4 software

The Slicer4 software is available for download:
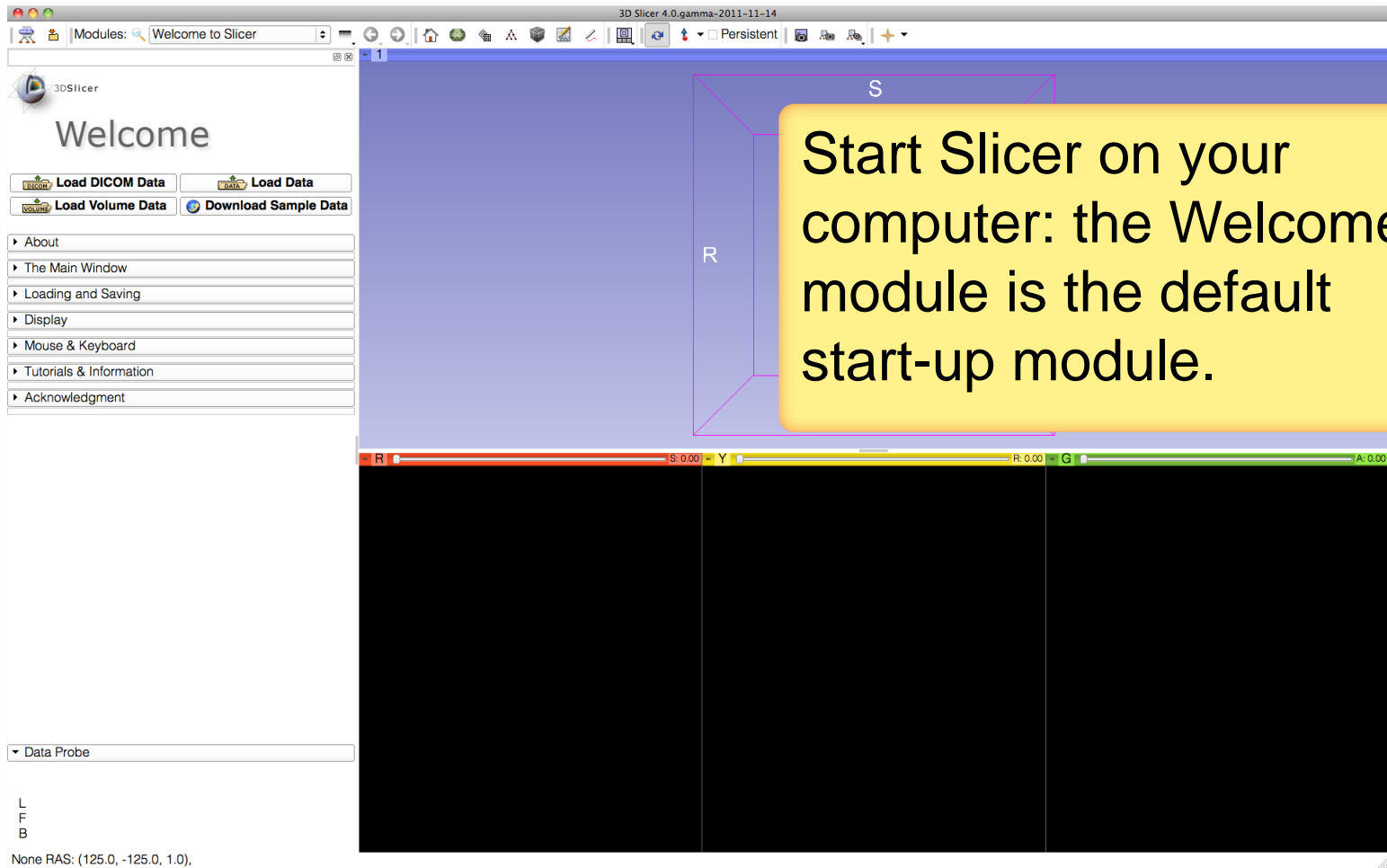
http://download.slicer.org

Slicer4 minute dataset

Download the slicer4minute-data.zip training dataset

http://wiki.slicer.org/slicerWiki/index.php/Training/4.0#Slicer4Minute_Tutorial

3DSlicer version 4.0

Start Slicer on your computer: the Welcome module is the default start-up module.

3D Slicer Scene

○ A Slicer scene is a MRML file which, contains the list of elements loaded into Slicer (volumes, models, fiducials…)

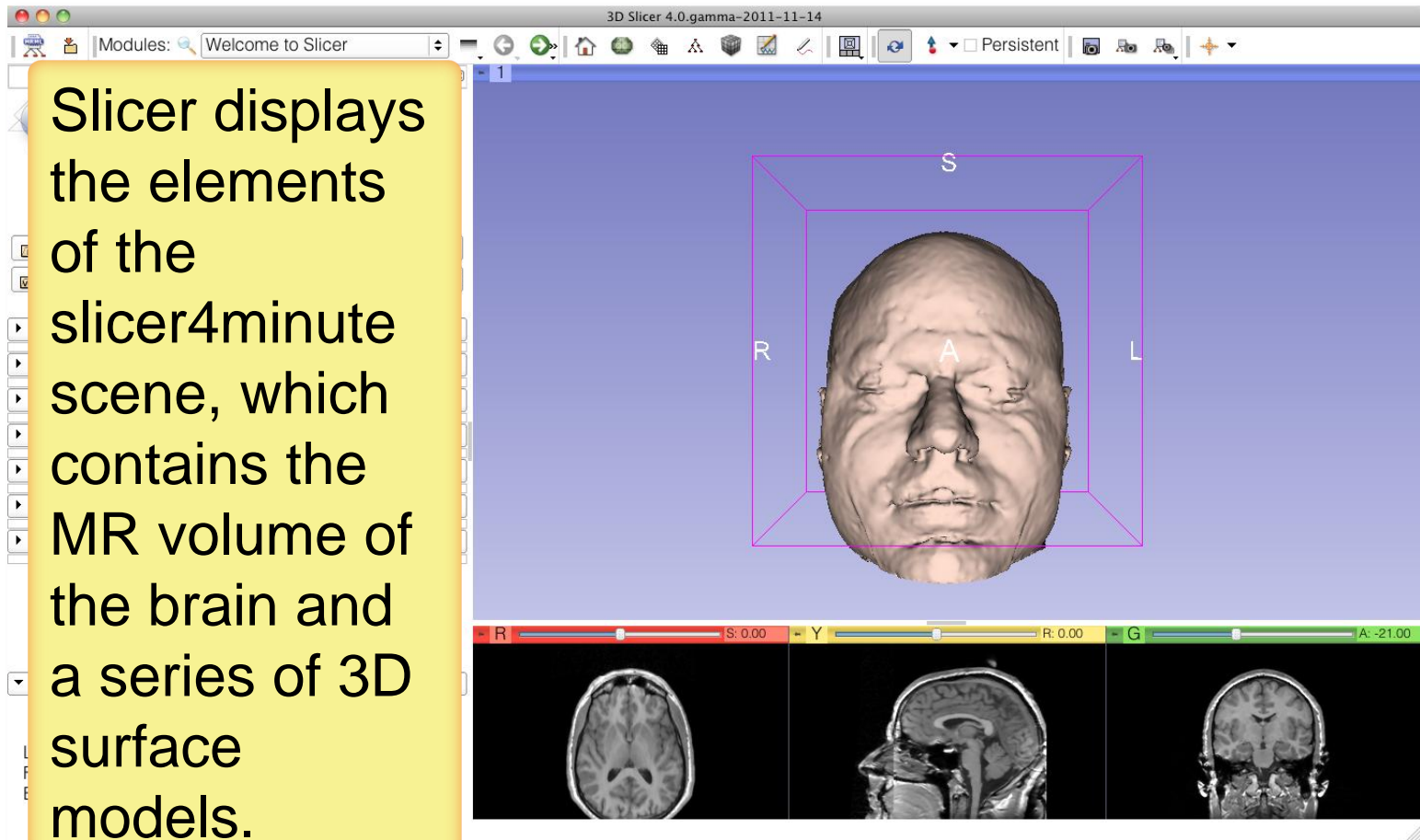○ The following example uses a 3D Scene, which contains images and 3D surface models of the head.

3DSlicer version 4.0

Select **File→ Load Scene** from the main menu, and load slicer4minute.mrml
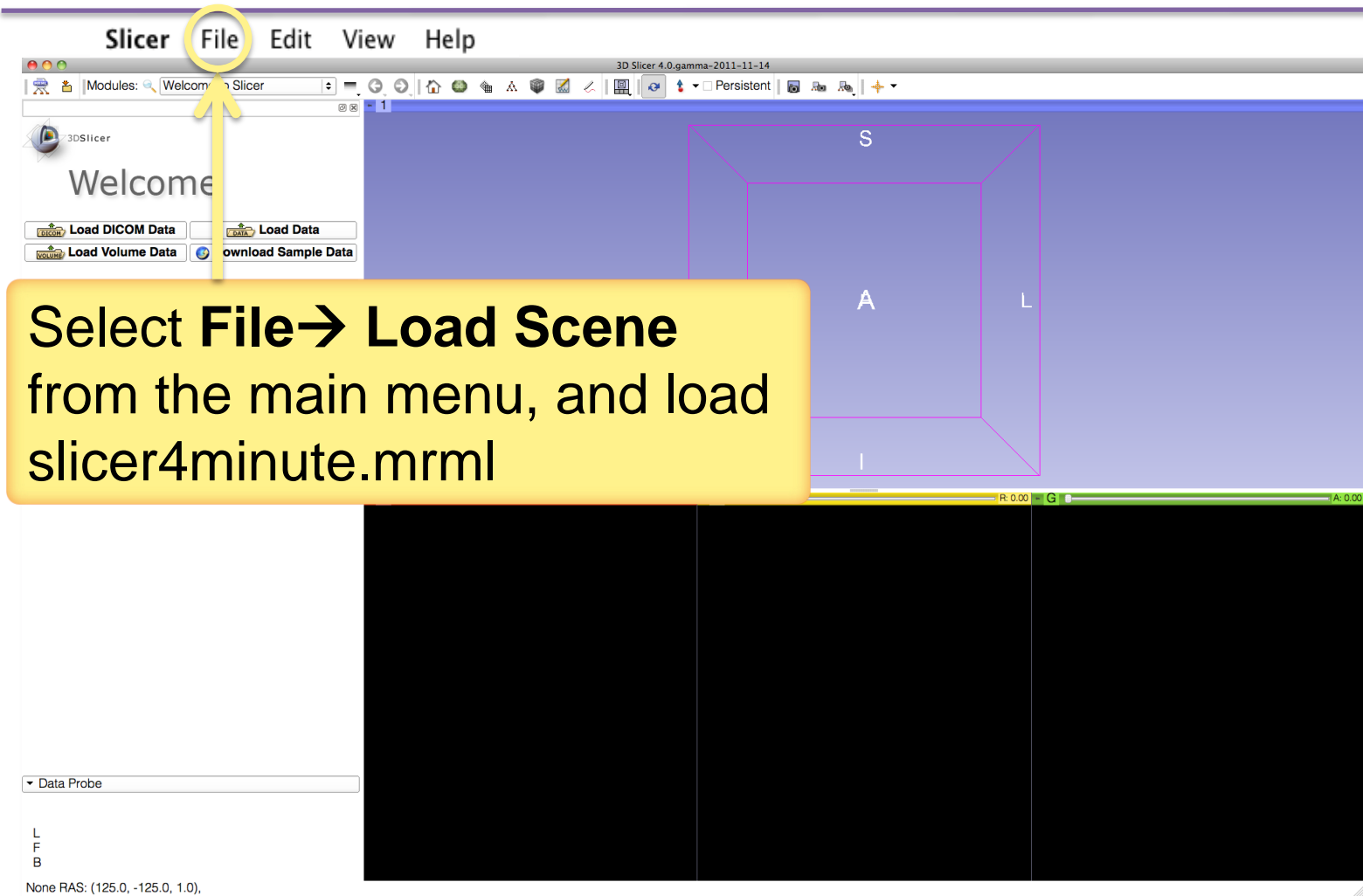
Slicer4 minute Scene

Slicer displays the elements of the slicer4minute scene, which contains the MR volume of the brain and a series of 3D surface models.
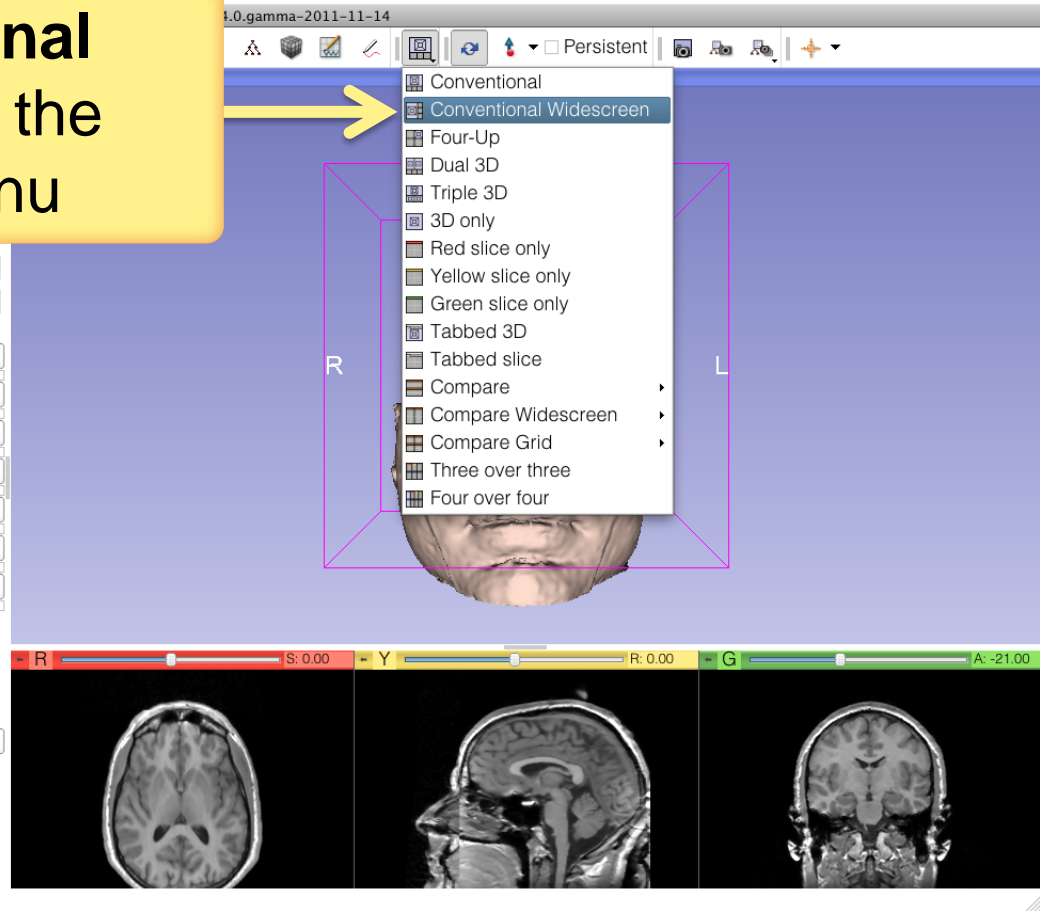
Slice4 minute scene

Select **Conventional Widescreen** from the viewing mode menu

Slicer4minute Scene

Select **Models** from the Modules menu
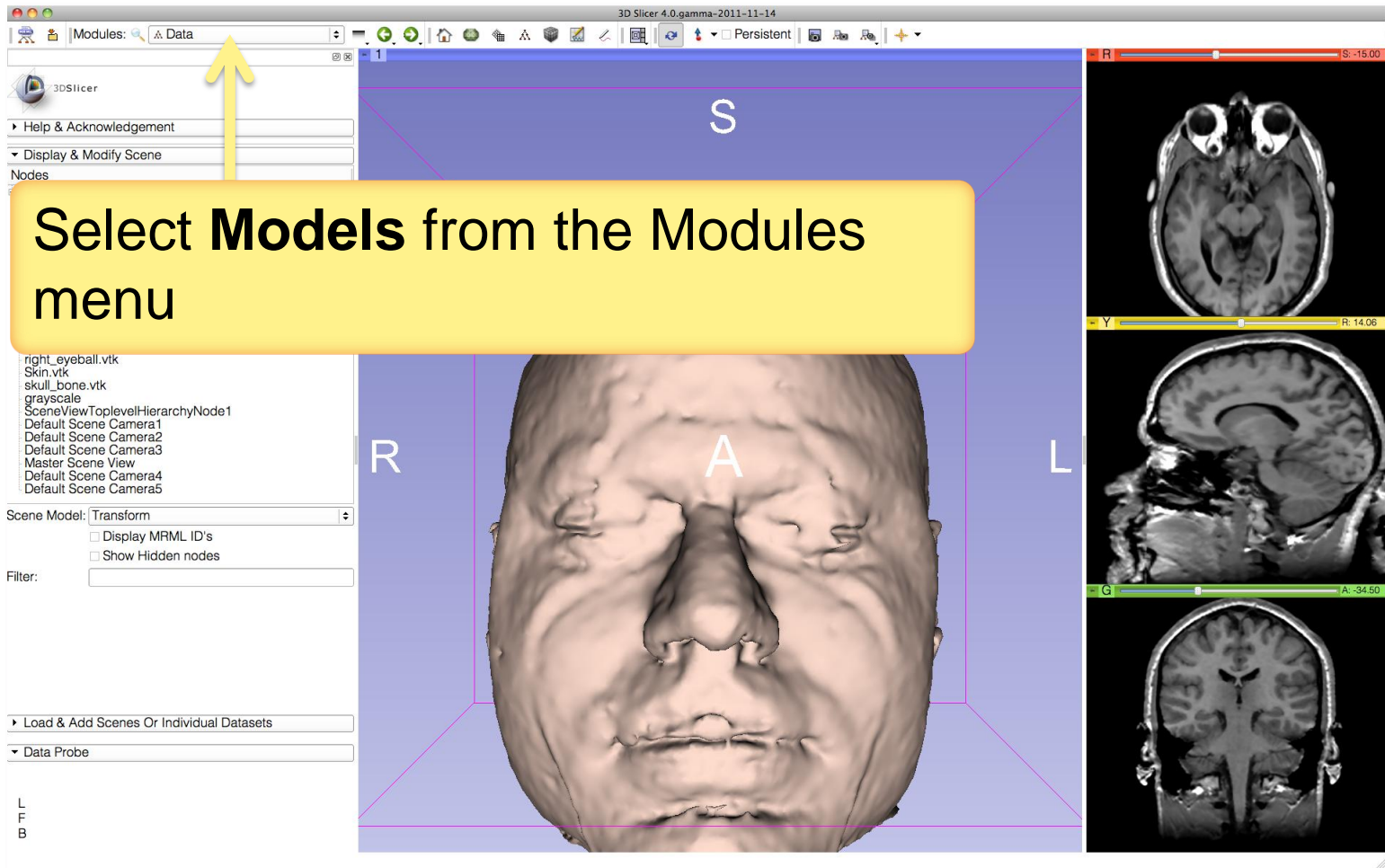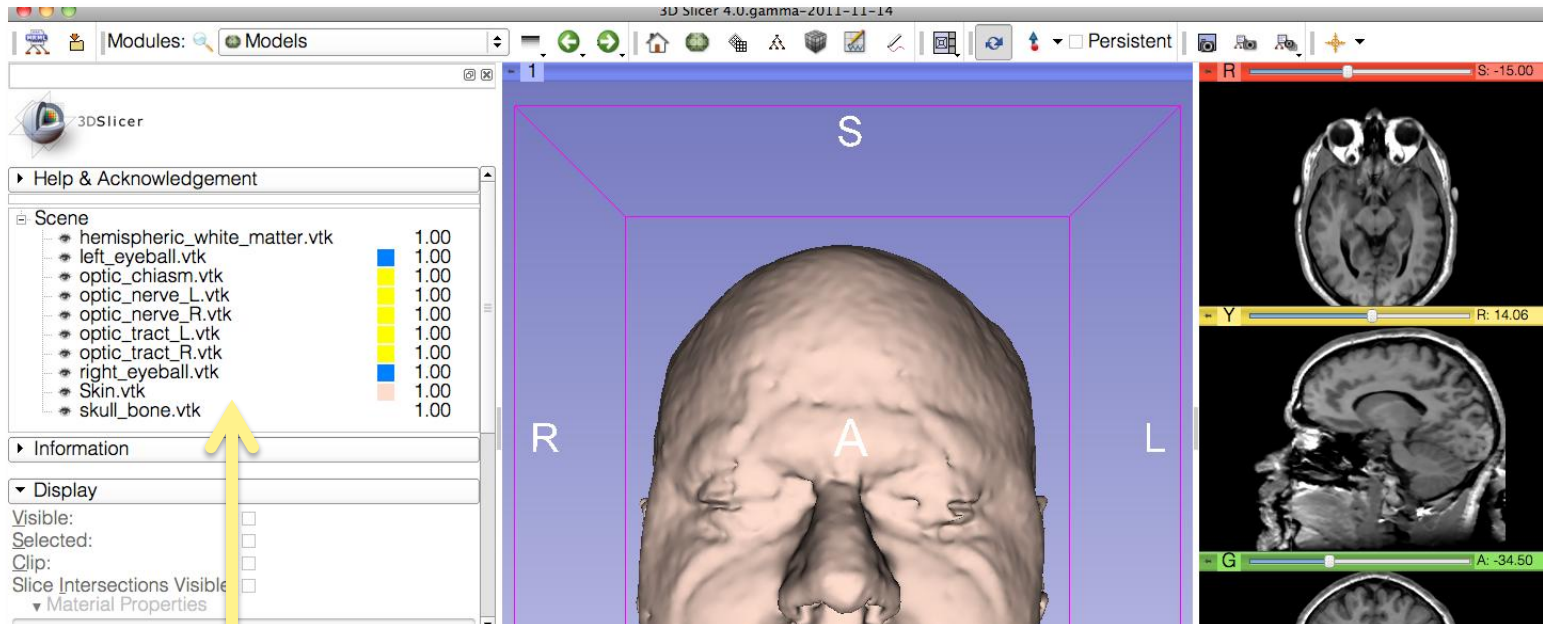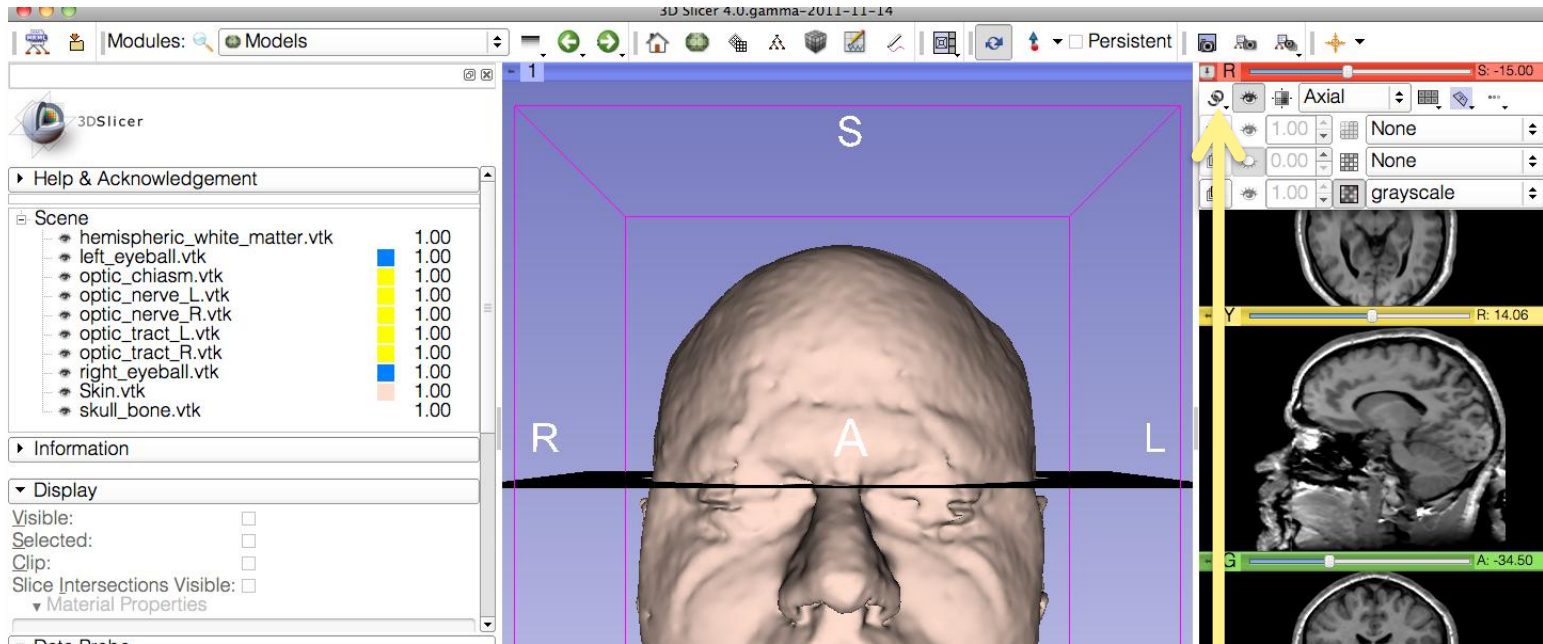
3D Visualization

The Models module GUI displays the list of models loaded in the slicer4minute scene, their color and the value of their opacity (between 0.0 an 1.0)
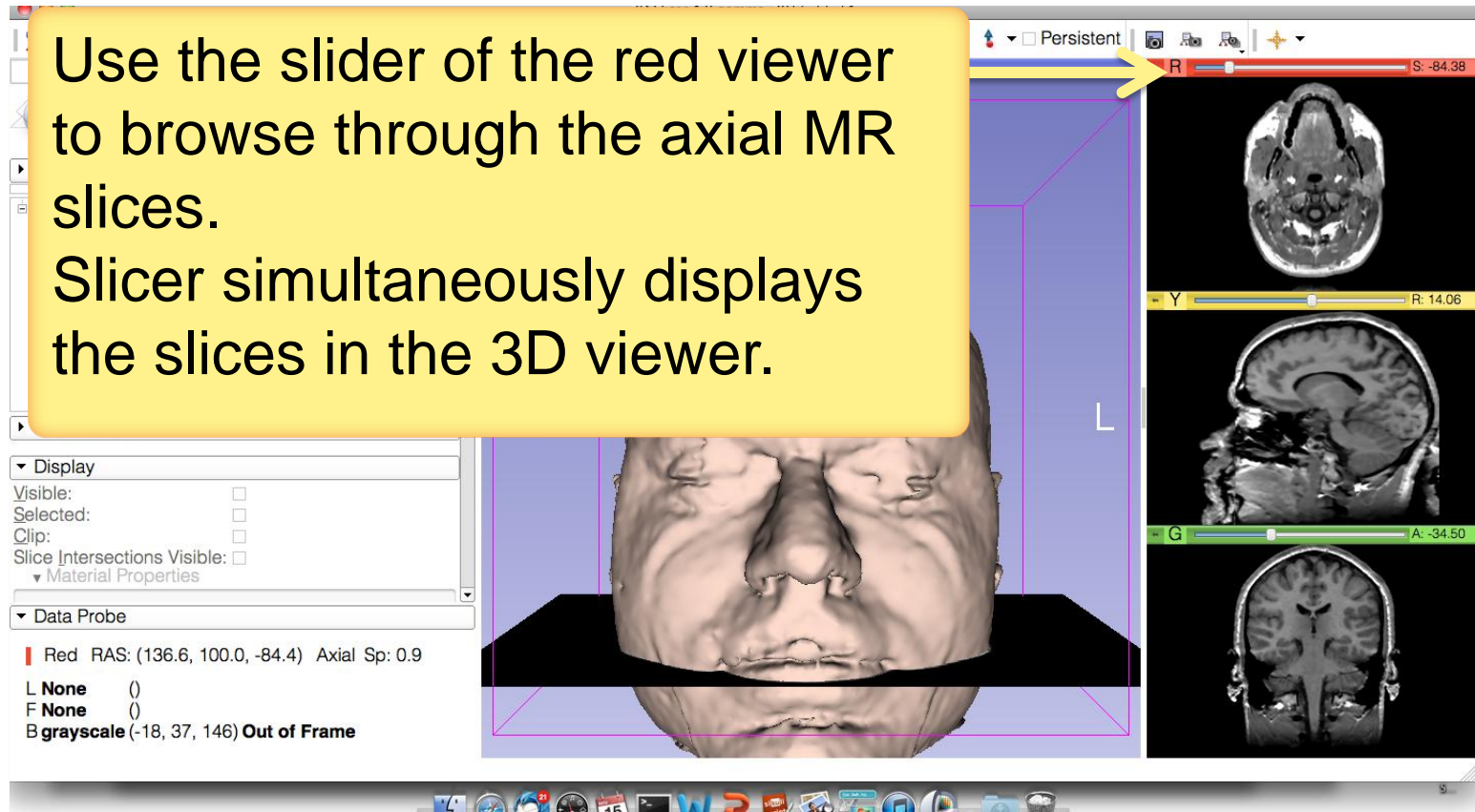
3D Visualization

Click on the **pin** icon on the top left corner of the red slice to display the slice viewer menu then click on the **eye** icon to display the axial slice in the 3D Viewer
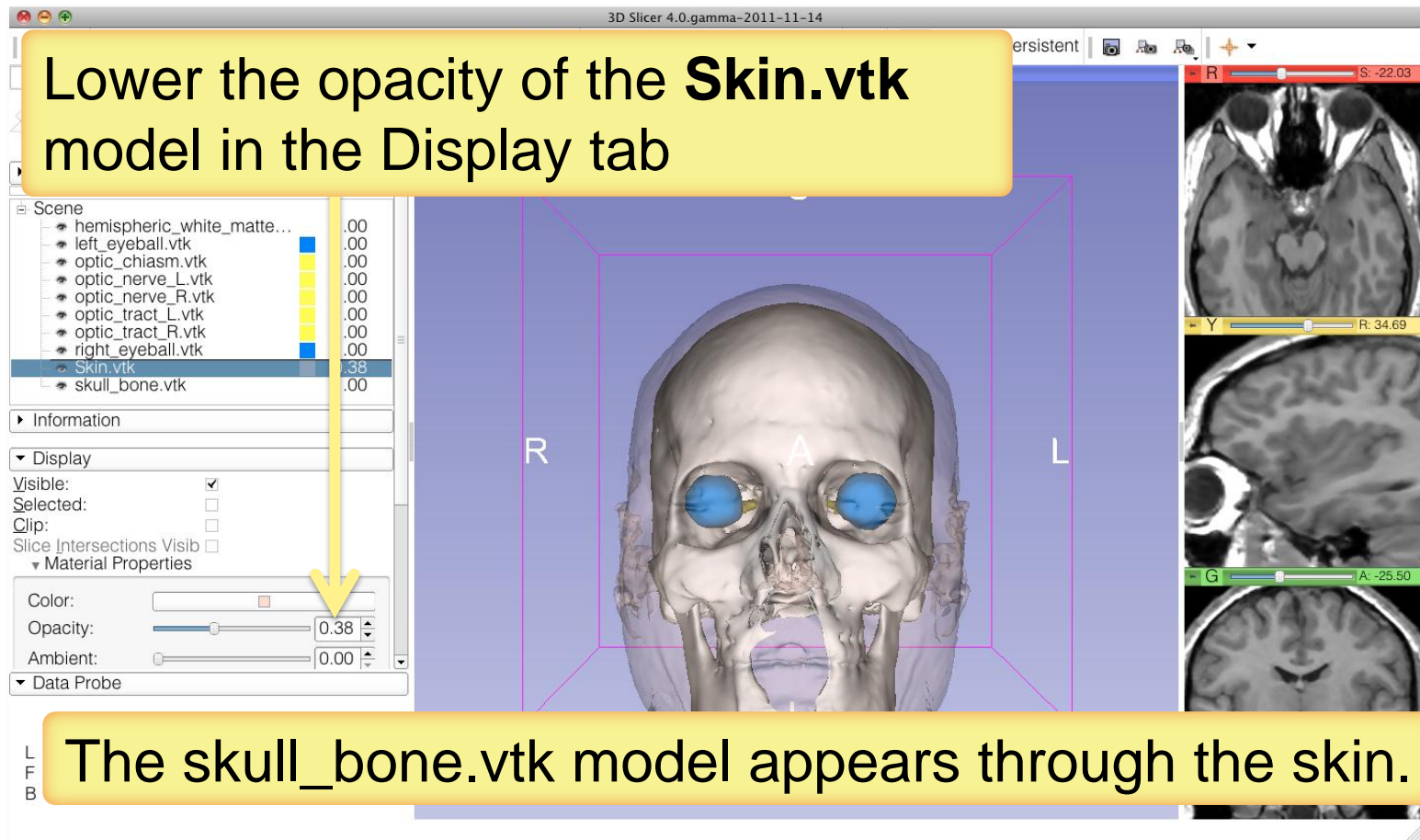
3D Visualization

Use the slider of the red viewer to browse through the axial MR slices.
Slicer simultaneously displays the slices in the 3D viewer.

3D Visualization

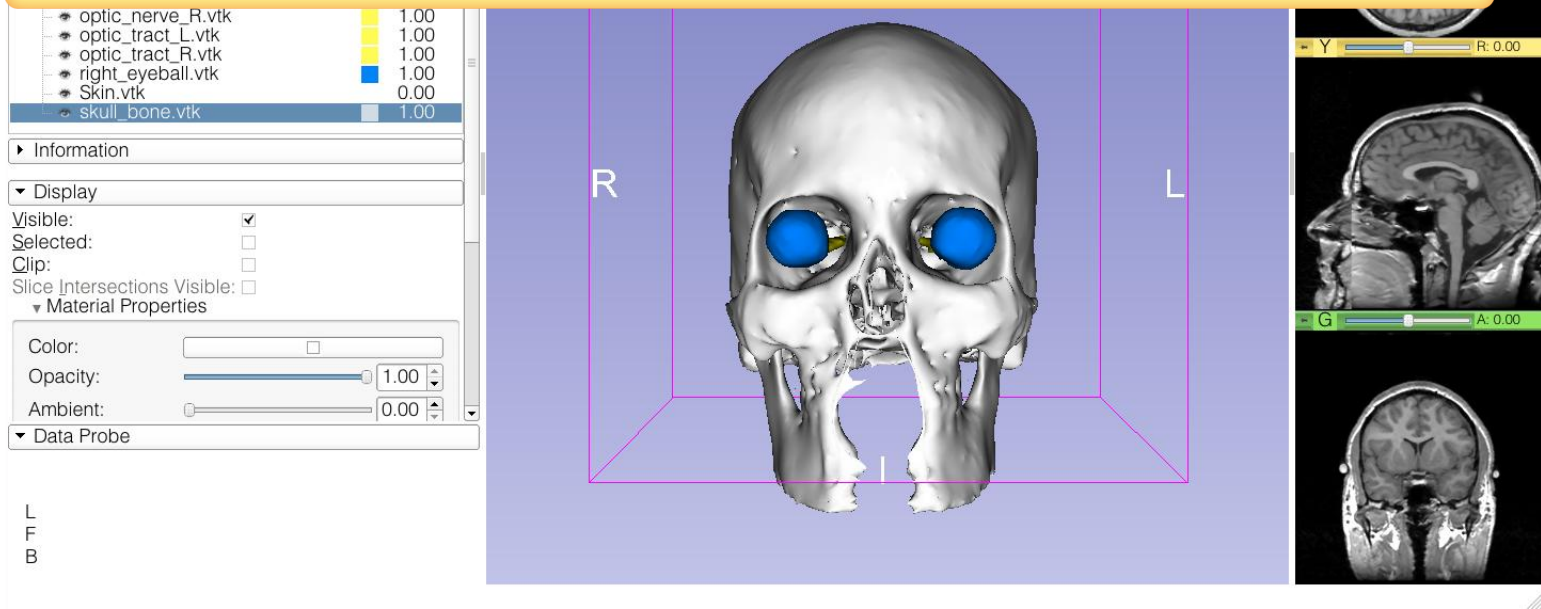Lower the opacity of the **Skin.vtk** model in the Display tab

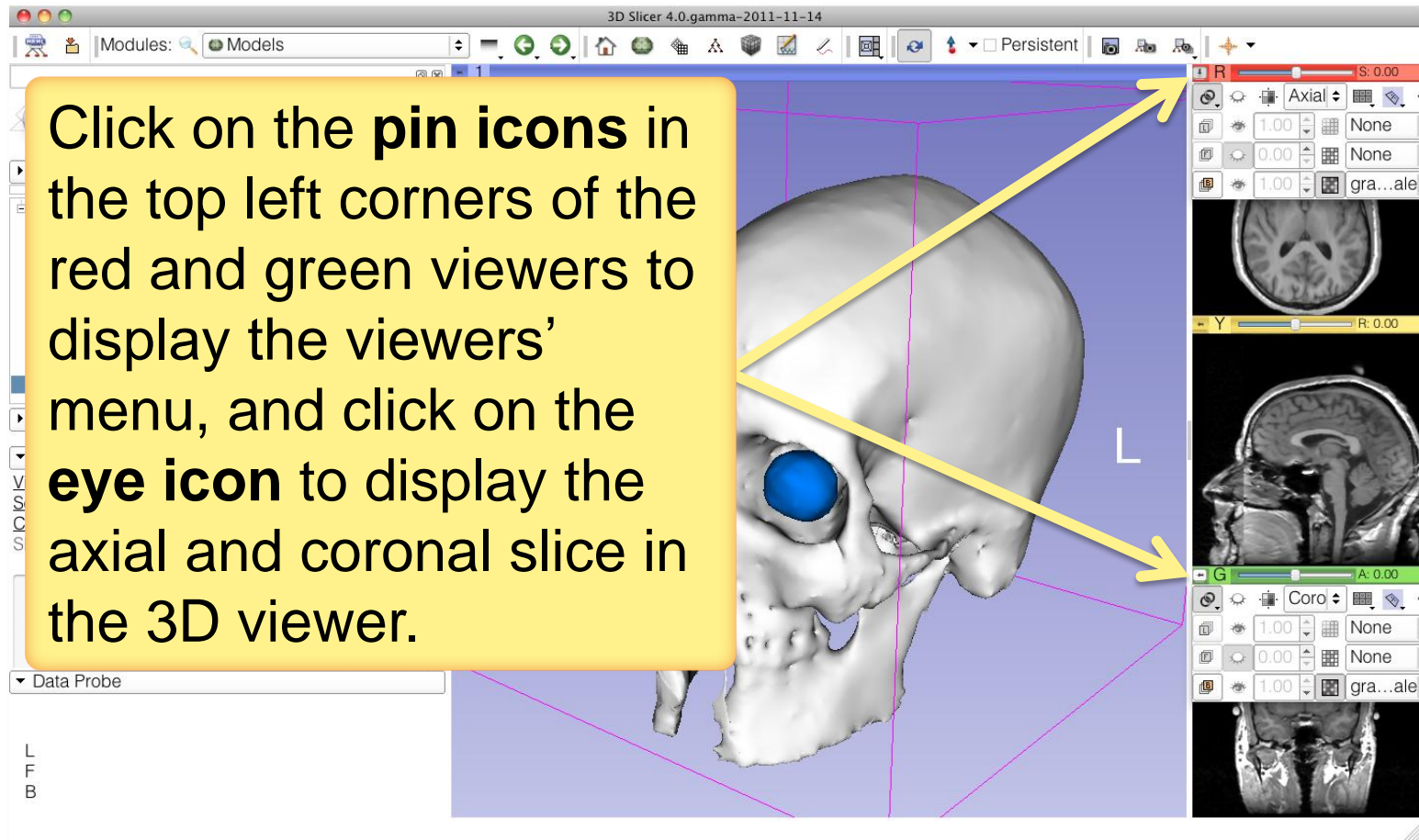The skull_bone.vtk model appears through the skin.

3D Visualization

Position the mouse in the 3D viewer.
- Click the left-mouse button to drag and rotate the model.
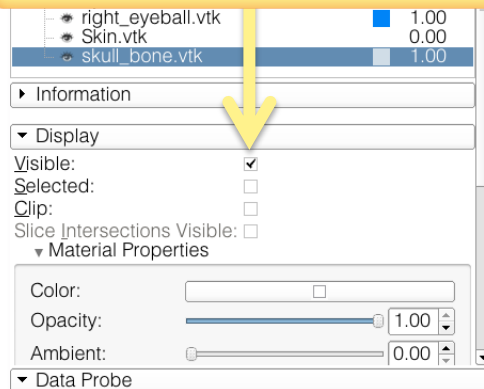- Click the right-mouse button to zoom in and out.

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

Turn off the visibility of the **skull bone** to display the **hemispheric white matter** model

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** tab.

3D Visualization

Use the slider of the coronal view (green) to expose the optic chiasm.
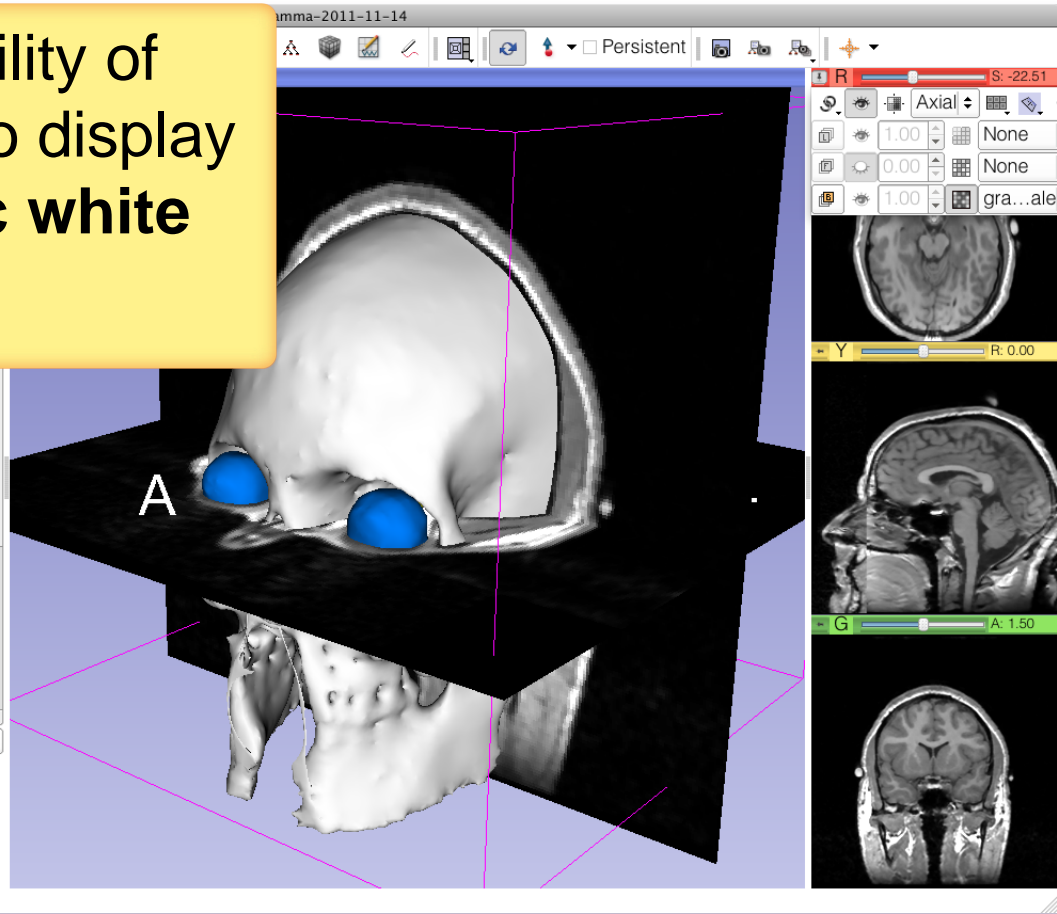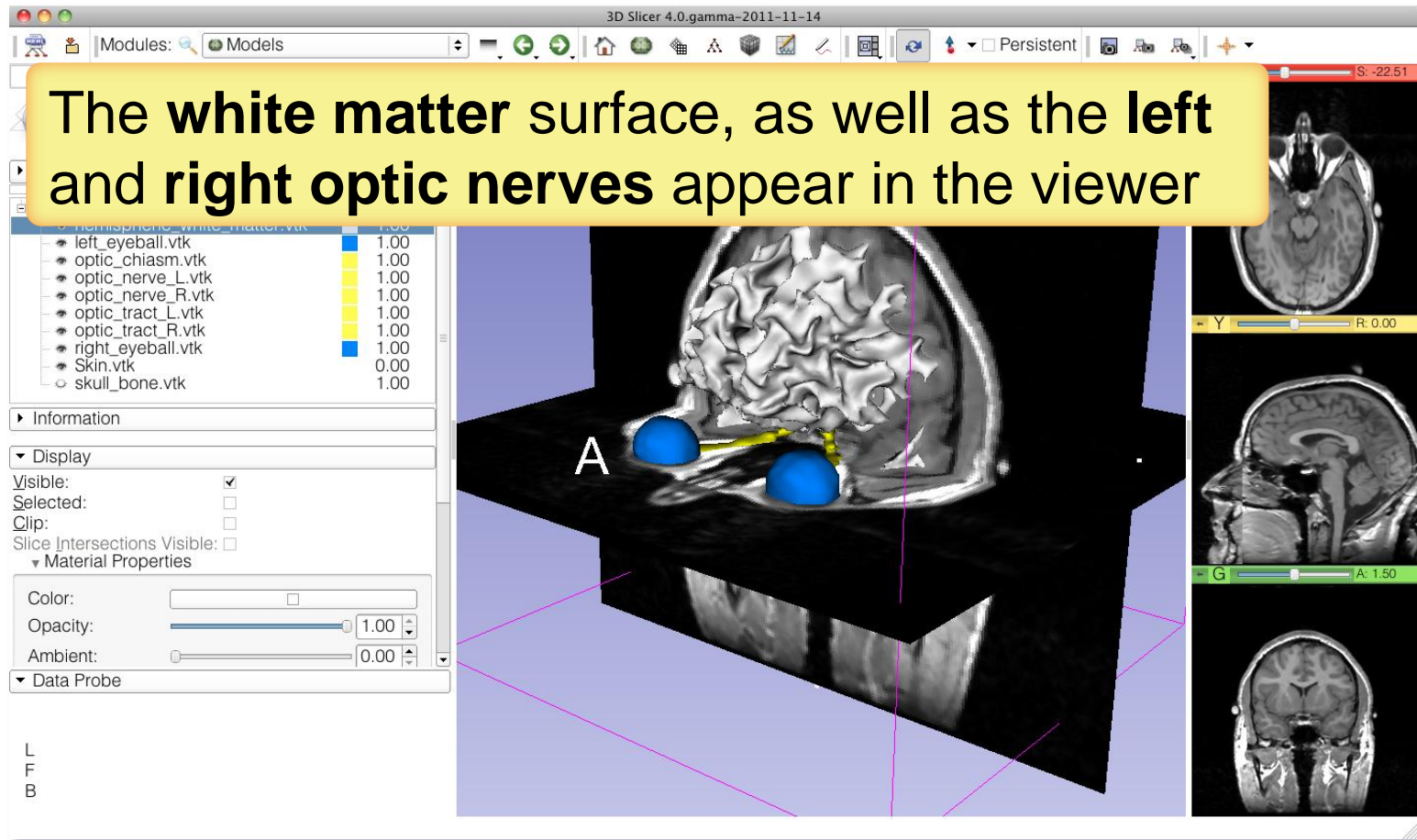
3D Visualization

3D Visualization

Click on the **Pin** icon at the top left corner of the 3D viewer, and click on the **Spin** icon.
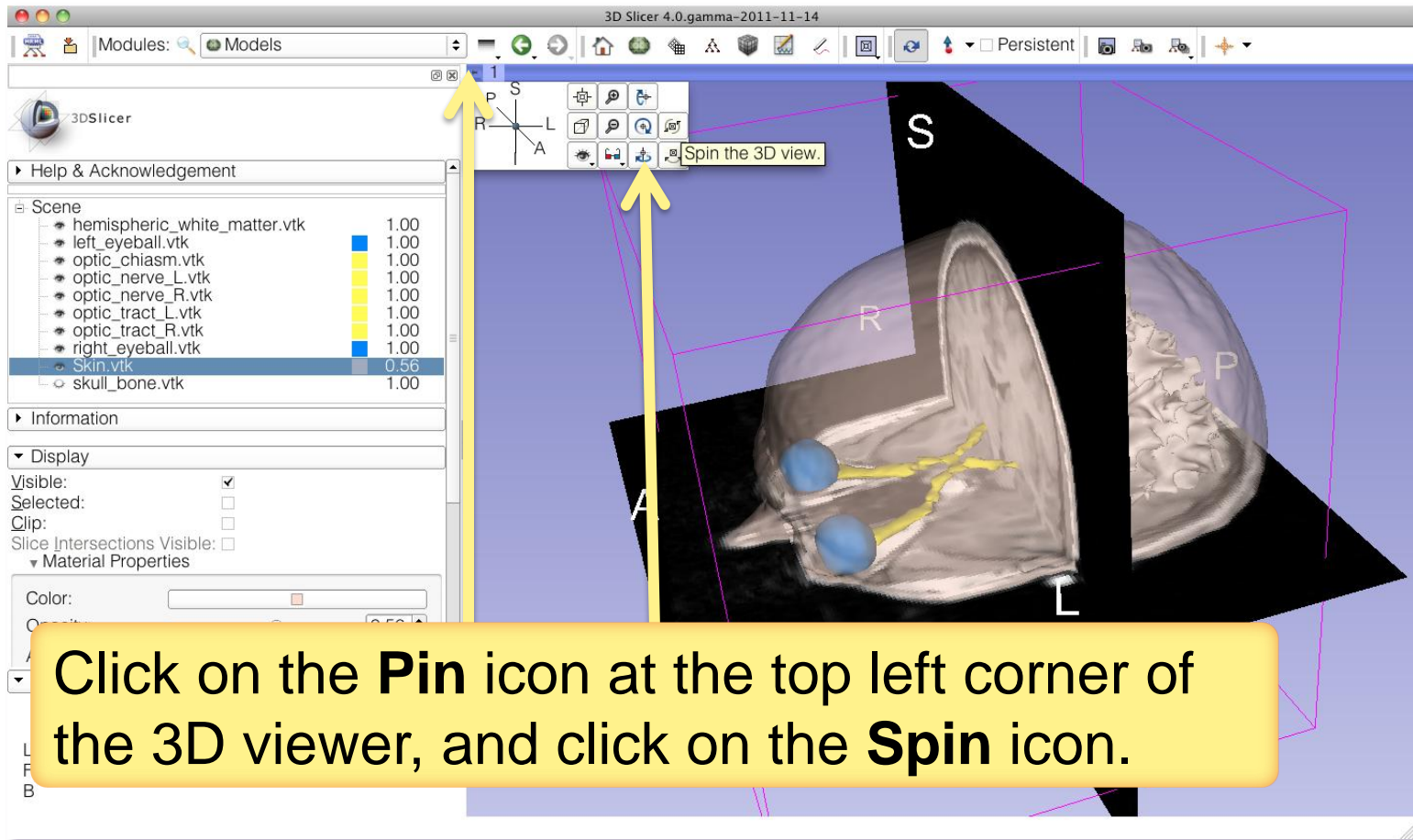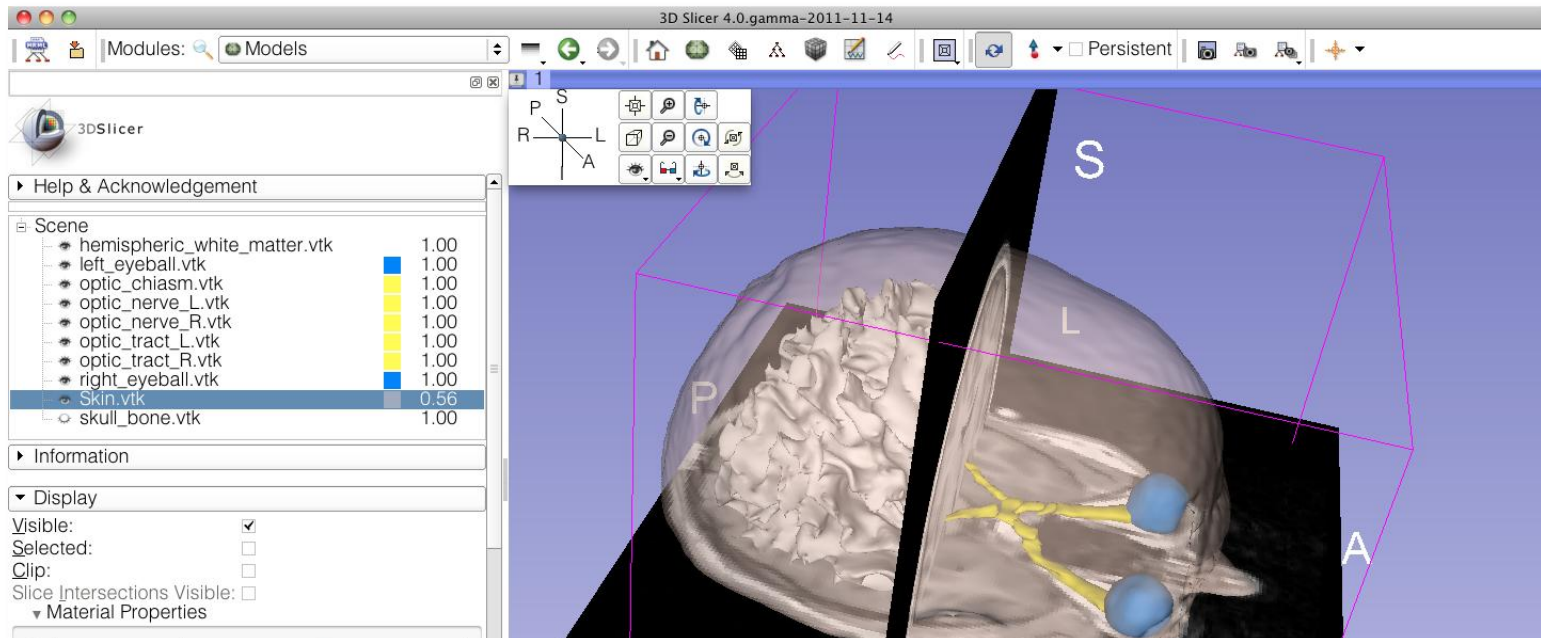
3D Visualization

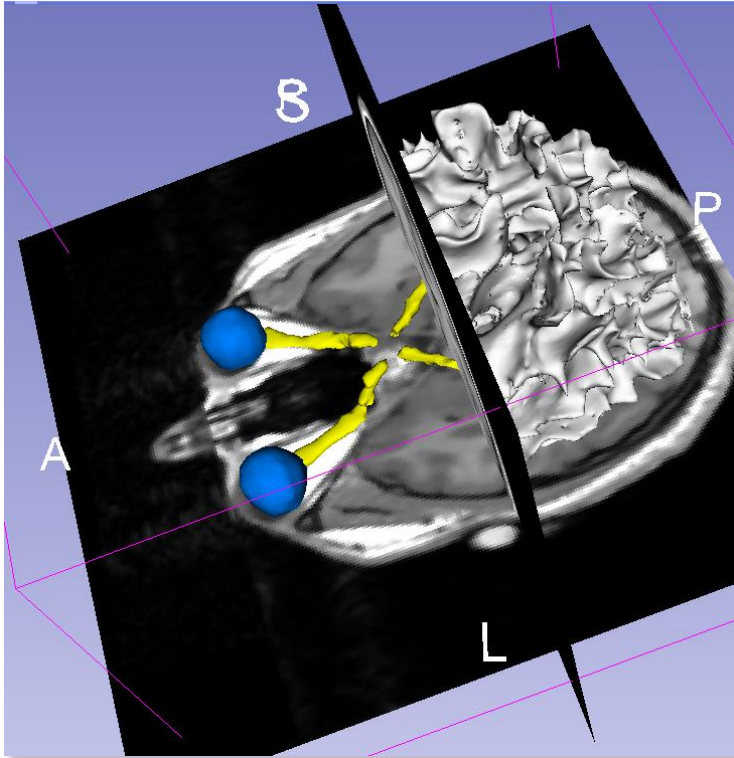The 3D models and 2D anatomical slices start spinning in the 3D viewer.
Click a second time on the spin icon to stop the models from spinning.

Slicer4 minute tutorial

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

Visit the Slicer4 training compendium for more information on the software.

http://www.slicer.org/slicerWiki/index.php/Documentation/4.0/Training

Acknowledgments

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