How to Use the Explorable Image Viewer

1 Loading an Image

The explorable image viewer is intended to provide a simple interface for working with previously generated explorable images. The best way to become familiar with this interface is to see an example of its use. Therefore, this document will describe how to explore a particular image. When you initially run the viewer, you should begin by pressing the large 'Open' button at the top right.

This will display a file selection dialog so that you may choose the explorable image of your choice. We will use the supernova explorable image generated by the example program from the explorable images library documentation. Once open, the viewer should look like Figure 1.
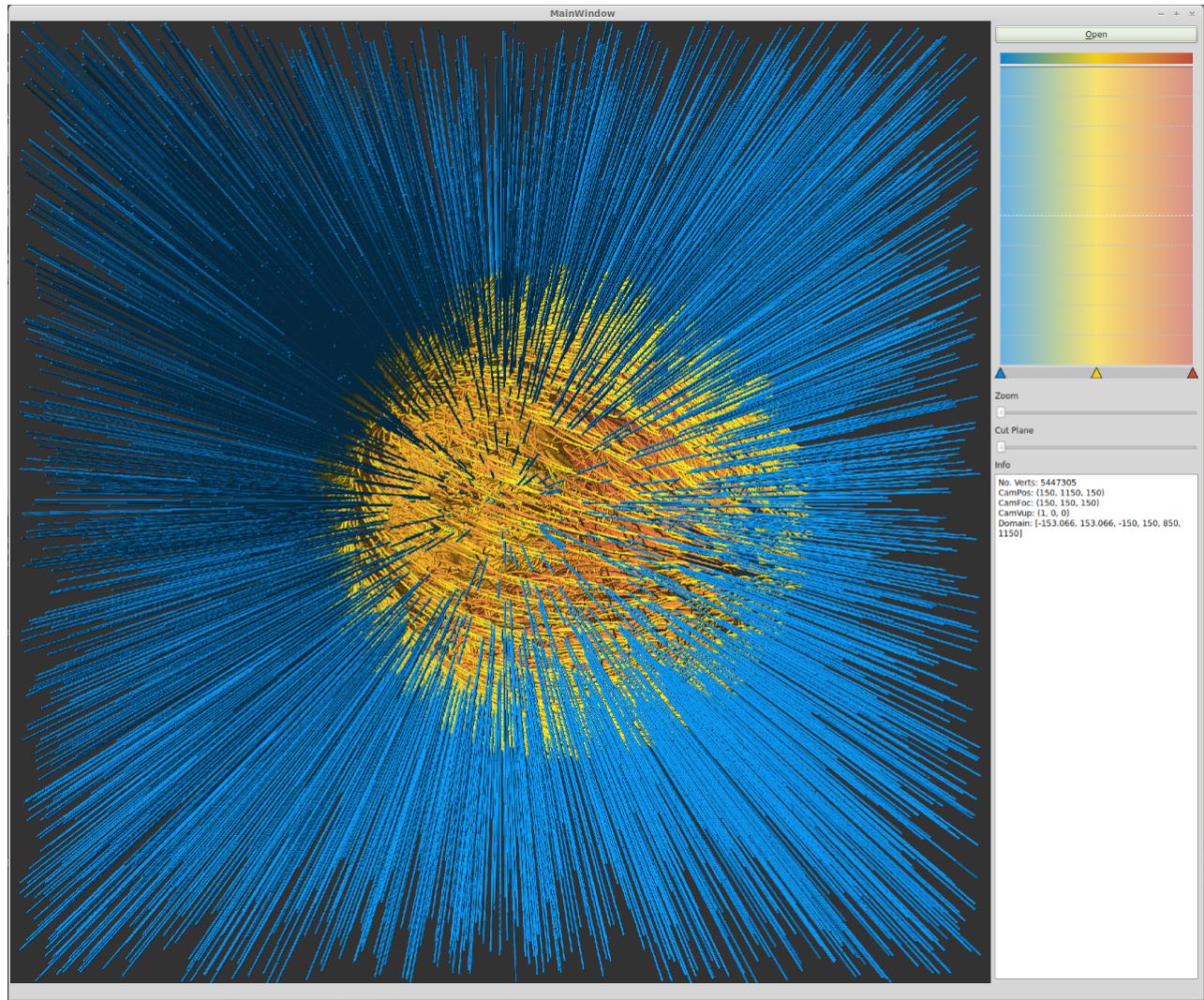
Figure 1: Recoloring to show detail

2 Cut Planes

One way to explore this image is to look 'inside' the supernova. To do so, we use the Cut Plane slider at right to look inside the supernova. We may choose to have the cutplane slider all the way to the left (default), which places the cut plane completely in front of all geometry in the image. Conversely, moving the slider all the way to the right will completely hide all geometry in the image. For our case, we move the slider until the back half of the supernova core is exposed. This gives us Figure 2.
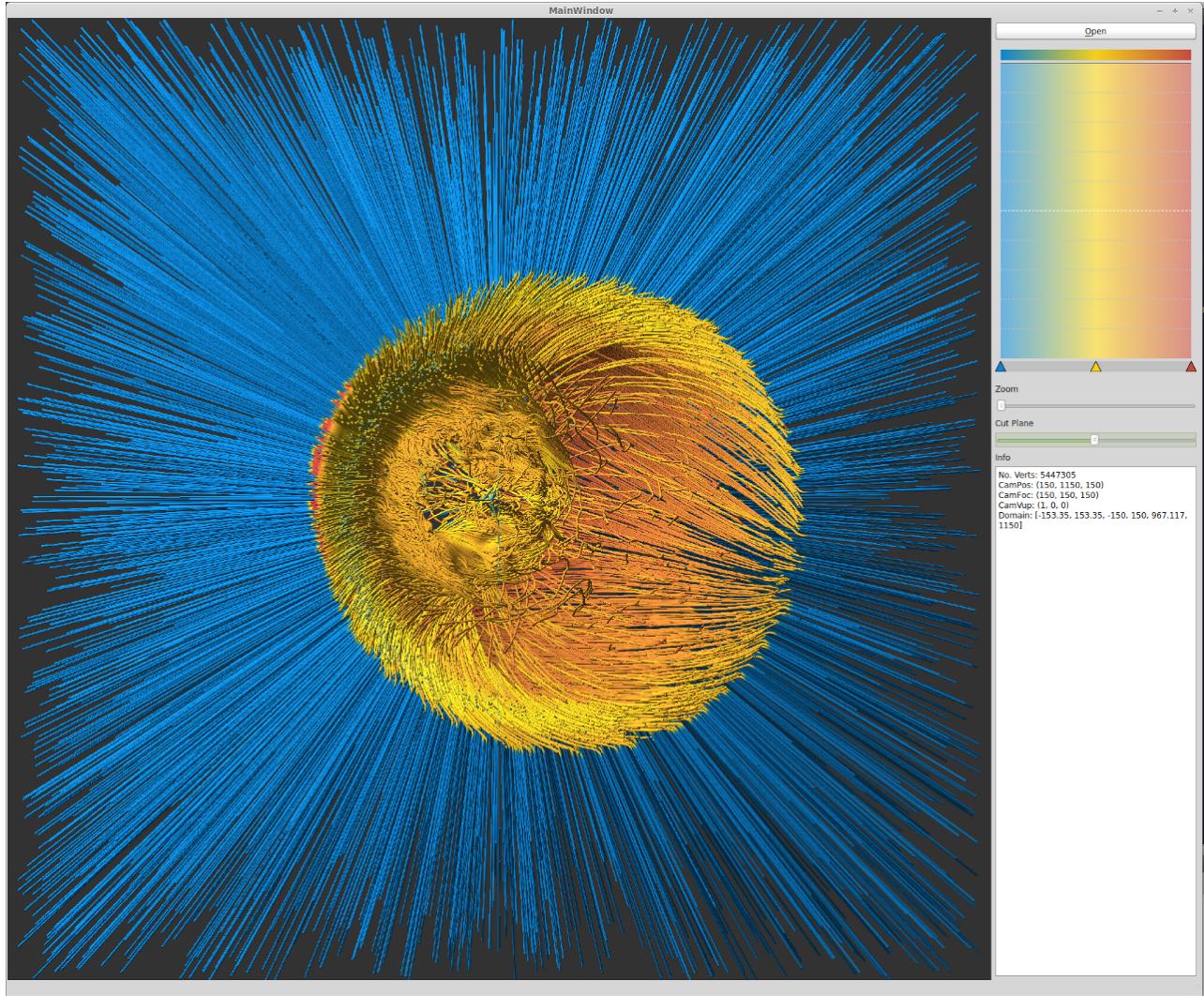
Figure 2: Recoloring to show detail

3   Opacity and Zoom

The blue trajectories at the outside of the image are not of interest to us, so now we can further explore the image by altering the transfer function to hide them. The opacity of each value in the transfer function is shown as a white overlay on the transfer function editor. Click and drag in the tranfer function editor to alter the opacity at that value. To hide the outside trajectories, we click at the bottom left corner of the blue part of the transfer function editor, and drag across to set the opacity to zero for approximately the first fifth of the available values.

Once the trajectories are hidden, we can zoom in so that the image fills the screen by dragging the zoom slider to the right. At this point, you may click and drag in the render window at the left to pan around the image. The result of these changes is shown in Figure 3.
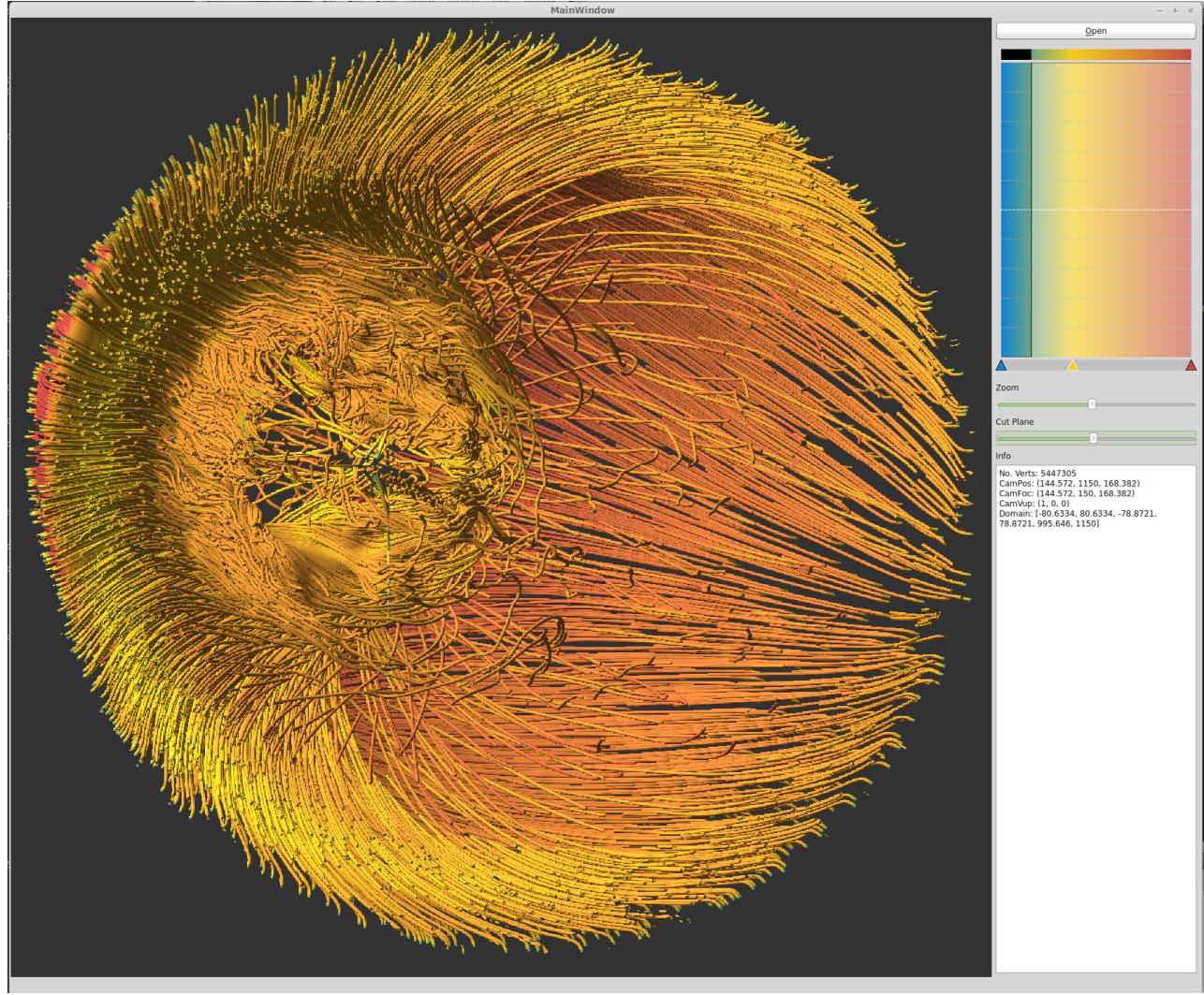
Figure 3: Recoloring to show detail

4   Recoloring

Finally, we can alter the transfer function used to explore the supernova properties in the image by dragging the color arrows in the transfer function editor at the top right, or even add or remove colors in the transfer function. In Figure 4, we simply scale the existing transfer function to cover the visible elements of the image. To do so, simply drag the arrows for each color closer to the right side of the editor.
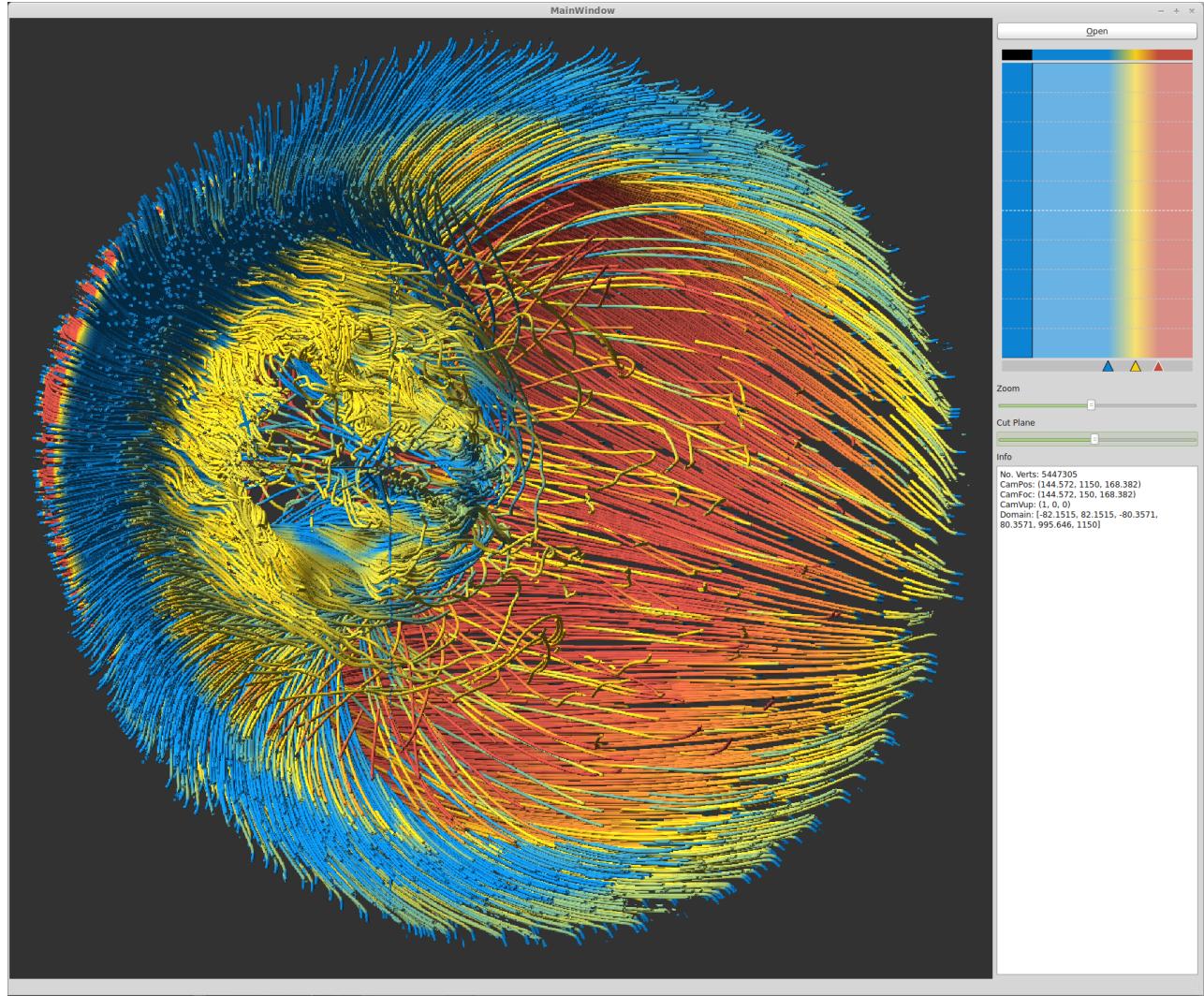
Figure 4: Recoloring to show detail