Subject: How to plot isosurfaces programmatically and import variables like color of each isosurfce, layout of the outcome and export results automatically?
Posted by Edgar Avalos on Tue, 22 Nov 2016 02:49:26 GMT

I know how some few tasks can be automatized, like rotations, but I am doing a large number of isosurfaces because eventually I want to make a movie of how these isosurfaces evolve in time, and therefore I need to plot hundred of these isosurfaces. Tipically I use the ivolume tool, but I would like to be able to automaically import variables like color of each isosurfce and layout of the outcome. I would deeply appreciate if someone could point me to the right place to learn how to do this.

Subject: Re: How to plot isosurfaces programmatically and import variables like color of each isosurfce, layout of the outcome and export results automatically?
Posted by dg86 on Tue, 22 Nov 2016 11:52:02 GMT

On Monday, November 21, 2016 at 9:49:31 PM UTC-5, Edgar Avalos wrote:
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Rather than using IVOLUME, I'd recommend using the function graphics routine, VOLUME(). The volume object created by VOLUME() has methods, such as ROTATE and TRANSLATE, for transforming the visualization. It also has properties, such as RGB_TABLE0 and OPACITY_TABLE0, for changing the color table and transparency, respectively. You can replace the data in the representation with the SET_DATA method without having to create a new plot window. Finally, you can acquire the current image data with the COPYWINDOW method and use the resulting RGB snapshot as a frame in your animation.

Take a look at the online documentation for VOLUME. The examples will get you started.

Be forewarned: The volume object has received less care and attention than other graphics objects, and is somewhat buggy. I've seen it crash on occasion, even causing IDL to quit. With that warning, I've used it successfully to create nice animations of volumetric data.

All the best,

David