
Subject: iVolume isosurface placement

Posted by [K. Bowman](#) on Fri, 24 Feb 2006 15:18:01 GMT

[View Forum Message](#) <> [Reply to Message](#)

I have been experimenting with iVolume in order to understand my problem with displaying isosurfaces.

I think the following example demonstrates the problem clearly.

```
n = 5
x = FINDGEN(n)/(n-1)
x3 = REBIN(REFORM(x, n, 1, 1), n, n, n)
y3 = REBIN(REFORM(x, 1, n, 1), n, n, n)
z3 = REBIN(REFORM(x, 1, 1, n), n, n, n)
vol = z3 - SIN(!PI*x3)*SIN(!PI*y3)

iVolume, vol, /NO_SAVEPROMPT, $
  VOLUME_LOCATION = [0.0, 0.0, 0.0], $
  VOLUME_DIMENSIONS = [1.0, 1.0, 1.0]
```

After the volume is created, add an isosurface at the level 0.0 by using
Operations...Volume...Isosurface.

The peak in the surface should be at (x,y) = (0.5,0.5), not (0.4,0.4), and the isosurface should span the whole data space, 0 -> 1.

Volume slicing (Operations...Volume...Image plane) and volume rendering operations do place the data correctly.

If you have a lot of points in your data set, you may not care that isosurfaces are squeezed by one grid point in each direction, but for my purposes, this is causing me real problems.

Ken Bowman

I have to admit, it is cool to interactively drag the image plane (slice) up and down.
