Subject: volume visualization and isosurface of axisymmetric data
Posted by Andrea[1] on Tue, 23 Nov 2010 10:42:52 GMT
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Hi guys, I have a hydrodynamic simulation of an axisymmetric system of gas.
Of couse the computation (I use ZEUS2D) is made in cylindrical coordinates (R,phi,z) so, computationally speaking, the simulation is 2D, and in IDL I have a matrix, eg density[i,j] where the first index refer to z axis and second index refer to R axis. Physically speaking this a section of a 3D space with phi = costant, ie a meridional plane.

Until now I made maps with contour (David Fanning will forgive me, I saw FSC_Contour only last week!) on meridional plane, but now I should make some 3D isosurface, but I have a 2D array, and I don't know a way to tell to iVolume that the system is axisymmetric.
iVolume (or the counterpart in direct graphics) accept only 3D matrix in cartesian coordinates, right? Because if iVolume accept a matrix in cylindrical coordinates, eg [phi,z,R] instead of [x,y,z], I can build a 3D matrix of density like this:

density3D[i,*,*]=density2D[*,*]

where i go on the phi campionation of the space.

This trick is possible or I have to move on another program, like tecplot? I want use IDL as long as possible, since my analizing program is written in IDL.

Thanks a lot for help.
Andrea