Subject: Surface plots in spherical coordinates
Posted by Matthias Vigelius on Wed, 03 May 2006 22:59:03 GMT
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Hi newsgroup!

Is there a possibility to plot surfaces in spherical coordinates?

I have a function R(theta, phi), describing some kind of elongated sphere or an ellipsoid, and I'dlike to plot the surface. What I'm doing now is:

1) create two big vectors theta and phi which sample the sphere, that is phi is something like (0, ..., 2*pi, 0, ..., 2*pi, ...) and theta (0,...,0,..., pi, ..., pi)

2) compute R(theta, phi)

3) convert these coordinates to cartesian

4) triangulate: triangulate, x, y, tr, b

5) regrid: grid=trigrid(x, y, z, tr)

6) draw surface: surface, grid, xc, yc

Besides being quite cumbersome, the problem is that I can't draw closed surfaces, say the whole sphere (and even so the results are at best moderate).

Is there an easier and working way to do that? I would imagine that this is a common task, so I wonder why it does not seem to be supported in IDL (or is it?)

Thanks heaps!

Matthias
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