Subject: Plotting spherical slice surfaces
Posted by Mrunmayee on Fri, 30 Apr 2010 07:27:16 GMT
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I want to plot a region between 2 spheres constrained by constant longitudes and constant latitudes. That is, if we want to plot a box in Euclidean space, we would plot 6 planes with x_min, x_max and so on constant. What I want to plot is region between given r_min and r_max, longitude_min (etamin) and longitude_max(etamax), latitude_min (lambdamin) and latitude_max (lambdamax). A constant longitude only surface would be just a plane perpendicular to xy-plane and its projection in xy-plane would be just a line. Here is what I have done for this one surface particular:

```
n = 100
rmin = 461.78 & rminArr = REPLICATE(rmin, n)
rmax = 1061.38 & rmaxArr = REPLICATE(rmax, n)
lambdamin = -50.* !pi/180. & lambdaminArr = REPLICATE(lambdamin, n)
lambdamax = 50. * !pi/180.& lambdamaxArr = REPLICATE(lambdamax, n)
etamin = -34. * !pi/180. & etaminArr = REPLICATE(etamin, n)
etamax = 35. *!pi/180. & etamaxArr = REPLICATE(etamax, n)

dr = rmax - rmin
dlambda = lambdamax - lambdamin
deta = etamax - etamin

r = FINDGEN(n)/(n-1) * dr  + rmin
lambda = FINDGEN(n)/(n-1) * dlambda + lambdamin
eta = FINDGEN(n)/(n-1) * deta +  etamin

z = r # sin(lambda) ; Conversion equations for latitude-longitude
x = x = r * cos(lambda)#cos(etaminArr)
y = r * cos(lambda) # sin(etaminArr)

surface,z,x,y,charsize=3
```

Its projection in xy-plane IS a line. If I use

```
fsc_surface,z,x,y
```

I do find it to be planar surface, but it's not what it should look like. I mean, I don't get what it's plotting.

Any help is appreciated. For the whole problem of plotting this region between 2 spheres.

Thanks.