Subject: Re: help on polar_surface routine
Posted by James Kuyper on Tue, 12 Mar 2002 19:10:28 GMT
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Florence HENRY wrote:

> Hello,
>
> I'm trying to use the polar_surface routine, and I have one question about it.
> Here is the instruction I give :
> zz = polar_surface(z,r,t,missing=zmin,spacing=[ds,ds])
> r ranges between 5 and 100
> t ranges between 0 and 2*pi
>
> why the resulting zz is not centered on 0 ?

>
> For example :
>
> r=findgen(51)/50.
> theta=findgen(25)*15.*!dtor
> x=r#cos(theta)
> y=r#sin(theta)
> z=exp(-r^2)#replicate(1.,25)
> zz=polar_surface(z,r,theta,/grid)
> surface,z,x,y
> window,2
> surface,zz
>
> the "surface,z,x,y" will give a plot centered on 0
> and "surface,zz" won't.

That looks fairly well centered to me. It isn't labelled that way, but
that's because by default SURFACE uses the array indices as the labels
for the x and y axes. Try the following:

```
zz =  polar_surface(z,r,theta,/grid,bounds=bounds,spacing=spacing)
surfsize = size(zz, /dimensions)
xcoords = bounds(0) + spacing(0)*indgen(surfsize(0))
ycoords = bounds(1) + spacing(1)*indgen(surfsize(1))
surface,zz,xcoords,ycoords
```

This works, even if you haven't previously defined 'bounds' and
'spacing'; in that case, polar_surface fills them in. That's something I
found out by accident when I forgot to specify them.