Subject: Re: POLAR_CONTOUR plot giving strange values for contour lines
Posted by robintw on Thu, 18 Jun 2009 08:37:15 GMT

I've got an update to this problem:

I've now managed to plot the data as a 3D surface using the following
command:

SURFACE, POLAR_SURFACE(dns, zeniths, azimuths)

This works fine, and gives me the sort of data I'm expecting. However,
the POLAR_CONTOUR command still gives me nonsense values! I've noticed
a bit in the IDL help for the POLAR_SURFACE function which says "Note
that the ordering of the elements in the array Z is opposite that used
by the POLAR_CONTOUR routine.", but what does this mean? Does it mean
I need to reverse the array of my z values to use it with contour?
That sounds a little strange...why would that be?

Any help would be much appreciated,

Robin

Subject: Re: POLAR_CONTOUR plot giving strange values for contour lines
Posted by David Fanning on Thu, 18 Jun 2009 12:21:30 GMT

Robin writes:

> I've now managed to plot the data as a 3D surface using the following
> command:
>
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>
> This works fine, and gives me the sort of data I'm expecting. However,
> the POLAR_CONTOUR command still gives me nonsense values! I've noticed
> a bit in the IDL help for the POLAR_SURFACE function which says "Note
> that the ordering of the elements in the array Z is opposite that used
> by the POLAR_CONTOUR routine.", but what does this mean? Does it mean
> I need to reverse the array of my z values to use it with contour?
> That sounds a little strange...why would that be?
>
> Any help would be much appreciated,

I think everyone might be a little reluctant to stick
their toe into this water because there is a very good
chance it could become a quadmire. :-(

I think your basic problem is that the POLAR_CONTOUR command
really requires a gridded data set. They way you are passing
data to it, IDL is going to attempt the gridding for you.
Letting IDL make choices like this has a long history of things
not working out all that well.

I have two suggestions that I would try. First, I would see
if I could figure out a way to grid my data first that was
more statisfying and looked better when it was contoured.
Here is one way to give that a try:

  http://www.dfanning.com/tips/grid_surface.html

You might also try GRIDDATA.

My second suggestion is to just give up on POLAR_CONTOUR.
I have made this kind of polar plot before with the Orthographic
map projection and a bit of data manipulation. I don't remember
anything at all about how I did it now, except that I was a lot happier
with the result than I was with what I got from POLAR_CONTOUR.
I'll see if I can find something.

Cheers,

David

--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.dfanning.com/
Sepore ma de ni thui. ("Perhaps thou speakest truth.")