Subject: Interpolation/gridding on a sphere?
Posted by tmote on Wed, 12 Jul 1995 07:00:00 GMT
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I have a need to interpolate and grid climate data for the northern hemisphere. I wish to know if anyone has IDL code to perform interpolation across the surface of a sphere. Can the routines in the IDL user's library be modified to accomplish this?

Thanks in advance.

Thomas L. Mote
tmote@unlinfo.unl.edu

Subject: Re: interpolation/gridding
Posted by wfzhao on Thu, 20 Mar 2008 08:45:27 GMT
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> Hi,
>
> I need some help about the IDL interpolation or gridding function.
> I have two data sets, both data sets are longitude x latitude wise in
> this one is regular and another is irregular wise. I will give example
> then you will get clear idea about my problem.
>
> Data1: irregular data1 set
> longitude1=[10.5,21.4,0.51,170.45,.....]= 600 points
> latitude1=[12.5,0.2,12.2,-10.2,-5.5,.....]= 600 points
> date1 =[21.32.12.45.13.45.2.34.1.23.]= 600 points
>
> Data2: regular grid model data sets (97 x 48)
> longitude2=[0.0,3.75,7.5,11.25.....] = 97
> latitude2= [-87.15,-83.47,-79.77...] = 48
> data2= [97 x 48]
>
> I want to interpolate/grid the model(Data2) values to the nearest
> longitude1 x latitude1 (data1) sets.
> How to interpolate the model (data2) values to the data1 values.
>
> I am awaiting for your reply,
>
> Thanking you,
>
> Kishore

Hi,

I have some experience in griddata and interpolation.
I think you can griddata on data2 to make it become a new grid at
600*600 points,and to have a look at the new grid data, which will be
a array of 600 *600, its value is near data1 or not.
just my person idea.

Subject: Re: interpolation/gridding
Posted by kishore1818 on Thu, 20 Mar 2008 12:20:00 GMT
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On Mar 20, 5:45 am, wfz...@bjmb.gov.cn wrote:

>
>
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Hi,
Thanks for your idea, if a made a grid points 600 x 600 then how to
get the nearest point to data1, because data1 is irregular grid.

Kishore

Subject: Re: interpolation/gridding
Posted by Spon on Thu, 20 Mar 2008 15:54:45 GMT
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On Mar 20, 12:20 pm, kishore1...@gmail.com wrote:
> On Mar 20, 5:45 am, wfz...@bjmb.gov.cn wrote:
>
>
>

>
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> Hi,
> Thanks for your idea, if a made a grid points 600 x 600 then how to
> get the nearest point to data1, because data1 is irregular grid.
>
> Kishore

Hi,

you should be able to grid to an irregular grid by calling GRIDDATA
with the /GRID, XOUT & YOUT keywords:

e.g.
```
grid = griddata(longitude2, latitude2, data2, /sphere, /degree, $
  missing = !values.f_nan, $
  /grid, xout = longitude1, yout = latitude1)
```

Hope this helps,
Chris
