Subject: about contour
Posted by tom on Wed, 28 Nov 2001 00:49:34 GMT
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Hi,I will plot a contour for Z=f(X,Y),
contour,Z,X,Y
I hope only area in which Z<0 to be filled, how to do that?

thanks,

Tom.

Subject: Re: about contour
Posted by Chris Lee on Wed, 29 Oct 2003 09:22:26 GMT
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In article <eceee805.0310282257.1de74ee3@posting.google.com>, "Park Kyung Won" <parkkw@mail1.pknu.ac.kr> wrote:

> Hello
> I want to draw contour.
> Array must be 2 dimension.
> I have ground rainfall data and longitute,latitute data about weather
> station. This data is all 1 dimension data.
> rainfall(300)
> longitute(300)
> latitute(300)
> How can I draw using contour?

Hi,

I'm guessing you want to do a spherical triangulation (instead of a 'regular' triangulation).

Use SPH_SCAT...e.g.

```
r = SPH_SCAT(longitude, latitude, rainfall, BOUNDS=[0, -90, 360, 90], $
GS=[10,5], gout=gout,bout=bout)

;gout and bout contain the information about the new regular grid,
; stored in r.
;GS is the grid resolution in degrees

 x=findgen((gout[0]+bout[2]-bout[0])/gout[0])*gout[0]+bout[0]
 y=findgen((gout[1]+bout[3]-bout[1])/gout[1])*gout[1]+bout[1]
contour, r, x,y
```

;;;;;;;

If you do want a non-spherical triangulation, use TRIANGULATE and TRIGRID, the help file can tell you how to use them much better than I can.

Chris.

Subject: Re: about contour
Posted by Chris[1] on Wed, 29 Oct 2003 20:56:10 GMT
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"Christopher Lee" <cl@127.0.0.1> wrote in message
news:20031029.092226.1398295499.15916@buckley.atm.ox.ac.uk.. .
> In article <eceee805.0310282257.1de74ee3@posting.google.com>, "Park Kyung
> Won" <parkkw@mail1.pknu.ac.kr> wrote:
>
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> contour, r, x,y
>

> ;;;;;;;
>
> If you do want a non-spherical triangulation, use TRIANGULATE and
> TRIGRID, the help file can tell you how to use them much better than I
> can.
>
> Chris.

Can't he use just:

contour,rainfall,longitude,latitude,/irregular ;; (assuming lat & lon are in
decimal degrees)

something like that; plus play around with levels, etc.
I don't have IDL up and running right now, so I don't remember :(

(another) Chris

Subject: Re: about contour
Posted by parkkw on Thu, 30 Oct 2003 05:03:40 GMT
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Thanks relpy.
Sorry, I didn't give detail information.

This area is korea region.
rainfall(k) : ground weather staion
longitute(k) : weather sation longitute
latitute(k) :weather sation latitute

k : number of weather station
example

longitute	latitute	rainfall
128.140	38.285	21.000
128.383	38.267	4.000
127.306	38.145	22.000
128.210	38.217	30.000
127.951	38.208	30.000
.	.	.
.	.	.
.	.	.

I want to use mecartor map projection and draw contour map in korea region.
Thanks
Park

Subject: Re: about contour
Posted by Chris Lee on Thu, 30 Oct 2003 09:06:58 GMT
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In article <oGVnb.4174$Nm6.241992@news20.bellglobal.com>, "Chris"
<not@this.address> wrote:

> news:20031029.092226.1398295499.15916@buckley.atm.ox.ac.uk.. .
>> In article <eceee805.0310282257.1de74ee3@posting.google.com>, "Park
>> Kyung Won" <parkkw@mail1.pknu.ac.kr> wrote:
<snip>
>> Use SPH_SCAT...e.g.
>>

> Can't he use just:
> contour,rainfall,longitude,latitude,/irregular ;; (assuming lat & lon
> are in decimal degrees)
> something like that; plus play around with levels, etc. I don't have IDL
> up and running right now, so I don't remember :((another) Chris

You can use /irregular (even though my contour wrapper seems to make a
dog's breakfast out of it...) to plot the data, but it looks "better" on
the plot with sph_scat, how much non-existent data the interpolation has
added I don't know.

In the IDL helpfile example for SPH_SCAT (a sine wave in longitude and
cosine in latitude I think) the circles on the map appear as circles using
SPH_SCAT, but they appear as jaggy polygons (reflecting the data) using
/irregular.

Chris.

Subject: Re: about contour
Posted by Chris Lee on Thu, 30 Oct 2003 09:13:48 GMT
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In article <eceee805.0310292103.52910172@posting.google.com>, "Park Kyung
Won" <parkkw@mail1.pknu.ac.kr> wrote:

> Thanks relpy.
> Sorry, I didn't give detail information. This area is korea region.
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> longitute(k) : weather sation longitute latitute(k) :weather sation

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> k : number of weather station
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> 128.383 38.267 4.000
> 127.306 38.145 22.000
> 128.210 38.217 30.000
> 127.951 38.208 30.000
> . . .
> . . .
> . . .
> I want to use mecartor map projection and draw contour map in korea
> region. Thanks
> Park

Range...ok, just change the ranges I gave from 'whole world' to 126-130 long, 36-38 lat, or whatever the data really is, change GS=[10,5] to GS=[0.1,0.05] or something, depends on the resolution YOU want.

Ah, fun with maps..

map_set, /mercator, limit=[lower_long, lower_lat, upper_long,upper_lat]
contour,r,x,y, /over

; you will have to play with the contour and the map_set to get the image
; you want, check the helpfile for continent and lat-long lines plotting.

Whether you use the SPH_SCAT or the /irregular keyword on contour, the map projection method is the same.

Chris.

Subject: Re: about contour
Posted by btt on Fri, 31 Oct 2003 14:08:27 GMT
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Christopher Lee wrote:
> In article <oGVnb.4174$Nm6.241992@news20.bellglobal.com>, "Chris"
> <not@this.address> wrote:
>
>
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>> news:20031029.092226.1398295499.15916@buckley.atm.ox.ac.uk.. .
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> cosine in latitude I think) the circles on the map appear as circles using
> SPH_SCAT, but they appear as jaggy polygons (reflecting the data) using
> /irregular.
>
> Chris.

Hi,

A couple of other options:

Use the newish GRID_INPUT/GRIDDATA functions that appeared with IDL5.5 These functions provide many features for sampling the data onto a grid before contouring.

Use the new iTools contour tool that provides a nice GUI to the GRIDDATA function.

Ben
