
Subject: contour problem (Triangle not in counterclockwise order)
Posted by skymaxwell@gmail.com on Sat, 04 Jun 2016 15:58:29 GMT
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I need to create a contour on map by data holds in the CSV file: longitude,latitude,probability.
Here is a fragment from one CSV file.

```
0,-70,0
0,-67.5,0
0,-65,1
0,-62.5,1
0,-60,0.9
0,-57.5,0.9
0,-55,1
0,-52.5,1
0,-50,0.6
0,-47.5,0.5
0,-45,1
0,-42.5,1
0,-40,1
0,-37.5,0.9
0,-35,0.5
0,-32.5,0.7
0,-30,0.6
0,-27.5,0.5
0,-25,0.6
0,-22.5,0.5
0,-20,0.5
0,-17.5,0.3
0,-15,0.2
0,-12.5,0.2
0,-10,0.2
0,-7.5,0.1
0,-5,0.2
0,-2.5,0.5
0,0,0.4
0,2.5,0.4
0,5,0.4
0,7.5,0.4
0,10,0.4
0,12.5,0.7
0,15,0.6
0,17.5,0.3
0,20,0.2
0,22.5,0.1
0,25,0
0,27.5,0
0,30,0
```

```
0,32.5,0
0,35,0
0,37.5,0
0,40,0.3
0,42.5,0.5
0,45,0.6
0,47.5,0.3
0,50,0.1
0,52.5,0
0,55,0.5
0,57.5,0.6
0,60,0.5
0,62.5,0.7
0,65,0.8
0,67.5,0.7
0,70,0
15,-70,0
15,-67.5,1
15,-65,1
15,-62.5,1
15,-60,0.8
15,-57.5,0.8
....
```

To process CSV file and create a contour I wrote

PRO CSVCONTOUR

```
path="E:\work\"
csvfile = DIALOG_PICKFILE(FILTER='*.csv',PATH=path)
Result = READ_CSV(csvfile)
;get coordinates
lon=result.FIELD1
lat=result.FIELD2
;get values
value=result.FIELD3
count=N_ELEMENTS(lat)
latLimit=MAX(lat)
PRINT,"count=",count," latLimit=",latLimit

;need a map proj. Also add a colorbar to contour
m = MAP('Mercator')
ct = COLORTABLE(72,/REVERSE)
c = CONTOUR(value, lon, lat, /FILL, OVERPLOT=m, GRID_UNITS='degrees', $
RGB_TABLE=ct, TITLE='Prob')
mc = MAPCONTINENTS()
cb = COLORBAR(TITLE='Probability')
END
```

Then I run a program, i got the following messages and only map grid is showing

```
count=      1425 latLimit=      70.000000
% GRIDDATA: Triangle 484 not in counterclockwise order.
% GRIDDATA: Triangle 586 not in counterclockwise order.
% GRIDDATA: Triangle 588 not in counterclockwise order.
% GRIDDATA: Triangle 589 not in counterclockwise order.
% GRIDDATA: Triangle 1814 not in counterclockwise order.
% GRIDDATA: Triangle 1815 not in counterclockwise order.
% GRIDDATA: Triangle 2223 not in counterclockwise order.
% GRIDDATA: Triangle 2440 not in counterclockwise order.
% CONTOUR: GRIDDATA: Triangle 2441 not in counterclockwise order.
```

So, how to fix that to get a contour ? What does that mean by "Triangle not in counterclockwise order" ? Any problem with CSV's data ?

Thanks at advance
