
Subject: Direct vs Function Graphics Contour Plots

Posted by [David Fanning](#) on Wed, 07 Sep 2011 23:18:36 GMT

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Folks,

I have been doing some experiments to see if I can figure out how Function Graphics work today.

One of the things I noticed right off the bat is how different the contouring algorithms are. I realize that there are MANY right answers for where a contour line should go, but even so, I was surprised by this. The details of the plots are interesting!

Here is a program you can run to produce random data sets that are then contoured with cgContour and the Contour function. Run the program with the LABEL keyword set, if you want to see the contour lines labeled. Notice how many lines are labeled upside down!

```
.*****  
;  
PRO ContourPlots, LABEL=label  
  
; Create a simple, random dataset for contouring:  
data = RANDOMU(-3L, 9, 9)  
  
; Set the contour levels.  
levels =[0.05, 0.1, 0.15, 0.2, 0.3, 0.44, 0.6, 0.75]  
  
; cgContour  
cgWindow, WXSIZ=500, WYSIZ=400  
cgCONTOUR, data, LEVELS=levels, LABEL=Keyword_Set(label), /WINDOW  
  
; Contour function.  
w = Window(DIMENSIONS=[500, 400])  
ctr=contour(data, C_VALUE=levels, AXIS_STYLE=2, /CURRENT)  
IF Keyword_Set(label) THEN ctr.C_LABEL_SHOW=Replicate(1,8)  
  
END  
.*****  
;
```

A couple of things I can't figure out. (1) Is there a way to make the contour labels smaller than the text labels for the Contour()? If I set FONT_SIZE=7, then *everything* is make that size. (2) Where does one go to figure out what properties can be changed? The on-line

help really does seem hopeless for these function graphics commands. (3) How would you position the Window() next to the cgWindow?

Cheers,

David

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Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

Sepore ma de ni thui. ("Perhaps thou speakest truth.")
