Subject: Re: plotting program problems
Posted by btt on Tue, 23 Oct 2001 17:39:09 GMT
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Clive Cook wrote:

> I'm relatively new at idl (and programming in general) so please excuse
> any what may seem to you guys dumb questions.

No such things.

> The problem is that i need
> a program to produce plots of data with three variables. They are time,
> height and intensity. At the moment i use a program that i think
> basically uses contour and then produces a color plot with a color bar.
> The thing is that it takes along time to process the data with this
> program and its not as flexible as i would like.
>
> An average data set may contain 5000 individual files, with each file
> containing 452 height bins each with a recording of the intensity.
>

Contour is a good choice for peeking at XYZ data. It's not easy to discern exactly what your are trying to do, so it's a bit hard to help here. An alternative is to make a plot of symbols sized according to your Z value. You have a lot of points, so maybe this will look a bit noisy on the display.

```
    ;set up the plot coordinates without actually plotting the data
Plot, X, Y, /NoData, otherkeywords = blahblah
   ; get the range of your values in Z
zMax = Max(Z, min = zMin)
    ;scale the data from 0-1
Scale = (Z - zMin)/(zMax-zMin)
    ;add one, so the symbol size ranges from 1.0 - 2.0
    ;loop through each point (maybe be slow)
For i = 0, n_elements(Z)-1 DO PlotS, X, Y, pSym = 1, SymSize = Scale[i]+1,
....
```

>
> One thing that i would like to be able to do that seems to be resticted
> due to the way the program works is actually specify certain colors for
> certain values, as well as using the specified color table for the more
> general data.
>

You can key your data to certain colors in much the same manner as above by

specifying the COLOR keyword to PlotS. You don't have to run a loop to access an array of colors passed to the COLOR keyword. The trick is to key your data to the color table. One way is to use the SCALE value above

```
    ;load a color table
LoadCT, 4
PlotS, X, Y, psym = 1, color = SCALE*255
```

To get more control than that you may need to manufacture a look up table of some sort look up table (which doesn't have to be all that fancy pants.) Many IDL users maintain good web pages with free advice, tips, and code. A good starting point is David Fanning's excellent website. He has a wonderful links page to other sites.

Ben

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