Subject: visualizing data in 3-D
Posted by patrick on Tue, 07 Aug 2001 17:56:47 GMT
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Folks-

I'm attempting to construct a 3-D visualization of oceanographic data. My data is in columnar ascii format. I need to interpolate corresponding data values at three different locations. For example, I have a density value of 21.9 kg/m^3 measured at three different locations and I want to visualize a density stratification surface interpolated between the three locations where the horizontal axes are space between the locations and the vertical axes are depth. What I have currently for the procedure is below. It is currently just a mangled set of lines which obviously won't work. the *pstate variables correspond to 3 different data sets in a pointer array stacked on top of each other. So x1 is a depth column, and y1 is a density column, x2 & y2 are depth and density columns from a second location, ditto with x3/y3 at a third location. Could xplot3d or slicer3 work for this? Or should I use a combination of surfr and t3d as opposed to the current code?

```
x1 = reform((*pstate).profiledata(0,*,0))
y1 = reform((*pstate).profiledata(1,*,0))

x2 = reform((*pstate).profiledata(0,*,1))
y2 = reform((*pstate).profiledata(1,*,1))

x3 = reform((*pstate).profiledata(0,*,2))
y3 = reform((*pstate).profiledata(1,*,2))
print, 'working'
; interpolate 1st data onto 2nd data alt grid
 y01 = interpol(y1, x1, x2)

 ; interpolate 3rd data onto 2nd data alt grid
 y03 = interpol(y3, x3, x2)

 ; concatenate arrays

 y = [transpose(y01), transpose(y2), transpose(y03)]
x = [0,1,2]


 contour, y, x, x2
```

Thanks for any suggestions,

Patrick