Subject: 3D data on a color coded line plot!
Posted by Steve Daal on Thu, 17 Oct 2013 15:17:37 GMT
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Hi,

I thought this would be an easy thing to do, but seems I am missing or overseeing something!

I have 3D data: density, pressure, and time.
I want to plot time vs density, with the pressure as a color code on the density trace.
Coyote's time vs elevation example doesn't work, since its 2D, and the colors are just over plotted, meaning that the red color would only be at the upper values of time (X axis) or elevation (Y axis).
In my case, the color coded data is independent, so the red could be at any place in the plot.
How to do that?!

Thanks,
S

Subject: Re: 3D data on a color coded line plot!
Posted by David Fanning on Thu, 17 Oct 2013 15:42:43 GMT
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steve.daal@gmail.com writes:

> I thought this would be an easy thing to do, but seems I am missing or
overseeing something!
>
> I have 3D data: density, pressure, and time.
> I want to plot time vs density, with the pressure as a color code on the density trace.
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plotted, meaning that the red color would only be at the upper values of time (X axis) or elevation
(Y axis).
> In my case, the color coded data is independent, so the red could be at any place in the plot.
> How to do that?!

It *is* easy to do. It is just a simple variation of the colored line
plots shown in the Coyote Plot Gallery.

```
  density = cgDemoData(1)
  pressure= cgDemoData(17)
  time = cgScaleVector(Findgen(N_Elements(density)), 0, 6)
  thick = (!D.Name EQ 'PS') ? 6 : 3
  cgDisplay
  pressureColors = BytScl(pressure)
  cgPlot, time, density, /NoData, XTitle='Time', $
     YTitle='Density', Label='Colored by Pressure'
  FOR j=0,N_Elements(pressure)-2 DO cgPlotS, $
```

```
      [time[j], time[j+1]], [density[j], density[j+1]], $
       Color=pressureColors[j], Thick=thick
   FOR j=0,N_Elements(pressure)-1,2 DO cgPlotS, $
       time[j], density[j], PSym=2, $
       SymSize=1.5, Color=pressureColors[j]
END
```

Cheers,

David
--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.idlcoyote.com/
Sepore ma de ni thue. ("Perhaps thou speakest truth.")

Subject: Re: 3D data on a color coded line plot!
Posted by Steve Daal on Thu, 17 Oct 2013 15:51:42 GMT
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Indeed it was easy. I screwed up with setting the pressure colors, now I see the light.
Thanks David!
