
Subject: Multiple axes and plots with NG

Posted by [Matthew Argall](#) on Sat, 11 Jan 2014 19:17:45 GMT

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Hi,

I am trying to reproduce the following plot from the coyote library using function graphics, as it similar to a plot of my own that I need to make.

http://www.idlcoyote.com/gallery/#ADDITIONAL_AXES_PLOT

My attempt is below.

Everything seems fine, except for the blue axis, which did not obey the axis range I gave it. I was hoping to use "emptyPlot" as the target for the y-axes, then use the axes as the targets for the plots. This did not work, though, since each additional axis reset the axis ranges of the others...

Can anyone help improve this?.... I was hoping to use the Target and Overplot keywords more, and not just position one plot on top of the other, then hide their axes...

Thanks in advance

```
data_1 = cgScaleVector(cgDemodata(17), 0.0, 1.0)
data_2 = cgScaleVector(cgDemodata(17), 0.0, 1000.0)
data_3 = (Findgen(101)+1) / 5
```

```
position = [0.15, 0.15, 0.7, 0.820]
thick = 2
```

```
;Create the empty plot. Hide the y-axes.
emptyPlot = Plot(data_1, Position=position, /NoData)
emptyAxes = emptyPlot.AXES
emptyAxes[1].HIDE = 1
emptyAxes[3].HIDE = 1
```

```
;Add the first set of data and the left axes.
location = emptyPlot.ConvertCoord(position[0:1], /Normal, /To_Data)
Plot1 = Plot(data_1, /Current, Overplot=emptyPlot, Color='red', Thick=thick)
Axis1 = Axis('Y', Location=location, Target=emptyPlot, Color='red', Title='Data 1')
```

```
;Add the second set of data. Turn off the axes.
Plot2 = Plot(data_2, /Current, Position=position, Color='green', LineStyle=2, Thick=thick)
Plot2Axes = Plot2.AXES
ForEach ax, Plot2Axes do ax.HIDE=1
```

```
;Add the right axis
```

```
location = Plot2.ConvertCoord(position[2:3], /Normal, /To_Data)
Axis2 = Axis('Y', Location=location, Target=Plot2, TextPos=1, Color='green', Title='Data 2',
Axis_Range=[0,1000])
```

```
;Add the third set of data. Turn off the axes
```

```
Plot3 = Plot(data_3, /Current, Position=position, Color='blue', LineStyle=1, Thick=thick)
```

```
Plot3Axes = Plot3.AXES
```

```
ForEach ax, Plot3Axes do ax.HIDE=1
```

```
;Add a third axis
```

```
location = Plot3.ConvertCoord([0.85, 0.15], /Normal, /To_Data)
```

```
Axis3 = Axis('Y', Location=location, Target=Plot3, TextPos=1, Color='blue', Title='Data 3',
```

```
Axis_Range=[0.1,100], /Log)
```
