
Subject: Re: Is there a way to plot with axis breaks in IDL?

Posted by [mankoff](#) on Sat, 03 Apr 2010 18:21:03 GMT

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On Apr 2, 6:12 am, David Fanning <n...@dfanning.com> wrote:

>
> I've made plots like this before. It is not particularly
> difficult to do *a* plot. It is more difficult to write
> this kind of functionality in a general way.
>

I think I just came up with a fairly generic implementation here:

<http://code.google.com/p/kdm-idl/source/browse/trunk/plotbreak.ak.pro>

For example I was able to produce the following graphic (including equivalent of OPLOT command) with the following two lines of code.
<http://kenmankoff.com/tmp/plotbreak.png>

```
plotbreak, time, p, $  
    position=pos, $  
    xrange0=[0,1000], $  
    xrange1=[1000,3000], $  
    breakpct=66, $  
    key0={ytitle:'Population (Phytoplankton)', $  
        xtitle:'Time (days)', $  
        xtickn:['0','20','40','60','80',''], $  
        title:'Predator v. Prey', $  
        thick:2}, $  
    key1={xtitle:'Time (days)', $  
        yst:5,thick:2,$  
        xtickn:['100','150','200','250','300'] }
```

```
plotbreak, time, z, $  
    position=pos, $  
    breakpct=66, $  
    xrange0=[0,1000], $  
    xrange1=[1000,3000], $  
    key0={NOERASE:1,color:253,thick:3,yst:5,xst:5}, $  
    key1={color:253,thick:3,xst:5,$  
        ytitle:'Population (Zooplankton)'} }
```

A truly generic algorithm, which would be difficult, would be recursive and let me specify BREAKPCT=[10,30,80,90,95] rather than just as a single percentage (66% in the above example). It should also be recursive in X and Y. That algorithm, when complete, could then easily be used to draw, for example, a calendar with the weekends

(first and last column) thinner than the middle weekdays. I'll leave that as an exercise to the reader.

-k.
