
Subject: Re: Looking for more elegant plot scaling...
Posted by [wlandsman](#) on Sat, 18 Jun 2011 12:04:43 GMT
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I'd probably go with the single line

```
maxy = max([temp_obsdata,splined_wvrdata,residuals,interp_obsdata], min=miny)
```

You could also use

```
maxy = max(temp_obsdata) > max(splined_wvrdata) > max(residuals) > max(interp_obsdata)  
miny = min(temp_obsdata) < min(spline_wvrdata) < min(residuals) < min(interp_obsdata)
```

--Wayne

Subject: Re: Looking for more elegant plot scaling...
Posted by [ben.bighair](#) on Sun, 19 Jun 2011 01:57:45 GMT
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Hi,

On 6/18/11 1:16 AM, Balt wrote:

```
> Hi all,  
>  
> I'm OPLOTting 3 curves on a fourth one. Is there a more elegant way to  
> scale a plot to YRANGE=[maxy,miny] than this:  
>  
> ; get the y max for the plots  
> maxy = MAX(temp_obsdata)  
> IF MAX(splined_wvrdata) GT maxy THEN maxy = MAX(splined_wvrdata)  
> IF MAX(residuals) GT maxy THEN maxy = MAX(residuals)  
> IF MAX(interp_obsdata) GT maxy THEN maxy = MAX(interp_obsdata)  
>  
> miny = MIN(temp_obsdata)  
> IF MIN(splined_wvrdata) LT miny THEN miny = MIN(splined_wvrdata)  
> IF MIN(residuals) LT miny THEN miny = MIN(residuals)  
> IF MIN(interp_obsdata) LT miny THEN miny = MIN(interp_obsdata)  
>  
> Maybe something a bit more C macro-ish... ?
```

I don't know about C stuff, but IDL's compare-and-assign operators could be handy here...

```
IDL> a = randomn(s,10)  
IDL> b = randomn(s,10)  
IDL> c = randomn(s,10)  
IDL> print, a,b,c
```

```
0.774450 0.0338028 -2.49289 -0.430953 2.15833
0.868524 -0.145793 1.13590 0.726517 1.28041
-1.14027 -0.520221 -0.283700 -0.849713 0.00405929
-0.525046 -0.335924 -0.548919 1.01423 0.0764202
2.04586 0.00412738 1.72472 0.707579 0.997633
1.72583 0.913348 0.699497 1.20014 0.907764
IDL> maxy = max(a) > max(b) > max(c)
IDL> print, maxy
2.15833
IDL> maxy = max(a, min = mina) > max(b, min = minb) > max(c, min=minc)
IDL> print, mina,minb,minc
-2.49289 -1.14027 0.00412738
IDL> miny = mina < minb < minc
IDL> print, miny
-2.49289
```

You could also simply concatenate all of the arrays together, but that seems like a lot of overhead.

Cheers,
Ben

Subject: Re: Looking for more elegant plot scaling...
Posted by [Balt](#) on Mon, 20 Jun 2011 01:01:41 GMT
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Both very elegant and just what I was looking for, thanks guys!

- Balt

Subject: Re: Looking for more elegant plot scaling...
Posted by [Gray](#) on Mon, 20 Jun 2011 10:12:52 GMT
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On Jun 19, 9:01 pm, Balt <bindermue...@gmail.com> wrote:
> Both very elegant and just what I was looking for, thanks guys!
>
> - Balt

There's also the MINMAX routine in the NASA IDL Astro library:

```
IDL> mnmxy = minmax([all,your,arrays])
IDL> oplot, thing, yra=mnmxy
```
