
Subject: Re: Odd axis labelling error

Posted by [Heinz Stege](#) on Thu, 27 Aug 2009 12:54:19 GMT

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On Thu, 27 Aug 2009 05:16:05 -0700 (PDT), Jimmy wrote:

```
> Hi,  
>  
> I'm trying to create a plot with a log y-axis from 10e-4 to 10e3. I'm  
> using the follow:  
>  
> plot_io, variable1, variable2, xr =[1,8], yr =[10e-4,10e3], xstyle =  
> 1, ystyle = 1  
>  
> (with titles and background colour stuff too).  
>  
> This plots the x axis fine, BUT- the y-axis is plotted from 10e-3 to  
> 10e4. Anyone know why this might be, and how I can fix it?  
>  
> Thanks!
```

Good joke!

$10e-4 = 10^*1e-4 = 1e-3 = 10^{-3}$

That is, what I see on the plot.

Heinz

Subject: Re: Odd axis labelling error

Posted by [David Fanning](#) on Thu, 27 Aug 2009 13:18:16 GMT

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Jimmy writes:

```
> I'm trying to create a plot with a log y-axis from 10e-4 to 10e3. I'm  
> using the follow:  
>  
> plot_io, variable1, variable2, xr =[1,8], yr =[10e-4,10e3], xstyle =  
> 1, ystyle = 1  
>  
> (with titles and background colour stuff too).  
>  
> This plots the x axis fine, BUT- the y-axis is plotted from 10e-3 to  
> 10e4. Anyone know why this might be, and how I can fix it?
```

I think this is the ol' Sky is Falling thing in another guise:

http://www.dfanning.com/math_tips/sky_is_falling.html

This works:

```
plot_io, v1, v2, x =[1,8], yr=[10d-4,10d3], xstyle=1, ystyle=1
```

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

Coyote's Guide to IDL Programming: <http://www.dfanning.com/>
Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: Odd axis labelling error

Posted by [Jean H.](#) on Thu, 27 Aug 2009 14:02:05 GMT

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Jimmy wrote:

```
> Hi,  
>  
> I'm trying to create a plot with a log y-axis from 10e-4 to 10e3. I'm  
> using the follow:  
>  
> plot_io, variable1, variable2, xr = [1,8], yr =[10e-4,10e3], xstyle =  
> 1, ystyle = 1  
>  
> (with titles and background colour stuff too).  
>  
> This plots the x axis fine, BUT- the y-axis is plotted from 10e-3 to  
> 10e4. Anyone know why this might be, and how I can fix it?  
>  
> Thanks!
```

Hi,

could it be that you are confusing 10e3 and 10^3 ?

A simple test using the same range as you do labels as 10^-3 to 10^4,
which is the same as 10e-4 and 10e3.

In IDL, $a \cdot 10^b = a \text{ (float)} * 10^b$

Jean
