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Subject: Tribulations with IDL 8.1 graphics legend function and log axes

Posted by [Sean\[1\]](#) on Mon, 18 Apr 2011 20:22:06 GMT

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Hi all,

I was having a problem getting legend() to work properly with plots containing log axes. I figured out a simple workaround to get them to work, but this is a real big annoyance/bug that ITT needs to fix!

Here's a simple example to illustrate:

```
;This call to legend works fine -- it places the legend in data space
at x=5, y=5
a = plot( findgen(20)+1, name='Test 1')
b = plot( findgen(20)*2+1, name='Test 2',/overplot)
c = legend( position=[5,5], data=1)
```

```
;This call places the legend somewhere off the graph
a = plot( findgen(20)+1, name='Test 1',ylog=1)
b = plot( findgen(20)*2+1, name='Test 2',/overplot)
c = legend( position=[5,5], data=1)
```

To confirm that the legend is off the screen, print the variable c

IDL> print, c

```
LEGEND <477233>
COLOR           = 0  0  0
FONT_NAME       = 'Helvetica'
FONT_SIZE       = 12.000000
FONT_STYLE      = 0
HIDE            = 0
HORIZONTAL_ALIGNMENT = 0.0000000
HORIZONTAL_SPACING  = 0.020000000
LINESTYLE       = 0
NAME            = 'Legend'
ORIENTATION     = 0
POSITION        = 0.32750000  2.0300000
SAMPLE_WIDTH    = 0.15000000
SHADOW          = 1
TEXT_COLOR      = 0  0  0
THICK           = 1.00000
TRANSPARENCY    = 0
VERTICAL_ALIGNMENT = 1.0000000
VERTICAL_SPACING = 0.020000000
```

The position of the plot is listed in normalized coordinates, and in this case the 0.3275 number is correct and corresponds to a (x) data coordinate of 5. However, the y coordinate is way off the window.

It turns out that when you have log axes and specify position in the call to legend, IDL interprets the number you put in in log space, so rather than

```
c = legend( position=[5,5], data=1)
```

you should put in

```
c = legend( position=[5,alog10(5)], data=1)
```

Uhm... Does this not seem like an obvious bug? or am i just thick?

Sean Davis

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