Subject: Error bars in ln-space with PLOTERROR
Posted by willettk on Tue, 04 Sep 2007 01:09:06 GMT
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This is less an IDL question than a mathy one, but I've been banging my head on it for a while without a solution - thank god for newsgroups. I want to use PLOTERROR to give me a scatter plot in lin-log space, with error bars in the y-direction. The quantities I want to plot are x vs. ln(y), so I can't use the /ylog keyword (since that gives me base10 logarithms, which I don't want). I can't figure out, however, how to do proper error bars.

Here's an example:

```
;;;;;
pro ll_plot

x = indgen(10)
y = indgen(10)
y_err = 1d-2 * indgen(10)

ploterror, x, ln(y), ln(y_err)

end
;;;;;
```

In this case, PLOTERROR is plotting the y-values as ln(y) +/- ln(y_err), while I want it to plot ln(y +/- y_err). Using the above code gives error bars that are orders of magnitude larger than the true error (the problem actually gets worse with smaller error bars). Does anyone know of how to make PLOTERROR behave when plotting natural logs with error bars (or some blindingly obvious thing that I'm doing wrong)?

Many thanks.