Subject: Re: Correlation on log-log? -or- Easy way of removing 0's?
Posted by Craig Markwardt on Fri, 26 May 2000 07:00:00 GMT
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Simon de Vet <simon@mathstat.dal.ca> writes:

> I have been creating scatter plots on a log-log graph, and they look
> pretty good.
>
> However, I'd like some more accuracy than saying "pretty good". I tried
> to use CORRELATE, and got some fairly reasonable values. However, since
> CORRELATE is working with the pure data, scatters that look good on the
> log-log plot can give some pretty horrendous correlation coefficients.
>
> Therefore, I thought I'd try doing a correlation of the log the data, to
> get a better impression of what I'm seeing. Of the five data sets, 2
> gave better correlations, one got worse, and 2 gave me NaN's.
>
> I think that this may be because some of the values are 0, and this
> makes my computer explode (metaphorically speaking, of course). Is there
> an easy way of fixing this problem without loops? Could there be another
> cause of my problem?

This is a classic case of using WHERE to filter your data.

```
wh = where(x GT 0 AND y GT 0, ct)
if ct EQ 0 then message, 'ERROR: there are no valid points'

x1 = x(wh)
y1 = y(wh)

plot, x1, y1, /xlog, /ylog, ...
correlate, x1, y1, ...
etc.
```

Craig

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