Subject: Re: IDL - EXP fitting function
Posted by Vince Hradil on Fri, 27 Mar 2009 13:38:08 GMT
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On Mar 27, 8:27 am, Paolo <pgri...@gmail.com> wrote:
> Vince Hradil wrote:
>> On Mar 26, 5:55 pm, Christopher Thom <ct...@oddjob.uchicago.edu>
>> wrote:
>>> Quoth glen_a...@hotmail.com:
>
>>>> On Mar 26, 5:12 pm, David Fanning <n...@dfanning.com> wrote:
>>>> > glen_a...@hotmail.com writes:
>>>> > > Greetings everyone! My first post! I have some data x, y, that i would
>>>> > > like to fit to a fitting function of the kind yfit = EXP(a+ b*x).
>>>> > > where a and b are constants which i would like found. Any ideas on how
>>>> > > to do this?
>
>>>> > ab = LinFit(x, y)
>>>> > a = ab[0]
>>>> > b = ab[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.")
>
>>>> Thanks for getting back to me David,
>
>>>> Does the linfit function work when i would like my data to be fitted to
>>>> an EXP(a + bx) function? I didn't think that a linear function would be
>>>> correct when considering the EXP? Or am i getting confused going from
>>>> real space to log space!
>
>>> No, linfit() fits a linear model of the form y = A + B*x, so it will not
>>> "just work". why don't you just fit a linear model in logspace?
>
>>> res = linfit(x, alog(yfit))
>>> a = res[0]
>>> b = res[1]
>
>>> cheers
>>> chris
>
>> I'll second that. This is really a linear problem, so no need to

>> solve the non-linear equation.
>
> I disagree. If you have negative measurements, or positive
> but very small measurements, you will get bad results.
> Also the result will not be the least-squares best fit.
>
> Ciao,
> Paolo

It can still be fit as a linear system - just weight the residuals by
the measured values, like this: http://mathworld.wolfram.com/LeastSquaresFittingExponential.
html
