Subject: Re: IDL - EXP fitting function
Posted by pgrigis on Fri, 27 Mar 2009 13:50:53 GMT
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Vince Hradil wrote:
> 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

Interesting... but I still do not see how they handle negative
values...

Ciao,
Paolo
