Subject: Re: Question about CURVEFIT function Posted by Paul Van Delst[1] on Thu, 29 Aug 2013 14:48:43 GMT View Forum Message <> Reply to Message

BTW, I would use MPFIT rather than CURVEFIT:

http://www.physics.wisc.edu/~craigm/idl/fitting.html

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On 08/29/13 10:45, Paul van Delst wrote:
> Here's a place to start:
> http://en.wikipedia.org/wiki/Non-linear least squares
>
> IDL docs tell me CURVEFIT uses a gradient expansion method. Directly
 from the docs:
   PROCEDURE:
>
       Copied from "CURFIT", least squares fit to a non-linear
>
       function, pages 237-239, Bevington, Data Reduction and Error
>
       Analysis for the Physical Sciences. This is adapted from:
>
     Marquardt, "An Algorithm for Least-Squares Estimation of
>
        Nonlinear Parameters", J. Soc. Ind. Appl. Math., Vol 11,
>
       no. 2, pp. 431-441, June, 1963.
>
>
       "This method is the Gradient-expansion algorithm which
>
       combines the best features of the gradient search with
>
       the method of linearizing the fitting function."
>
>
       Iterations are performed until the chi square changes by
>
       only TOL or until ITMAX iterations have been performed.
>
       The initial guess of the parameter values should be
>
       as close to the actual values as possible or the solution
>
       may not converge.
>
> On 08/29/13 09:14, fd_luni@mail.com wrote:
>> Hi all
>>
>> I have some questions about the CURVEFIT function. I didn't use any
>> programming language before and there are some things in this
>> function that I don't understand.
>> The keyword TOL which corresponds to tolerance what actually do in
>> the algorithm?
>>
>> When you specifies the number of iterations what does this means?
>> What is the role of this keyword?
>>
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- >> Finally, the CURVEFIT function how does it works? For instance, It
- >> uses the derivatives of the points?

>>

>> Many Thanks Mar

>>