Subject: Re: scattering data with MPFITFUN
Posted by Nafiseh Masoumzadeh on Sat, 22 Jun 2013 21:37:08 GMT
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On Thursday, June 20, 2013 9:00:33 PM UTC+2, Craig Markwardt wrote:
> On Thursday, June 20, 2013 4:23:27 AM UTC-4, Nafiseh Masoumzadeh wrote:
>
>> On Thursday, June 20, 2013 5:51:16 AM UTC+2, Craig Markwardt wrote:
>
>>> On Wednesday, June 19, 2013 6:49:43 PM UTC-4, Nafiseh Masoumzadeh wrote:
>
>>>
>
>>>> Hello,
>
>>>>
>
>>>> I have some data which I simply want to fit p[0]*x^P[1] on them, But
>
>>>> I don't know I am receiving very far results!
>
>>>> I am using mpfitfun like this:
>
>>>> start=[0.001, 0.1]
>
>>>> results=MPFITFUN('MYFUNCTION', x, y, err, start)
>
>>>>
>
>>>> I applied this function and points in MATLAB (fitting toolbox) , and I had reasonable coefficients .
>
>>> MPFITFUN can solve problems like this.
>
>>>
>
>>> What happens when you say,
>
>>> YMODEL = MYFUNCTION(X, START)
>
>>> Do you get sensible values for YMODEL?
>
>>> You should also be checking the STATUS and ERRMSG keywords to see if there is a more informative error message.
>
>>
>
>> yes, I got reasonable result from YMODEL. and for STATUS I got 6 and I don't have any

ERRMSG. I checked in MPFIT script that 6 for STATUS means
>
>>
>
>> FTOL is too small. no further reduction in
>
>> ;   the sum of squares is possible.
>
>>
>
>> but I cannot figure out what is the problem?
>
>
>
> STATUS=6 is not necessarily a good or bad thing. It usually means that a best fit was achieved.
>
>
>
> So let's assume the results of the IDL fit are RESULTS_IDL and the results from your Matlab fit are RESULTS_MATLAB. You can then compute the chi-square value for each.
>
>
>
>   CHI_START = TOTAL((MYFUNCTION(X, START) - Y)^2 / ERROR^2)
>
>
>
>   CHI_IDL = TOTAL((MYFUNCTION(X, RESULTS_IDL) - Y)^2 / ERROR^2)
>
>
>
>   CHI_MATLAB = TOTAL((MYFUNCTION(X, RESULTS_MATLAB) - Y)^2 / ERROR^2)
>
>
>
> How different are these three values?
>
>
>
> Craig

Hello,

sorry for delay,

I don't know how to calculate error for each case, but here is the results for (sum(residuals))^2 or TOTAL((MYFUNCTION(X, START) - Y)^2 .

start

16.4292

IDl

106.596

Matlab

2.39294

I really don't know why for IDL is far from what should be. I think here I cannot attached any figures since in figure it is clear that how much the result from IDL is different from my data points!

I'd appreciate your help,

best regards,
Nafiseh
