
Subject: mpfit with asymmetric errors?

Posted by [dg86](#) on Wed, 26 Feb 2014 14:29:01 GMT

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Dear Folks,

Does anyone have experience using mpfit to fit experimental data with asymmetric error bars? My understanding is that the ERR parameter represents symmetric 1 sigma errors. Is there a straightforward way to account for the asymmetric case?

Many thanks,

David

Subject: Re: mpfit with asymmetric errors?

Posted by [Craig Markwardt](#) on Wed, 26 Feb 2014 22:44:12 GMT

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On Wednesday, February 26, 2014 9:29:01 AM UTC-5, David Grier wrote:

>

> Does anyone have experience using mpfit to fit experimental data with
> asymmetric error bars? My understanding is that the ERR parameter
> represents symmetric 1 sigma errors. Is there a straightforward way to
> account for the asymmetric case?

It can be done. You have to use MPFIT() instead of MPFITFUN(). With MPFIT you return the normalized residuals, so you can normalize them in any way you wish. In your user function, you would normalize the positive residuals by the "positive sigma" and the negative residuals by the "negative sigma." You can use the standard FUNCTARGS approach to pass these values into your user function.

Happy fitting,
Craig Markwardt

Subject: Re: mpfit with asymmetric errors?

Posted by [dg86](#) on Thu, 27 Feb 2014 00:22:46 GMT

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On Wednesday, February 26, 2014 5:44:12 PM UTC-5, Craig Markwardt wrote:

> On Wednesday, February 26, 2014 9:29:01 AM UTC-5, David Grier wrote:

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>>

>

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your user function.
>
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>
> Happy fitting,
>
> Craig Markwardt

Well, that's just outstanding. Thanks very much indeed.

TTFN,

David
