Subject: MPFIT .TIED
Posted by wouter.schellekens on Tue, 10 Nov 2015 15:08:11 GMT
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Dear All,

I'm using MPFITFUN to find Gaussian shapes among some datasets. Mostly I'm interested in 2D Gaussian shapes (i.e. having a sigma-x and sigma-y). Additionally, I would like to tie both Gaussian sigma parameters to eachother in the sense that sigma-x cannot be bigger than e.g. 5*sigma-y, and vice versa as well (e.g. sigma-y cannot be bigger than 5*sigma-x).

As I understand I can tie one parameter to another by specifing the parinfo[X].tied. The examples show how I can set one parameter equal to another. However, I have not been successfull in specifing a tied relation that covers a certain range (.2*Sx < Sy <= Sx < 5*Sy). Is this even possible?

Thanks in advance!
Cheers,

Wouter

Subject: Re: MPFIT .TIED
Posted by Dick Jackson on Tue, 10 Nov 2015 15:49:15 GMT
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On Tuesday, 10 November 2015 07:08:15 UTC-8, wouter.sc...@gmail.com wrote:
> Dear All,
>
> I'm using MPFITFUN to find Gaussian shapes among some datasets. Mostly I'm interested in 2D Gaussian shapes (i.e. having a sigma-x and sigma-y). Additionally, I would like to tie both Gaussian sigma parameters to eachother in the sense that sigma-x cannot be bigger than e.g. 5*sigma-y, and vice versa as well (e.g. sigma-y cannot be bigger than 5*sigma-x).
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>
> Thanks in advance!
> Cheers,
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> Wouter

Hi Wouter,

I think what will work is to have one of the two (say, Sx) be a regular parameter, and have a "ratio" parameter (say, SyOverSx) that might start at 1.0 and be limited (using parinfo.limits and

parinfo.limited) to [0.2, 5.0]. Then in your function, compute Sy as (Sx * SyOverSx) and use that. Sy and Sx will always stay within the relative range you're looking for.

I know this was brief, but does it give you enough to go on?

Cheers,
-Dick

Dick Jackson Software Consulting Inc.
Victoria, BC, Canada --- http://www.d-jackson.com

Subject: Re: MPFIT .TIED
Posted by Craig Markwardt on Thu, 12 Nov 2015 19:08:53 GMT
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On Tuesday, November 10, 2015 at 10:49:18 AM UTC-5, Dick Jackson wrote:
> On Tuesday, 10 November 2015 07:08:15 UTC-8, wouter.sc...@gmail.com wrote:
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>
> I know this was brief, but does it give you enough to go on?

Yes, this is the right approach!

Subject: Re: MPFIT .TIED
Posted by wouter.schellekens on Sat, 14 Nov 2015 19:20:53 GMT
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On Tuesday, November 10, 2015 at 4:49:18 PM UTC+1, Dick Jackson wrote:
> On Tuesday, 10 November 2015 07:08:15 UTC-8, wouter.sc...@gmail.com wrote:
>> Dear All,
>>
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> I know this was brief, but does it give you enough to go on?
>
> Cheers,
> -Dick
>
> Dick Jackson Software Consulting Inc.
> Victoria, BC, Canada --- http://www.d-jackson.com

Yes indeed, that worked like a charm!
Thanks!

Wouter