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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,

>>

>> 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 each other 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 specifying the parinfo[X].tied. The examples show how I can set one parameter equal to another. However, I have not been successful in specifying a tied relation that covers a certain range ( $.2*S_x < S_y \leq S_x < 5*S_y$ ). Is this even possible?

>>

>> Thanks in advance!

>> Cheers,

>>

>> Wouter

>

> Hi Wouter,

>

> I think what will work is to have one of the two (say,  $S_x$ ) be a regular parameter, and have a "ratio" parameter (say,  $S_{yOverSx}$ ) 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  $S_y$  as  $(S_x * S_{yOverSx})$  and use that.  $S_y$  and  $S_x$  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>

Yes indeed, that worked like a charm!

Thanks!

Wouter

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