
Subject: Re: MPFITFUN

Posted by [James Kuyper](#) on Fri, 27 Oct 2006 18:20:04 GMT

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nolan.smith1@gmail.com wrote:

- > Hello,
- >
- > I have a little problem with mpfitfun.pro and I was wondering if anyone
- > has any suggestions
- > on how to solve it. I am using mpfitfun to perform a fit in a function
- > that is the sum of 2 exponentials
- > and a quadratic. The fit works very good but the result is giving me
- > some negative values Y values
- > which physically do not make sense (the numbers on Y are numbers per
- > bin so they are positive).
- > The negative values are only 3 (out of the 50 bins) and they never go
- > lower than -1, so they do not go very low. Is there any way to limit
- > the Y to be positive (like we do with the parameters?).

The simplest approach is simply to treat fitted values less than 0 as if they were 0.

A more complicated approach would be to parameterize your model in such a way that it's easy to impose non-negative results as a constraint on model parameters. For instance, instead of using $a*x^2+b*x+c$ for the quadratic part of your model, use $a*(x-b)^2+c$, so that non-negativity can be imposed by the requirements that "a GE 0 and c GE 0".
