
Subject: Re: MPFITFUN AND PARINFO

Posted by [Craig Markwardt](#) on Wed, 17 May 2006 21:56:17 GMT

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JJMeyers2@gmail.com writes:

> Hello,
>
> I am trying to use MPFITFUN to fit the sum of 2 Gaussians to my data. I
> need both of the Gaussians to give curves with positive numbers because
> a negative value will not make physical sense. When I run the MPFITFUN
> it gives me 1 Gaussian that has all positive values and one Gaussian
> that some values are negative. I tried to use PARINFO to constrain the
> values for the second Gaussian but I think I am using it wrong.
> Here is what I did:
>
> guess_2g=[0.70,0.11,0.3,0.13,532.,1.]
>
> parinfo(5).limited(0)=1.
> parinfo(5).limits(0)=0.
>
> fit=mpfitfun('twogauss',X,Y,1,guess_2g,PARINFO=parinfo)
>
> and the error message i receive is:
> % Expression must be a structure in this context: PARINFO.
> % Execution halted at: fit.pro

Please note carefully that error occurred in your script and not MPFITFUN. You don't say where, but I assume it crashed at the point where you try to assign to PARINFO.

You have to create the PARINFO structure before you can fill it.
Perhaps the easiest way to do this is

```
parinfo = replicate({fixed:0, limited:[0,0], limits:[0.D,0.D]},NPAR)
```

There are other PARINFO fields you can include if you want, but these are pretty common. Put this statement before you try to assign to PARINFO. You don't have to put a VALUE field if you don't want to, in which case your GUESS_2G initial values will be used.

You should take some care about constraining all your amplitudes to be positive. I can point to examples in the past where people did that, then tried to average the amplitudes and came out with a highly biased answer.

Happy fitting!
Craig

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