Subject: Re: constraining parameters in multi-Gaussian 1D fitting
Posted by Craig Markwardt on Tue, 06 Sep 2005 02:35:15 GMT
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JD Smith <jdsmith@as.arizona.edu> writes:
> On Mon, 05 Sep 2005 12:07:42 -0500, Craig Markwardt wrote:
>
>>
>> "Jess" <jobrien@mso.anu.edu.au> writes:
>>> One constraint I am unable yet to do is: I = would like to be able to
>>> tie the peak flux of the Gaussians such that the peak flux of last
>>> Gaussian is always greater than that of the first Gaussian.
>>> I tried using
>>> parinfo((n_gauss-1)*3).tied = 'GT P[0]'
>>>
>>> However the tied structure of parinfo doesn't seem to be meant to
>>> accept operators like GT,LT, etc. ...
>>
>> True. MPFIT's TIED fields are limited to equality constraints only.
>
> What if you availed yourself of the ITERPROC procedure to enforce the
> constraint, dragging the fitter (kicking and screaming if necessary)
> back into line if it attempts to step out? Any reason this wouldn't
> work?

It might work, it might not. I suspect that in general the fitter might get stuck. For example, if we *started* out by thinking the tallest peak was on the left part of the curve - and made a model function to match that - but the truth is that a peak on the right is truly he tallest, then we can enforce all the constraints in the world and won't come out with the best fit.

Now, with the additional info that the original poster provided, this will probably not be the case, so s/he might be alright.

Craig

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