Subject: Re: How to speed up or remove this FOR loop
Posted by johan[1] on Wed, 26 Jan 2011 00:12:49 GMT
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On Jan 21, 4:02 pm, wlandsman <wlands...@gmail.com> wrote:
> On Friday, January 14, 2011 4:00:25 AM UTC-5, johan wrote:
>> I do have 768 profiles, each 24 pixels long, each to whom I want to
>> fit a Gaussain and getting the mean and SD. I am using the following
>> FOR loop calling mpfitexpr. It works fine but it takes forever to
>> complete!
>
>> expr = 'P[0] + GAUSS1(X, P[1:3])'
>
>> t = indgen(24)
>> start = [20.D, 10, 2., 1000.]
>
>> for i=0,(size(profiles,/dim))[1]-1 do begin
>> r = profiles[*,i]
>> result = mpfitexpr(expr, t, r, 1, start, /QUIET)
>> endfor
>
> Before I had suggested using MPFITFUN instead of MPFITEXPR, which should provide a modest speedup since one doesn't need an indirect function evaluation. Now I am going to suggest not to use the MPFIT* routines at all, but to instead use the ITTVIS supplied GAUSSFIT(). The MPFIT* routines are more robust, with more checking for overflows, NANs and more user diagnostics, but for simple Gaussian fits the overhead for GAUSSFIT() is *much* lower. (A factor of 4 speedup is possible.) --Wayne

I did end up using the native Gaussfit and it works fine and fast. It
is a lot of fitting but it as you said, simple fits. Thanks!