Subject: Re: Help: Weighted quadratic fitting under IDL?
Posted by Martin Schultz on Wed, 15 Mar 2000 08:00:00 GMT
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There is only one answer: MPFIT

Grab it from http://cow.physics.wisc.edu/~craigm/idl/

Cheers,
Martin

"Brad K. Gibson" wrote:
>
> This may be a highly trivial question, but it's one I'm having problems
> dealing with under IDL. Perhaps I"m simply missing something obvious ..
> regardless, I'd be indebted if someone could help me out. Heck, I'll even
> throw in a nice acknowledgement in my next paper, if someone could point me to
> a simple solution, or provide the requisite few lines of code!
>
> Anyways ... here it is ... the equation of interest is of the form:
>
>   Vmax - 5*log(v) = a + b^2 + c
>
> I have a data file with Vmax, v, and m15 for a set of objects (about 40 of
> them), with uncertainties on each value.
> Having read those entries in, what I want to do is fit the above
> functional form, deriving a, b, and c, as well as their associated
> uncertainties (i.e. a +/- sig(a), b +/- sig(b), and c+/-sig(c)), and the final
> dispersion (and maybe reduced chi-squared) of the best fit quadratic.
>
> Now .. I can see various routines which get me part-way there, but they either
> only provide a,b, and c without uncertainties, or only provide the
> uncertainties for a linear fit (e.g. fitexy). Basically what I'd like is a
> quadratic version of fitexy (i.e., sigmas on all returned coefficients+
> dispersion of fit+reduced chi-square).
>
> Obviously there is a nice way to do this without doing Monte Carlo
> simulations, but anyone who could save me a few
> hours of hacking code would become my instant hero(ine). Anyone?
>
> Cheers,
>   Brad
>
> --
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