Subject: Re: Explanation for keywords of POLY_FIT?
Posted by Jeremy Bailin on Thu, 30 Oct 2008 11:48:53 GMT
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>> If your data points are X, Y and the fit is X, YFIT, then YERROR =
>> stddev(Y - YFIT).
>
> That is not correct (as I found out now), but you gave me the hint for
> finding the correct answer!
>
> YERROR is the "Root Mean Squared Error" aka the "fit standard error".
> Dr. Google gives the definition. ;)

Aha! Yeah, that makes more sense anyways.

>> MEASUREMENT_ERROR only influences these via changes to YFIT, but the
>> form is complicated and depends on the degree of the polynomial... if
>> you need the detailed expression, I'd just follow the NR derivation
>> for linear least squares fit with whatever degree polynomial you need.
>
> I assume that this is "weighted linear least squares", when using
> MEASUREMENT_ERROR.

Yup, that should be right. Some of the fitting procedures
alternatively let you use a WEIGHT keyword instead, so you can
directly weight the data points instead (depricated, since it's not a
great idea, but can be convenient to explicitly set some to zero), but
it looks like POLY_FIT isn't one of them.

-Jeremy.