Subject: !ERR and MPFIT
Posted by Craig Markwardt on Tue, 16 Nov 1999 08:00:00 GMT
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When I set out to translate MPFIT from MINPACK, I wanted to stay as faithful as possible, but I also wanted it to be as simple as possible. When it came to error handling, I wanted the user's model routine to be able to report an error condition.

Unfortunately I chose to use the !ERR system variable. If !ERR is set to a negative number, then MPFIT aborts the run, assuming that there was an unrecoverable error.

I now realize that using !ERR was probably a mistake. Why? RSI seems to want to make it obsolete. Through their error-handling flavor of the month program, !ERR seems to have fallen out of favor. Also, there are quite a few actions which might set !ERR accidentally in the user's function without actually signalling an error condition.

So I have two questions:

* to people who use MPFIT: does anybody actually use the !ERR status variable to control the fitting process? If not, then I would consider removing it.

* to everybody: any suggestions on how to generically signal an error condition? My thoughts were:

  - ERROR keyword variable - don't like this, since then the function has to accept keywords

  - define a new system variable - don't like this either, since it's hard to do system variables right

  - common block variable - not very pretty, but gets the job done.

To be clear, this is some kind of error flag that a user routine would (optionally!) set to signal an abnormal termination condition. Right now I am leaning toward the common-block approach. Sorry David.

Thanks,

Craig

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