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Subject: MPFIT improvements (speed)

Posted by [Craig Markwardt](#) on Mon, 14 Jun 1999 07:00:00 GMT

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Greetings--

MPFIT is a fitting program for IDL which I have been making available on my web page. For the uninitiated, MPFIT is based on the MINPACK-1 family of fortran least squares fitting routines, available at [netlib.org](http://netlib.org). Because of its heritage, MPFIT is typically much more robust (reliable) than the standard IDL fitting routines such as CURVEFIT and LMFIT.

MPFIT also has some nice features which make it easy to use in your programs. It allows you to hold any parameters fixed, and also to place simple upper and lower bounds on parameter values. You may also supply a routine which is called upon each fitting iteration, which for example may be used to update the parameter values in a widget.

MPFIT is partnered with two optional driver programs called MPFITFUN and MPFITEXPR. I especially recommend that you download MPFITFUN, since it allows you to fit simple model functions easily [ MPFIT itself is more powerful but slightly more difficult to use. ]

Gradually I am trying to make them better and faster, and I am making some of those changes available now. Please download and provide feedback to me! Changes include:

- \* ability to stop fit from the keyboard by typing Control-G (see ITERSTOP)
  - \* optimizations for speed
- (if you need even more speed, investigate using the FASTNORM keyword)

Documentation is included. The files, and a short tutorial are available from the following web page:

<http://cow.physics.wisc.edu/~craigm/idl/idl.html>

Happy fitting!

Craig

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