Subject: Updates to Markwardt Library
Posted by Craig Markwardt on Thu, 22 Dec 2011 02:38:31 GMT
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Hi Folks--

These days I don't promote my IDL library of software on the news group much any more, but seeing David put out some update notices got me motivated. I added a bunch of new routines that people might find interesting. For newer readers who don't know me very well, I specialize in the numerical and astronomical, but also in getting IDL to do interesting tricks. Here are some of the new ones:

FLORMAT - Format a string with named format variables. This is an interesting twist that brings Python-like format strings to IDL (Python calls it "variable interpolation"). The key is that you can use named variables to make your format strings more readable instead of the impenetrable gobbledygook of normal IDL format strings. [*]
http://www.physics.wisc.edu/~craigm/idl/io.html#FLORMAT

GAPNAN - Insert NANs in time series gaps to facilitate plotting. It handles the case where you want to plot a time series with gaps, but don't want to connect the dots across gaps.
http://www.physics.wisc.edu/~craigm/idl/arrays.html#GAPNAN

PXPERFECT - Get 'pixel perfect' Postscript output which matches the on-screen version. I figured out all the pixel scaling and font sizing factors so that you don't have to. If you use this routine, your Postscript output (processed by Ghostscript) should match almost pixel-for-pixel with the on-screen direct graphics version. (fingers crossed!)
http://www.physics.wisc.edu/~craigm/idl/graphics.html#PXPERF ECT

MPPROPERR - based on a user request, this routine provides a way to estimate the uncertainty in your model function values due to parameter uncertainties. Basically it answers the question of how sensitive your model is to parameter variations. (you will need to upgrade MPFIT to version 1.79 too)
http://www.physics.wisc.edu/~craigm/idl/fitting.html#MPFIT

TZOFFSET - Compute timezone offset from GMT for any date. If you've ever wanted to convert between local and UTC time values, this routine should help.
http://www.physics.wisc.edu/~craigm/idl/ephem.html#TZOFFSET

FILE_COMPILE - compiles an arbitrary procedure or function stored on disk. It deals with all the difficulties of using RESOLVE_ROUTINE, resetting your path, and catching errors, so you don't have to.

http://www.physics.wisc.edu/~craigm/idl/introspect.html#FILE _COMPILE

There are some other more minor changes. For more information, you can see here
http://www.physics.wisc.edu/~craigm/idl/news.html

Best wishes for the holiday season!
Craig Markwardt

[*] - It's hard to explain. You can click through to the documentation to read more about FLORMAT.

Subject: Re: Updates to Markwardt Library
Posted by Mark Piper on Wed, 04 Jan 2012 17:25:09 GMT
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Thanks for these routines, Craig. I especially like FILE_COMPILE, which elegantly solves the (often frustrating for me) problem of programmatically specifying a file to compile.

mp

Subject: Re: Updates to Markwardt Library
Posted by Craig Markwardt on Thu, 05 Jan 2012 03:49:22 GMT
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On Jan 4, 12:25 pm, Mark Piper <mpi...@ittvis.com> wrote:
> Thanks for these routines, Craig. I especially like FILE_COMPILE, which
> elegantly solves the (often frustrating for me) problem of
> programmatically specifying a file to compile.

My pleasure!
Craig
