Subject: Re: "Correct" Data Philosophy
Posted by Kenneth P. Bowman on Thu, 17 Dec 2009 23:03:38 GMT
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In article <MPG.2594571640f8a8219896ab@news.giganews.com>,
 David Fanning <news@dfanning.com> wrote:

> OK, here is my problem: I don't have any idea what you
> people are talking about. And neither do the folks asking
> me questions. :-(

That crux of the issue here is that this problem is *hard*,
and it is difficult to generalize from one situation to
another. Kind of like asking -- "How do I write a good IDL
program?" :-)

Experience with similar data sets is very helpful -- that is,
we learn by doing (and making mistakes and re-doing).

>
> This, in particular, is opaque to me:
>
>   If you need to do a Fourier transform, consider using
>   least-squares estimation rather than interpolating
>   and using an FFT.
>
> OK, I will, but *how*!?

This is actually quite easy. You can use REGRESS. I'll try to
write a short example that will demonstrate, among other things,
that when there is *no* missing data, least squares is exactly
equivalent to the FFT.

> Does IDL even *do* these things!? Or do I have to go learn
> Matlab?

IDL does a number of different kinds of interpolation. For the
basics you can look in my book. The chapter on interpolation
happens to be the sample chapter that is posted on my web site

  http://csrp.tamu.edu/pdf/idl/sample_chapter.pdf

Cheers, Ken