Subject: Re: chi-squared of poly_fit and polyfitw results
Posted by Craig Markwardt on Sat, 03 May 2003 03:00:02 GMT
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"Chris Boshuizen" <chrisb@newsgroup.usyd.edu.au> writes:

> Hi group,
>
> I was wondering how I relate the sigma values from these routines to a
> chi-squared value. Is it a simple statistical relation? I tried a google
> search and didn't find out how, so I hope someone can offer a suggestion.

As Sergey says, there is not a direct formulaic relation between the the "sigma" values and the chi-squared value. Generally speaking, the chi-squared statistic measures goodness of fit. The sigma values establish confidence regions for each parameter.

It is worth checking the discussions of statistics and fitting in either Numerical Recipes or Bevington to understand this better. When estimating useful confidence regions, it is common to vary parameter values until the chi-squared value changes by a set threshold. So there is indeed a connection between the those two sets of quantities, but it is usually not a formula you can write down explicitly.

Happy fitting,
Craig

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