Subject: Re: chi-squared of poly_fit and polyfitw results
Posted by Sergey Koposov on Fri, 02 May 2003 11:41:18 GMT
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Hello Chris,
In principle, chi-square is not directly related with sigma.

The function poly_fit have the keyword
CHISQ=variable, which allow to put the chi-square value of fit into the
variable.

You want the chi-squared value of parameters , or of fit?

Cheers,
 Sergey

Chris Boshuizen wrote:
> 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.
> Thanks.
>
> Best regards,
> Chris Boshuizen
>
> To reply via email, replace 'newsgroup' with 'student'.
>
>

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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Craig B. Markwardt, Ph.D.   EMAIL: craigmnet@cow.physics.wisc.edu
Astrophysics, IDL, Finance, Derivatives | Remove "net" for better response
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Subject: Re: chi-squared of poly_fit and polyfitw results
Posted by Chris Boshuizen on Mon, 05 May 2003 01:26:48 GMT
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Thank you Craig and Sergey, that all makes sense.

Thanks again,
Chris