Subject: Re: power law fit with a constant
Posted by Craig Markwardt on Thu, 10 Mar 2016 17:40:33 GMT
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On Wednesday, March 9, 2016 at 11:39:29 AM UTC-5, wlandsman wrote:
> On Tuesday, March 18, 2014 at 10:13:47 PM UTC-4, suruchi wrote:
>> Could anyone suggest me how to do the fitting of the following functions:
>>
>> 1) A + B (x^gamma) which is a power law with a constant.
>>
>> without the constant, for the power law of the form " Bx^gamma " it is easy to convert to log space and linearize the problem, that is
>> log(y)=log(B)+gamma*(log(x)).
>
> I am trying to fit a power law without the constant term to data. As noted above, and also at
> http://www.exelisvis.com/Support/HelpArticlesDetail/TabId/219/ArtMID/900/ArticleID/2813/2813.aspx
> one can convert to log space and linearize the problem. This is very nice because linear fits can be vectorized and I can do a million linear fits in one vector call.
...

Wayne, the fit is "linear" in the values, but non-linear if one considers the error bars. That would not be a large problem if the significance of the data was always large, but since you mention negative values, some of your values must be very low significance. I think you need to do a non-linear fit to capture the errors properly.

Craig