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Subject: Re: Constrained fit of a straight line: fixed intercept

Posted by [David Grier](#) on Fri, 27 Aug 2010 08:39:17 GMT

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On 8/27/10 12:36 AM, Joe Daal wrote:

> Hi,  
>  
> I am not sure how easy this problem is, but it sure gave me hell  
> today.  
> I have the following vector arrays: X, Y,& Y\_errors. There are 5  
> elements in each and they do form a nice line describes by  $Y = A + BX$ .  
> I need to fit this line with B as a free parameter and constrain A to  
> pass by the the third point.  
> So the problem narrows down to one parameter as:  $Y = (Y0 - BX0) + BX$ ,  
> whre Y0 and B0 and the third point values (i.e., X[2] and Y[2]).  
> I tried using MPFIT with the PARINFO keyword. It just didn't work.  
> Any ideas? Thanks....  
>  
> -Joe

How about:

```
pivot = 2
dy = y - y[pivot]
dx = x - x[pivot]
w = where(dx ne 0, count)
if count gt 0 then $
  B = mean(dy[w]/dx[w]) $
else $
  B = 0.
```

TTFN,

David

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