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Subject: Re: CURVEFIT for multiple datasets  
Posted by [Wox](#) on Fri, 01 Feb 2008 09:14:57 GMT  
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On Thu, 31 Jan 2008 04:55:11 -0800 (PST), chloesharrocks@gmail.com wrote:

<snip>

> How can I extend this for the case when I have say 2 data sets, ie:  
> x=[indgen(10), indgen(10)]  
> y=[[12.0, 11.0, 10.2, 9.4, 8.7, 8.1, 7.5, 6.9, 6.5, 6.1], [11.5, 10.8,  
> 10.3, 9.5, 8.6, 7.8, 7.5, 6.4, 6.4, 5.9]  
> and I want to plot an exponential curve through all of this data?

Euhm, I must be missing something here, but what's wrong with just doing it. You are trying to fit 1 curve which fits best to all datasets right? I.e. 3 parameters and not 3n parameters?

PRO CURVE\_FITTING

x=[findgen(10), findgen(10)]

y=[12.0, 11.0, 10.2, 9.4, 8.7, 8.1, 7.5, 6.9, 6.5, 6.1, 11.5, 10.8, \$  
10.3, 9.5, 8.6, 7.8, 7.5, 6.4, 6.4, 5.9]

weights=1.0/y ;Define a vector of weights

A=[10.0, -0.1, 2.0] ;Provide an initial guess of the function's parameters

yfit=CURVEFIT(x,y,weights, A, FUNCTION\_NAME='gfunct') ;Compute the parameters

print, 'Function parameters: ', A

plot, x, y, yrange=[5,13], ystyle=1, xrange=[0, 11], xstyle=1, psym=1

ind=sort(x)

oplot, x[ind], yfit[ind], linestyle=1, color=5

END;PRO CURVE\_FITTING

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