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Subject: Re: QROMB

Posted by [Craig Markwardt](#) on Tue, 15 Jun 2004 22:05:21 GMT

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Paul Van Delst <paul.vandelst@noaa.gov> writes:

> New2IDL wrote:

>> hi,

>> The function I am trying to integrate is :

>>

>>  $F(x) = a \cdot \exp(-b \cdot (x^2))$

>>

>> where: a and b are parameters

>> x ranges from 0,20

>>

>> We have experimental data to fit with the above integral (a and b as  
>> parameters to be found from fit).

>>

>> When I tried to integrate the above mentioned function with QROMB we  
>> get a single value as the answer. I cannot fit this value to my data.

>>

>> Can anybody please help me to get the  $F(x)$  value for each value of X.

>

> If you want to fit the data, why are you integrating it? Check out Craig Markwardt's IDL  
> fitting package MPFIT at

> <http://cow.physics.wisc.edu/~craigm/idl/fitting.html>

Thanks for the plug Paul, but I think the original poster wants to fit  
the integrated function, i.e., the \*antiderivative\*, to the data.

The antiderivative of the gaussian function is the error function, or  
ERF() / ERRORF() in IDL, so the answer is built into IDL already. One  
needs to take care, since there is a simple change of variables from  
the IDL function to the one that "New2IDL" wants.

And of course I recommend MPFIT for the actual fitting :-)

Craig

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Craig B. Markwardt, Ph.D. EMAIL: [craigmnet@REMOVEcow.physics.wisc.edu](mailto:craigmnet@REMOVEcow.physics.wisc.edu)  
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