
Subject: QROMB and parameters

Posted by [mikko.inkinen](#) on Thu, 13 Feb 2003 14:18:11 GMT

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I would like know what is the best way of using a function with parameters when integrating with QROMB. I tried to save parameters in procedure (SAVE,a,b,FILENAME='a_b.txt') and restore them in function (restore,'a_b.txt') where a and b are used, but this doesn't seem to work as it should.

What is the best and recommended practise to handle this quite simple thing with IDL?

Subject: Re: QROMB

Posted by [Paul Van Delst\[1\]](#) on Tue, 15 Jun 2004 15:57:34 GMT

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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>

paulv

Subject: Re: QROMB

Posted by [mmeron](#) on Tue, 15 Jun 2004 20:06:36 GMT

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In article <162586e3.0406150744.514aba92@posting.google.com>,

biomedthesis2002@yahoo.com (New2IDL) writes:

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>
> where: a and b are parameters
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>
The integral *is* a single value. Unless you mean an indefinite
integral (say, from 0 to x, for various values of x). Is this the
case?

Mati Meron | "When you argue with a fool,
meron@cars.uchicago.edu | chances are he is doing just the same"

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:
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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
Astrophysics, IDL, Finance, Derivatives | Remove "net" for better response
