Subject: Re: gaussfit question
Posted by mirko[1] on Mon, 01 Nov 1999 08:00:00 GMT
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David Fanning wrote:

> Why don't you continue on a bit and see if you
> get the result you expect.

Yes I did. I have the feeling it was more or less my fault.
From my data it is clear that the centre of the gaussian should be somewhere in the middle between 0 an 36 which is not the case here for a[1].
Doing an 'oplot, x,yfit' gives a nice fit but not the right solution to the problem (fitting a gaussian).

```
IDL> y=[52.0,52.7,56.0,60.9,65.40,71.40, 75.20,
 80.80,86.1,89.8,88.3,94.8,94.9,100.5,100.1,103.9,105.3,106.2 ,107.3,
108.2,106.1,105.7,107.8,102.2,
101.3,97.2,92.1,87.4,87.0,82.5,77.4,69.9,67.7, 62.1, 58.9, 53.4,53.8]
IDL> x=findgen(37)
IDL> yfit=gaussfit(x,y,a)
% Program caused arithmetic error: Floating underflow
IDL> print,a
     -92.8950      38.7370      9.73786      48.4928
   4.97301   -0.0657729
```

Using the estimates keyword and removing the linear and quadratic term results in the proper solution.

```
IDL> yfit=gaussfit(x,y,a, nterms=4,estimates=[90.0,20.0,10.0,10.0])
IDL> print,a
      96.7115      18.2423      13.4573      10.8630
```

without ESTIMATES the starting values for the fit seem not close enough

```
IDL> yfit=gaussfit(x,y,a, nterms=4)
% Program caused arithmetic error: Floating underflow
IDL> print,a
     -35.3286      35.3296      3.44060      89.3350
```

Therefore I think I have to supply estimates to GAUSS2DFIT() in the case I like to fit an surface
because this routine uses GAUSSFIT().

Thanks for the help

Mirko