
Subject: GAUSS2DFIT - TILT ?

Posted by [Zeschke](#) on Mon, 11 Dec 2000 13:45:55 GMT

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Why does the following example not work correctly ?

This program use the "GAUSS2DFIT.PRO" - Routine. The "Tilt"-Parameter-Fit does not work.

What can I do ?

Thanks for any help

Thomas

```
*****
```

```
,  
loadct,39
```

```
; Define array dimensions.
```

```
nx = 128 & ny = 128
```

```
; Define input function parameters.
```

```
A = [ 5., 100., nx/8., ny/20., nx/2., .6*ny]
```

```
; Create X and Y arrays.
```

```
X = FINDGEN(nx) # REPLICATE(1.0, ny)
```

```
Y = REPLICATE(1.0, nx) # FINDGEN(ny)
```

```
;Tilt
```

```
T=1.
```

```
h=A[4]
```

```
k=A[5]
```

```
x1 = (x - h) * cos(T) - (y - k) * sin(T)
```

```
y1 = (x - h) * sin(T) + (y - k) * cos(T)
```

```
U = (X1/A[2])^2 + (Y1/A[3])^2; Create an ellipse.
```

```
xvec=x[,0]
```

```
yvec=y[0,]
```

```
yvec=transpose(yvec)
```

```
Z = A[0] + A[1] * EXP(-U/2) ; Create gaussian Z.
```

```
Z = Z + RANDOMN(seed, nx, ny) ; Add random noise, SD = 1.
```

```
yfit = GAUSS2DFIT(Z,B,xvec,yvec, /tilt) ; Fit the function with rotation.
```

```
PRINT, '      constant scale width_x width_y center_x center_y tilt'
```

```
PRINT, 'Should:', STRING(A,T, FORMAT='(6f8.3)')
```

```
PRINT, 'Is:   ', STRING(B(0:6), FORMAT='(6f8.3)')
```

```
contour,z,x,y,/fill,nlevels=30
```

contour,yfit,x,y,/noerase

·*****
;
