Subject: help with curve fitting
Posted by paulartcoelho on Sat, 03 Aug 2013 23:29:47 GMT
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hello,

i'm trying to use idl to fit (x,y) data using MPFIT by C. Markwardt. This is my first time doing curve fitting with IDL. I need to fit an exponential function of the form:

y = p[0]*(p[1]^(x/p[2]))+p[3]

which I empirically found to be a good fit to the data (by eye, plotting the data and overploting the function with some parameter guesses). By eye as well I sorted out good first guesses (don't know if i can attach a picture here). Nevertheless, I can't make it fit:

```
IDL> print,expr
P[0]*(p[1]^(x/p[2]))+p[3]
IDL> print,start
      4.00000    -0.870000      180.000      1.00000
IDL> result=mpfitexpr(expr,l,f,1,start)
Iter      1   CHI-SQUARE =               -NaN
    P(0) =            4.00000
    P(1) =           -0.870000
    P(2) =            180.000
    P(3) =            1.00000
% MPFITEXPR: ERROR: parameter or function value(s) have become infinite; check model
function for
           over- and underflow
% Program caused arithmetic error: Floating illegal operand
```

Could someone point me out in the direction to solve this? Plotting the function with the same parameters and datasets do not generate any under- overflow error.

many thx
paula

Subject: Re: help with curve fitting
Posted by paulartcoelho on Tue, 06 Aug 2013 01:02:10 GMT
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never mind, the initial parameters were producing complex numbers.

it should have been
start=[-4.,0.87,180.,1.].

i wonder how IDL plots complex numbers without complaining... :)

p.