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

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