Subject: Re: Help with least squares on non-linear function
Posted by Heinz Stege on Sun, 25 Aug 2013 12:40:42 GMT
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On Sat, 24 Aug 2013 14:53:39 -0700 (PDT), Phillip Bitzer wrote:

> Yep, that was the next piece of advice :-) MPFIT is highly recommended....

I would say, this is a linear function. Here is a way how to calculate
the fit parameters.

Put your x, k and y values into the arrays
```
  x=dblarr(npoints)
  k=dblarr(npoints)
  y=dblarr(npoints)
```

With npars=3, create the matrix
```
  fx=dblarr(npoints,npars)
  for i=1,npars do fx[0,i-1]=((1+k)^i-k^i)*x^i
```

and do the calculation
```
  temp=transpose(fx)
  a=temp#fx
  b=temp#y
  ludc,a,indx
  par=lusol(a,indx,b)
```

par is an array with npars elements and should contain the fit
parameters named by a_i within your function.

I hope, that there is no error in this code. I couldn't test it,
because I have no example values for x, k and y.

Cheers, Heinz