
Subject: Problems getting CURVEFIT to work

Posted by [Jonathan Greenberg](#) on Tue, 12 Nov 2002 23:24:35 GMT

[View Forum Message](#) <> [Reply to Message](#)

Hi there, I'm trying to use CURVEFIT to fit data to a decay function of the form:

$$f(x) = a(1-e^{(bx)})+c$$

My code is as follows:

```
pro decayfunc, X,A,F,pder
bx=EXP(A[1]*X)
F=A[0]*(1-bx)+A[2]
if N_PARAMS() GE 4 THEN $
pder=[[1-bx],[-A[0]*X*bx],[replicate(1.0,N_ELEMENTS(X))]]
end

X=[30185.0,33897.0,35089.0,35377.0,35665.0]
Y=[0.3002,1.3849,1.3004,1.226,1.3118]
A=[1.25,-1.0,-0.1]
weight=[1.0,1.0,1.0,1.0,1.0]
yfit=CURVEFIT[X,Y,weights,A,SIGMA,FUNCTION_NAME='decayfunc', /DOUBLE]
```

I get the error:

CURVEFIT: Failed to converge- CHISQ increasing without bound.

and the SIGMA values are:

.44721360,Infinity,.44721360

The plot of the data looks like it should fit a decay equation, but CURVEFIT can't seem to determine the parameters. I've tried a number of different starting values for A to no avail. Any suggestions?

--j

--

Jonathan Greenberg

Graduate Group in Ecology, U.C. Davis

<http://www.cstars.ucdavis.edu/~jongreen>

<http://www.cstars.ucdavis.edu>

AIM: jgrn307 or jgrn3007

MSN: jgrn307@msn.com or jgrn3007@msn.com
