Subject: mpfit of parametric data?
Posted by jamiesmyth_uni@yahoo. on Wed, 28 Jul 2004 15:45:08 GMT
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I suppose this is really a question for Craig but I figure here is as good a place to ask as any... Does anyone know how I can go about fitting parametric data using MPFIT? I have done a fair bit of 1d fitting with mpfit (MPFITEXPR) but I'm really stumped on this one. I want to fit to the following parametric parameterisation:

x = (a0+a1*t) + sin(a2*t+phase)
y = (b0+b1*t) + cos(b2*t+phase)

where, a0, a1, a3, b0, b1, b2 and phase are all fit parameters.

The intention is to try and fit the motion of a spinning top that precesses. I have very long running (but noisy) time series data for the x and y values. Alternatively, you can think of me having x(t) and y(t) sampled at identical times. I am mainly interested in the phase parameter.

This is proving considerably more difficult than I expected it to be!
Thanks.
Jamie