Subject: Challenging question - array curve fitting
Posted by Qing on Tue, 27 Mar 2007 08:37:38 GMT
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G'day folks,

I have a time series of images represented by a 3D array as Data(Nx, Ny, Nt) or Data (Nt, Nx, Ny). I would like to apply a non-linear curve fitting to the time dimension for every pixel respectively. I can loop through every pixel using 1-D curve fitting procedure, but the process is slow and it does not make efficient use of multiple CPUs.

Theoretically I would think it should be feasible to perform curve fitting for all pixels simultaneously via matrix operation? However, all the IDL's fitting routines only accept vectors for input parameters to my knowledge. Does anyone know if there is any non-linear fitting routines that accept array parameters. Or can anyone comment on whether such a routine is feasible at all?

Qing ;-?