Subject: Re: MPFIT2DFUN- use for a time series of images?
Posted by Allard de Wit on Fri, 11 Mar 2011 12:49:56 GMT
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On Mar 10, 9:01 pm, Katie <kmwhite21...@gmail.com> wrote:
> I want to fit pixel values to a logistic model that each have X, Y
> coordinates and a day of the year value associated with them. I see
> from the MPFIT2DFUN documentation how to define X, Y for a each Z
> dependent value and the dependent error value, but can a third
> variable (day of the year in this case) be defined in order to fit a
> curve in MPFIT2DFUN? I currently have each each date as a separate
> band in a stacked image file that I exported as an ASCII file. I want
> to determine the day of the year that the pixel values (vegetation
> indices) reach a value on the the curve.
>
> Any suggestions, or perhaps I am not understanding the MPFIT2DFUN
> correctly (I am very new to IDL)?

Katie,

You will need to iterate over the rows and columns of your image and
fit
the logistic model to the time-series at each row/column value.
Indeed, MPFITFUN is one of the tools to do that.

A couple of years ago I implemented this approach for use with the
GIMMS
dataset. In fact it uses a double logistic model to model the NDVI
time-series. My implementation does not include a variable day-of-year
(just regular time-steps) but this is a trivial extension. It also
uses IDLs native Curve_Fit routine rather then MPFITFUN, although the
latter is better.

If you're interested I can send you a copy of that code.

Allard