Subject: MPFIT2DFUN- use for a time series of images?
Posted by Katie[1] on Thu, 10 Mar 2011 20:01:14 GMT
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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)?

Subject: Re: MPFIT2DFUN- use for a time series of images?
Posted by rajen.water on Fri, 14 Feb 2014 19:47:33 GMT
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On Thursday, March 10, 2011 3:01:14 PM UTC-5, Katie 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
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> 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)?

Hi Katie,
Were you able to solve your problem? I do have the similar problem now.

Best,
Rajendra

Subject: Re: MPFIT2DFUN- use for a time series of images?
Posted by Craig Markwardt on Sat, 15 Feb 2014 05:56:38 GMT
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On Friday, February 14, 2014 2:47:33 PM UTC-5, rajen...@gmail.com wrote:
> On Thursday, March 10, 2011 3:01:14 PM UTC-5, Katie wrote:
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> Were you able to solve your problem? I do have the similar problem now.

The easiest way to solve Katie's problem is to use the FUNCTARGS option. For example, if DOY is day of year,

```
pp = mpfit2dfun(myfunct, x, y, z, err, pp0, functargs={doy: doy})
```

and then MYFUNCT needs to accept the DOY keyword,

```
function myfunct, x, y, p, doy=doy
  ;; calculate function based on x, y and doy
  return, f
end
```

Another way is described here,
http://www.physics.wisc.edu/~craigm/idl/fitqa.html#multivar

Basically MPFIT doesn't care how many independent your function has. That is ancillary information that only you need to know. All you need to do is find a way to get that data into your user function.

Craig