Subject: Re: MPFITFUN error -- only reading the first data value
Posted by   on Thu, 09 Apr 2015 09:32:54 GMT
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Den torsdag 9 april 2015 kl. 10:28:30 UTC+2 skrev graham kerr:
> On Wednesday, April 8, 2015 at 11:55:44 PM UTC+1, Craig Markwardt wrote:
>> On Thursday, April 2, 2015 at 6:02:07 AM UTC-4, graham kerr wrote:
>>> So after much staring at code I think I have found my (somewhat daft) mistake!
>>>
>>> I think that in mpfitfun (and mpfit & mpfitexpr), the function that you specify ('myfunction')
must have the independent variable set as 'x' and the dependent variable set as 'p'.
>>>
>>> So, in my case, in planck_fit_sot, I changed the function call from
>>>
>>> planck_fit_sot, wave, temp
>>>
>>> to
>>>
>>> planck_fit_sot, x, p
>>>
>>> ... and then within the code I changed all the 'wave' to 'x' and 'temp' to 'p[0]'.
>>>
>>> This seems to have solved my problem.
>>
>> Huh? Nope.
>>
>> For MPFITFUN, it doesn't matter what you name the parameters, it's just that the first
parameter needs to be the independent variable, and the second parameter needs to be the array
function parameters. This is documented at the top of MPFITFUN.PRO
>>
>> For MPFITEXPR, yes indeed, the independent variable in the expression needs to be X and
the parameter array needs to be P. This is also documented.
>>
>> Craig
>
> Oh, that seemed to fix my problem, somehow. Do you know what the issue might have been
then?

Maybe this: "I changed all the [...] 'temp' to 'p[0]'". I think the problem is you did not have 'temp[0]'
in the first place.

If temp is a 1-element array, the line

bb_fn = const1 / (wave_cm^5.0 * (exp(const2]/temp)-1.))

might not give you the array with the dimension of wave_cm that you'd expect, but rather a
1-element array like temp. (Even with the bracket corrected.)

I mean:

```
IDL> a=[1,2,3]
IDL> help,a
A               INT       = Array[3]
IDL> help,a*2
<Expression>    INT       = Array[3]
IDL> help,a*[2]
<Expression>    INT       = Array[1]
IDL> help,a^[2]
<Expression>    INT       = Array[1]
```