Subject: Re: Multiple parameters for ZEROFCN
Posted by wlandsman on Tue, 03 Jan 2012 02:48:59 GMT
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One problem with the built-in IDL functions based on IMSL or Numerical Recipes is that they don't accept _EXTRA keyword to supply additional parameters to user-supplied function.

One ugly but efficient workaround is to use a common block in your user function and the calling procedure to pass and modify the Y parameter.

Alternatively, you could find your zeros using
http://idlastro.gsfc.nasa.gov/ftp/pro/math/zbrent.pro
which does accept _EXTRA keywords (so your Y parameter would need to be accepted as a keyword). A couple of notes:

1. ZBRENT requires one to first bracket the location of the zeros.
2. I'm not sure that the function you supplied has any zero -- as opposed to discontinuities.

--Wayne

Subject: Re: Multiple parameters for ZEROFCN
Posted by Rick Walton on Sat, 14 Jan 2012 12:27:26 GMT
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On Jan 3, 3:48 am, wlandsman <wlands...@gmail.com> wrote:
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> 1. ZBRENT requires one to first bracket the location of the zeros.
> 2. I'm not sure that the function you supplied has any zero -- as opposed to discontinuities.
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> --Wayne

Hi Wayne,

Thanks a lot for your response. The common block idea sounds like it would be the way forward for me as I need to remain in PV wave for consistency with other programs. I'm not familiar with how the calling procedure to pass and modify a parameter using the common

block in PV wave. Would you be able to provide an example of how to do this? I have pasted a small section of my program and function to work with. It would be much appreciated.

```
FUNCTION, f, x
RETURN, ((sinh((1.4 +x-0.25)/(0.4))/(sinh((x-0.25)/0.4)))-Y
END

FOR i = 0, N-1 DO BEGIN
Y(i)=C(i)/D(i)
EPIresult(i)=ZEROFCN("F")
ENDFOR
END
```

Best wishes,
Rick
