Subject: Re: Solving elliptic equation in IDL
Posted by Stein Vidar Hagfors H[2] on Tue, 19 Aug 2003 17:55:55 GMT
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I would also recommend looking at dlmform:

http://www.astro.uio.no/~steinhh/idl/dlmform.html

"Haje Korth" <haje.korth@jhuapl.edu> writes:
> Mark,
> as far as I understand, you always need the C glue-code when working with
> FORTRAN in a DLM.This is the reason why I often still use the old-fashioned
> call_external. Here the wrapper in minimal and can be written in FORTRAN. I
> think there is an example in the external directory of the IDL installation.
>
> Cheers,
> Haje
>
> --
>
>
> "Mark Hadfield" <m.hadfield@niwa.co.nz> wrote in message
> news:bhp3fkkah1@newsreader.mailgate.org...
>> Hi guys
>>
>> I want to solve an elliptic equation on a rectangular portion of the
>> (x,y) plane, specifically
>>
>> L(A) = f(x,y)
>>
>> where A is an unknown, scalar-valued 2D array, L is the Laplacian
>> operator (d2/dx2 + d2/dy2) and the RHS (forcing) term is a function of
>> space only. A is specified at the boundary.
>>
>> This can be done with an elliptic equation solver, of the type that
>> can be found in many general-purpose mathematical libraries. However a
>> Google search has not uncovered any IDL code to do this. So I have two
>> questions:
>>
>> - Does anyone have or know of an IDL elliptic equation solver?
>>
>> - If I choose to solve the equation in Fortran (Compaq Visual
>> Fortran 6.6B, IMSL Fortran Library,IDL 6.0, Windows 2000), what is the
>> path of least resistance for passing data between Fortran and IDL? A
>> DLM? Can I call a Fortran subroutine directly from IDL or will I
>> need to write glue code in C?
>>
>> --

>> Mark Hadfield "Ka puwaha te tai nei, Hoea tatou"
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>> National Institute for Water and Atmospheric Research (NIWA)
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