Subject: modified bessell functions
Posted by Michael Asten on Tue, 30 Mar 1999 08:00:00 GMT
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Any one know of routines to compute modified bessell functions In(z) and
Kn(z),
where n=0 or 1, and z is a complex argument. The idl library routine
beselli(x,n)
provides In for real arguments only, (but if fed a complex argument it
seems to cheerily ignore the imaginary part without comment!)

Thanks and regards,
Michael Asten

Subject: Re: modified bessell functions
Posted by Michael Asten on Fri, 09 Apr 1999 07:00:00 GMT
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Just for the archive record, I'm posting an answer to my own question.
I found siutable fortran77 routines which are free to use conditional on
acknowledgement (given below) and translated line-for-line to idl5.2.

As a matter of interest, the runtime comparision for 10000 calls with
complex argument is 11 sec in idl vs 3 sec in Lahey fortran 90 (standard
opt). I'm quite impressed; I expected greater overheads for idl considering
the fortran loops and goto statments were left intact.

Of course, another answer to my question would be to use pv-wave; - the IMSL
library within pv-wave has the desired complex bessel functions built in!

Regards,
Michael Asten

Michael Asten wrote:

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> where n=0 or 1, and z is a complex argument. The idl library routine
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>
> Thanks and regards,
> Michael Asten