
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 bessell functions built in!

Regards,
Michael Asten

Michael Asten wrote:

> Any one know of routines to compute modified bessell functions $I_n(z)$ and
> $K_n(z)$,
> where $n=0$ or 1 , and z is a complex argument. The idl library routine
> `beselli(x,n)`
> provides I_n 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
