Subject: Re: idl and pv-wave
Posted by Big Brother on Sat, 25 Jan 1997 08:00:00 GMT
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Achim Hein wrote:
> Try the following:
> wave>test=findgen(4097)
> wave>print,max(test-fft(test,-1),1))

Shurely it should be max(test-fft(fft(test,-1),1)) :-)

> wave>(31.3898,0.350983)

fairly close, my HP gives
(29.4698,0.247685)

> In IDL you will get as result:
> IDL>test=findgen(4097)
> IDL>print,max(test-fft(test,-1),1))
> IDL>(0.000244141,1.39110e-05)
> If you try to evaluate this FFT with a 4096-length, the results in > > > both programs are quite equal.

test=findgen(4095)
print, max(test-fft(fft(test,-1), 1))
(0.00219727, -0.000417931)

> There was a discussion some month ago with Sergei Senin...:
> In his opinion:

IMHO :-)

>> <There seems to be no mistake, but simply no check in the procedure > > <for the number of elements in the array being 2^X.

> But I think:
>> It seems so, but I think a Fourier-Transform-Algorithm has to
>> run for every array length

I do agree with you now - WAVE fft is weird.
I'm using it to plot amplitude and phase spectral densities, which requires a certain precision, and to avoid this problem, I run a "power-of-two check" routine and zero padding before doing fft.

Sergei Senin
UoP, UK
ss@ee.port.ac.uk
WAVE mailing list archive:

http://www.ee.port.ac.uk:80/~ss-www/WAVE/wave-maillist/maill ist.html

PS: Sorry about this "Big Brother" stuff - I'm tired of getting junk
e-mail. My real address is in the signature.
