
Subject: Re: idl and pv-wave

Posted by [Achim Hein](#) on Mon, 27 Jan 1997 08:00:00 GMT

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<Big Brother wrote:

<>

<> 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

Thank you, I am very pleased.

Achim

PS.: I cannot get you by E-mail

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