Subject: Re: Complications with variance using FFTs
Posted by Craig Markwardt on Tue, 20 Jul 2004 13:54:47 GMT
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olde_english33@hotmail.com (Eric) writes:
>
> Hello. First, I don't understand what you mean by "multiplied by
> exp(-phi)? Secondly, consider the following code instead:

I mean, that for a real signal, the Fourier components at negative frequencies are the complex conjugate of those at positive frequencies. Thus, EXP(IMAG*PHI) at positive frequencies becomes EXP(-IMAG*PHI) at negative frequencies, for arbitrary PHI. Since you are not changing to the complex conjugate at negative frequencies, I think that's where your problem lies.

> Now I think all the code snipets are related correctly. I checked the
> the average variance of all the xf1[*,i] was equal to
> sum(avgspec1)/31.0 and that the average variance of xf2[*,i] was equal
> to sum(avgspec2)/31.0. This check held. It works if I don't throw in
> the symmetric random phase exp(e). Does this phase throw off the
> variance? Is there any way to account for inputting this random
> phase?

Well, it's still worth investigating the original questions I posed...

Craig

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Craig B. Markwardt, Ph.D. EMAIL: craigmnet@REMOVEcow.physics.wisc.edu
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