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Subject: Re: time vs longitude FFT

Posted by [Kenneth Bowman](#) on Mon, 29 Oct 2007 17:41:02 GMT

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In article <1193671433.271745.268030@57g2000hsv.googlegroups.com>, knielsen73@gmail.com wrote:

> Hi,  
>  
> I have a time vs longitude plot and would like to do a 2-D FFT to get  
> a frequency vs wavenumber plot. I used the IDL FFT but I am not sure  
> what the output is...I didn't feel the IDL help was very helpful  
> there. I found a post from 1998 but there were some non-defined  
> functions and I wasn't exactly sure what they did.  
>  
> Does anybody have a good example on how to use 2D FFT in IDL or some  
> good documentation?  
>  
> Cheers,  
> Kim

The main issues with the IDL FFT (or any FFT for that matter) are sorting out the order in which the coefficients are stored and understanding how the sine and cosine components are represented in a complex FFT.

My recommendation is that you create an artificial, low-resolution, input data set that contains some simple combination of sines and cosines and that you understand completely. Then look at the FFT. Or you can buy my book (An Introduction to Programming with IDL), which has a chapter that does exactly that for the 1-D case.

Ken Bowman

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