
Subject: Re: wavenum, frequency FFT plot
Posted by [R.G. Stockwell](#) on Thu, 23 Apr 2009 22:03:45 GMT
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<kishore1818@gmail.com> wrote in message
news:c004f032-02b9-4990-a268-73966d3c6383@a5g2000pre.googlegroups.com...
> Hi,
> I have time vs latitudinal values and I would like to estimate the
> power spectral density 2-D do the 2-D FFT to get the frequency VS wave
> number .
> Example : data sets are (30,8); 30=days values and 8 latitudinal avg.
> data
> I am planning to wave number, frequency and power contour plot.
> x-axis zonal wave number range is -7 to 7
> Y-axis frequency range is -1. To 1.
> Does anybody have a good example program on 2D FFT in IDL program.
>
> Thanking you,
>
> Kishore

You mean longitudinal values (for zonal wavenumber)?
And is it global (45 deg sampling)?

just call FFT on the data, keep in mind that it is symmetrical
across the origin, and that you're index numbers are the wavenumbers
in the k_{lon} direction.

The sampling in time is $1/(NT)$, where T is the sampling interval in time.

cheers,
bob

Subject: Re: wavenum, frequency FFT plot
Posted by [kishore1818](#) on Mon, 27 Apr 2009 21:28:12 GMT
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On Apr 23, 3:03 pm, "R.G. Stockwell" <noemail...@please.com> wrote:
> <kishore1...@gmail.com> wrote in message
>
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> bob

Hi Bob,
Thanks for your e-mail message.
Actually I have 365 days daily avg values, every 10 deg latitudinal averages.
ie., (365,18). I need to calculate the psd for 30days data sets for all latitudinal values.
But I am planning to plot contour: wvae no. (x axis), frequency (y-axis) and z is power.
could you give a example program then it is very easy to understand to me and also I am beginner in IDL.

Thanking you,
Kishore
