Subject: Re: Correction: 2D FFt
Posted by agraps on Tue, 22 Oct 1996 07:00:00 GMT
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Walid Atia <atia@wam.umd.edu> writes:

> I just realized that FFT(data,-1) takes the FFT of an array of up to 7
> dimensions. What confused me was that when I plotted, say, the FFT of a
> gaussian, I got values only near the sides. However, the FFT of a
> gaussian is a gaussian, so I thought that the FFT routine must not be
> working correctly for my array. Just in case anyone out there is
> interested, the problem lies in the way IDL stores the FFT data. The
> edges are taken as 0 frequency, rather than the more intuitively obvious
> center to be zero.

To be fair, I don't think that IDL is the only software package that performs the ordering that way. I believe that many others order the output into quadrants as well. One should always check the output of the FFT first and then reorder it (or the filter) if necessary before applying any kind of filter.

Well I learned this little fact too, about a year ago. I have some illustrations showing some high-pass filtering of solar images with the swapped gaussian filter I used to remove some noisy components of my images. (All done in IDL). The results were nice. See

http://quake.stanford.edu/~amara/movdev.html

(Warning: that page has about 500 kB of images)

Amara

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Amara Graps email: agraps@netcom.com
Computational Physics vita: finger agraps@best.com
Multiplex Answers URL: http://www.amara.com/
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