Subject: Re: negative return values after FFT
Posted by edward.s.meinel@aero. on Thu, 27 Jul 2006 14:22:00 GMT
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FFT(*, *) can take REAL input and return a COMPLEX result; however, a COMPLEX input always returns a COMPLEX result. To get a REAL result you need to do:

inverse = REAL(ABS(FFT(ft, 1)))

Ed

PS. The one-line solution: inverse = REAL(ABS(FFT(FILTERING_JOB(FFT(image, -1)), 1)))

adisn123@yahoo.com wrote:
> Hi,
>
> I did FFT from spacial domain to frequency domain on an image of about
> 500 x 500 pixel size.
>
> IDL> ft = FFT(image, -1)
>
> After filtering job, it was inversly fourier tranformed back using
> IDL> inverse = FFT(ft, 1)
>
> When I printed "inverse", the values were complex numbers.
>
> 1. Aren't they supposed to real numbers since I tranformed back to
> spcial domain?
>
> When I only get real numbers, using
> IDL> print, float(FFT(ft,1))
> There were some negative values in the array (quite a lot).
>
> For my understanding, the inversely fourier tranformed values should
> represent the pixel values corresponding to individual pixel
> coordinates in 500 x 500 size.
> How do I interpret those negative pixel values?
>
> Thanks.