
Subject: FFT+inverse FFT

Posted by [Natalya Lyskova](#) on Sun, 05 Dec 2010 17:48:54 GMT

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Hey! I'm a beginner at IDL and have problem with FFT. I'm trying to perform 2d-FFT but the code doesn't work properly even on test images. So I create an image, make the Fourier transform, then the inverse Fourier transform and finally I expect to get the initial image. But the resulting image is the initial one, reversed with respect to the center.

My code:

```
nx=256L
```

```
x1=findgen(nx)-nx/2.0+1.0
```

```
x2=findgen(nx)-nx/2.0+1.0
```

```
ytest=fltarr(nx,nx)
```

```
for i=0l,nx-1 do begin
```

```
for j=0l,nx-1 do begin
```

```
if (x1[i] le 20.0 and x1[i] ge 0.0 and x2[j] le 20.0 and x2[j] ge 0.0) then begin
```

```
    ytest[i,j]=1.0
```

```
endif
```

```
endfor
```

```
endfor
```

; So the initial image is a square in the right upper corner

```
FFTtest=FFT(ytest)
```

```
sh_FFTtest=SHIFT(FFTtest,nx/2.0-1.0,nx/2.0-1.0)
```

```
inv_test=FFT(FFTtest,-1)
```

;The result is the square in the LEFT LOWER corner.

I would be very grateful for comments/advice/solutions

Thank for help,

Natalya
