Subject: Re: IDL 5.5, 2D FFT indexing confusion.
Posted by R.G. Stockwell on Tue, 19 Jul 2005 20:49:34 GMT
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"Pitufa" <c.c.calderon@gmail.com> wrote in message
news:1121772201.952005.96070@g43g2000cwa.googlegroups.com...
> Hi,
>
> I have been trying to generate an real even function in fourier space
> that I can INVERSE FFT in order to get a function which has no
> imaginary part. I have no problems when the function is a vector, but I
> get an imaginary part when it is a two dimensional array.
...

Hello Pitufa,
I shrunk the size of the array and took a look.
I think your nyquist rows and columns should all be positive (i.e. don't
flip the signs).
(by nyquist rows/columns i mean the npix/2+1 columm and the npix/2+1 row)

Here is a npix=6 example that i fixed

```
f = [ $
 [0.00, 0.00,  0.00,  0.00,  0.00,  0.00],$
 [0.00, 1.00,  0.80,  0.60, -0.80, -1.00],$
 [0.00, 0.80,  1.00,  0.92, -1.00, -0.80],$
 [0.00, 0.60,  0.92,  1.00,  0.92,   0.60],$
 [0.00,-0.80, -1.00,  0.92,  1.00,  0.80],$
 [0.00,-1.00, -0.80,  0.60,  0.80,  1.00] $
 ]
```

Cheers,
bob

PS
Note that if your "npix" is odd, you have both a positive and negative
nyquist points
and they are both complex.