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Subject: Re: FFT with NaNs in an array

Posted by [Steve Eddins](#) on Thu, 20 Jul 2006 19:42:30 GMT

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adisn123@yahoo.com wrote:

- > Hi,
- >
- > I'm trying to fourier transform a spacial domain image to frequency
- > domain using FFT function in IDL.
- >
- > My image has quite a bit of NaNs in an array, about 5%.
- >
- > When I use FFT into the image, it doesn't give me any errors, but when
- > I inversely fourier transform after
- >
- > filtering, it gives a little funky result.

I would have expected you to get a VERY funky result. Since every output element of an FFT depends on every input element, I'd expect every output element of your result to be NaN.

- > How do I make FFT ignore NaNs in their job or filtering?

I think you'll need to explicitly replace the NaNs with 0s, like this:

`A(isnan(A)) = 0;`

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Steve Eddins

<http://blogs.mathworks.com/steve>

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