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Subject: Deconvolving a set of points

Posted by [panblosky](#) on Tue, 02 Mar 2010 09:43:35 GMT

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Hi all,

I hope you can help me with this. I have a couple of set points [x,f] and [x,h], and I wish to deconvolve them in order to get [x,g].

I know that by the convolution theorem,  $f * g = h \implies h = F^{-1}[F(f)F(g)]$  (F is the Fourier Transform). So, if I would like to find g, I should do

$$F(h) = F(g)F(f)$$

$$F(g) = F(h)/F(f)$$

$$g = F^{-1}[F(h)/F(f)] \quad (\text{assuming } f \text{ is non-zero})$$

I am trying to implement this in IDL with a simple function (the convolution of two square pulses, and then deconvolving in order to get the same function), but I get different things.

Does anybody know how to do this?

Thanks!

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