Subject: Convolution of two equally sized arrays
Posted by Benjamin Hornberger on Thu, 09 Dec 2004 23:03:03 GMT
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Hi all,

IDL's convol() function requires the kernel to be smaller than the array. Any ideas why?

According to Brigham, "The Fast Fourier Transform", the discrete convolution is defined as

y(k) = Sum(i=0,N-1) x(i) * h(k-i)

where both x(k) and h(k) are periodic functions with period N.

So I would think that if I have two equally gridded functions (two arrays a and b of equal size), I can convolve them by

result = convol(a, b, /edge_wrap, center=0)

and interchanging a and b should give the same result. I hope I understood the center keyword right.

But anyway, it doesn't work because IDL wants the kernel to be smaller than the array. Do I have to write my own convolution function?

Any hints?

Thanks,
Benjamin