
Subject: Re: Does CONVOL convolute

Posted by [David Fanning](#) on Mon, 24 Feb 2003 19:22:30 GMT

[View Forum Message](#) <> [Reply to Message](#)

Big Bird (condor@biosys.net) writes:

```
> But leaving the kernel alone, and just making the original array
> unsymmetric, I get something entirely unexpected:
>
> IDL> tt = fltarr(5,5)
> IDL> tt[0,0] = 1
> IDL> print,tt
>   1.00000  0.00000  0.00000  0.00000  0.00000
>   0.00000  0.00000  0.00000  0.00000  0.00000
>   0.00000  0.00000  0.00000  0.00000  0.00000
>   0.00000  0.00000  0.00000  0.00000  0.00000
>   0.00000  0.00000  0.00000  0.00000  0.00000
> IDL> print,convol(tt,k)
>   0.00000  0.00000  0.00000  0.00000  0.00000
>   0.00000  1.00000  0.00000  0.00000  0.00000
>   0.00000  0.00000  0.00000  0.00000  0.00000
>   0.00000  0.00000  0.00000  0.00000  0.00000
>   0.00000  0.00000  0.00000  0.00000  0.00000
>
> Huh?
>
> I get the same results with or without the /center keyword to convol.
```

Setting CENTER=1 or /CENTER is the same as leaving the CENTER keyword off. (Don't ask!) If you want to perform convolution in the "strictly mathematical" sense, you must explicitly set CENTER=0. Is this what you were after:

```
IDL> print,convol(tt,k, center=0)
  0.000000  0.000000  0.000000  0.000000  0.000000
  0.000000  0.000000  0.000000  0.000000  0.000000
  0.000000  0.000000  1.00000  0.000000  0.000000
  0.000000  0.000000  0.000000  0.000000  0.000000
  0.000000  0.000000  0.000000  0.000000  0.000000
```

Cheers,

David

--

David W. Fanning, Ph.D.

Fanning Software Consulting, Inc.

Phone: 970-221-0438, E-mail: david@dfanning.com

Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

Toll-Free IDL Book Orders: 1-888-461-0155
