Subject: Re: Array indexing problem: Appreciated
Posted by Ken Knapp on Thu, 29 Jan 2004 13:42:55 GMT
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My 2 cents-
I won't say I "enormously appreciate" it, but here is how I have found it useful. Consider needing to calculate a spatial standard deviation for an image. Rather than loop over the dimensions of the image, I loop over the size of the standard deviation window. I use this array notation so I don't have to worry about the calculations at the edges. here's my code. If there is a simpler way to do this without the "enormously appreciated" "feature" then let me know ;-)
-Ken

```
function spatstdev,input,n

s=size(input)
nx = s(1)
ny = s(2)

var = fltarr(nx+2*n,ny+2*n)
mask= intarr(nx+2*n,ny+2*n)
var(n:n+nx-1,n:n+ny-1) = input
mask(n:n+nx-1,n:n+ny-1) = 1

ii = lindgen(nx,ny)
i = (ii mod nx) + n
j = floor(ii / nx) + n
x2 = fltarr(nx+2*n,ny+2*n)
x = fltarr(nx+2*n,ny+2*n)
nn = fltarr(nx+2*n,ny+2*n)

for ii = -n,n do begin
    for jj = -n,n do begin
       x2 = x2 + var[i+ii,j+jj]^2
       x = x + var[i+ii,j+jj]
       nn = nn + mask[i+ii,j+jj]
    endfor
endfor

std = sqrt((x2 - ((x^2)/nn)) / (nn-1))

return,std
end
```

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***** to reply remove the _REMOVE_ *****

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