Subject: Moving window mode
Posted by Luke on Mon, 09 Oct 2006 03:24:55 GMT
View Forum Message <> Reply to Message

I use smooth to calculate a moving window mean and have seen posts relating to other moving window moments, but can't figure out how to do a moving window mode (w/out nested loops).

Any ideas...?

Below is the code with nested loops I currently use...

```
function mode,arr ;code from JD Smith - (http://tinyurl.com/zpbxp)
   compile_opt idl2
   on_error, 2
   ;note... if array is multimodal,
   ;this function returns the LOWEST value
   ;of the equal highest frequency values
   void=max(histogram(arr,omin=mn),mxpos)
   mode=mn+mxpos
   return, mode
end
function focalmode, arr, win
   compile_opt idl2
   on_error, 2

   dims = size(arr,/dimensions)
   cols=dims[0]
   rows=dims[1]

   if win mod 2.0 eq 0 then win-=1 ;win needs to be an odd number
   win2=(win-1)/2 ;num pixels from centre pixel to edge of moving
window

   fm_array=arr

   for Y=0,ROWS-1 do begin
      ;watch out for the edges...
      ywin_u = y < win2       ;num pixels from centre pixel to upper
edge of moving window
      ywin_d = rows-1-y < win2 ;num pixels from centre pixel to lower
edge of moving window
      for X=0,COLS-1 do begin
         ;watch out for the edges...
         xwin_l = x < win2       ;num pixels from centre pixel to
left edge of moving window
         xwin_r = cols-1-x < win2 ;num pixels from centre pixel to
right edge of moving window
```

```
            ;Calc the mode
            fm_array[X,Y] =
mode(fm_array[X-xwin_l:X+xwin_r,Y-ywin_u:Y+ywin_d])
        endfor
    endfor

    return, fm_array

end
```

PS: verrry newbie in IDL, be nice ;)
