
Subject: 2-d histogram and Routines of same name
Posted by [Mrunmayee](#) on Mon, 17 May 2010 09:33:12 GMT
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Jeez, my original problem something completely different... Still. I have a dataset with x,y values (about 700 each). These values range from about [200,800] and [200,1200]. I place a grid of size 2 (in data units) on this x,y plot. Now I paint the square as 1 if it contains a point, 0 if it doesn't. In IDL way this is what I do.

```
dl = 2 ; gridsize
grid = fltarr(300,500) ; with above gridsize, this would be size of
grid.
ix = FIX( (x-(min(x))/dl) ) & jy = FIX( (y-(min(y))/dl) ) ; This converts
x,y to integers and literally gives indices where grid will become 1.
grid[ix,jy] = 1
```

Now my aim is to count points in each grid cell. That is I want to see typically how many points are there in a cell. A brute force solution would be something like this:

```
counter = intarr(300,500) ; Size of grid
for i = 0,299 do begin
  for j = 0, 499 do begin
    index = where(x ge i*dl and x lt (i+1)*dl AND y ge j*dl and y lt
(j+1)*dl, nindex)
    counter[i,j] = nindex
  endfor
endfor
```

So my first problem is how to do this IDL way?

Then I felt this is a histogram problem. So went to IDL's hist_2d which does what I want, but doesn't return reverse indices. But I did find hist_nd written byt David. This routine uses PRODUCT(.., / Preserve_Type). Unfortunately, idlastrolib ALSO contains the routine of the same name which DOESN'T use the keywords in IDL's routine. So I keep getting KEYWORD NOT ALLOWED error. My guess is that (because of various issues, I have to set my IDL_PATH such that) this other routine always get compiled first. When I have such a problem, of having two routines of same name doing things differently, I usually compile with full path. E.g

.com /path/to/routine/I/want/routinename

But I don't think there is any product.pro in IDL's libs. So my second problem is how do I tell IDL to use inbuilt function instead of user written when there is no .pro file associated with it?
