
Subject: Re: non-integer binsize

Posted by [David Fanning](#) on Thu, 05 May 2005 00:54:43 GMT

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patrick.gatlin@msfc.nasa.gov writes:

- > This may be a very elementary question, but I was wondering if the
- > histogram function can accept a binsize < 1?

Since the example in the on-line help for HIST_2D uses a bin size of 0.02, I think you might be in good shape here. ;-)

- > I am using the hist_2d function to determine the density field of some
- > lat/lon locations in a dataset. These values range 4 deg lat and 4 deg
- > lon. In order to determine the # of points per square km, I have setup
- > the hist_2d function as follows:
- >
- > IDL> result=hist_2d(lon,lat,max1=lonmax,min1=lonmin,max2=latmax,\$
- > min2=latmin,bin1=1/111.,bin2=1/111.)
- >
- > where the size of bin1 and bin2 are the approximate conversions from km
- > to degrees (1km=.09 deg).
- > Since hist_2d needs two bins, then is the result equal the number of
- > points within a box that is 1/111. long on all sides? Thus am assuming
- > result will give me the # of points per square kilometer. Is this a
- > correct assumption based upon the way hist_2d works?

This explanation reminds me of editing my middle son's big essay last night (sigh...), but I think you've probably got the gist of it, anyway. :-)

I think a better way of looking at it is that the box is 1/111. times the number of bins between the min and max values, but I think you are correct that the numbers you get back represent the number of points in a square kilometer.

Cheers,

David

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