Subject: Number of points inside a contour curve
Posted by burkina on Wed, 20 Dec 2006 09:38:41 GMT
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What I need to do is basically simple, I guess, but I can't find an easy way to do that.
I have an array of two parameters, let's call them x and y, each pair a couple of measures taken simultaneously. I need to:

-Plot them in the x and y axis (at least this one is trivial!)

-Produce a density plot, i.e. divide the x-y space in discrete bins and assign the number of points falling in each bin to that bin (This should be done by hist_2D, but the results are fairly disappointing. A better work is done by histogram_2d. Do you have any comments?)

-Plot confidence contour levels on that density plot, i.e. a contour at the level where, say, 90% of points are contained. In other words, you can use the normal contour IDL procedure, but you must find a way to count all points lying inside this contour, in order to set the level for the contour plot. The procedure should be able to find the iso-count curve which encompass 90% of the total points.

So... I'm not sure I'm doing the right/best thing for point 2 (hist_2d/histogram_2d) and have no idea how to do point 3. However, this problem seems to me quite common, because it's a way to find statistical confidence level for a distribution of two parameters.

Can you help me?

Thanks,

Stefano