
Subject: Density contour curves

Posted by [Eric Williams](#) on Thu, 10 Jun 1999 07:00:00 GMT

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I am wondering if there is a better way of doing solving this problem:

I have a set of data (x,y coordinates) that represent a distribution (actually the 2-D spatial distribution of a star field). I would like to show the position of the stars and then overplot contours curves that convey the spatial density of the stars. Here is my simplistic first approach:

```
array = fltarr(n,m)*0 ;n & m are dimensions I pick
                        ;depending on the range of x,y values
```

```
for n=0,n_elements(x)-1 do array[x[n],y[n]]=1
```

```
sarray = smooth(array,5) ;3,5,7,9 for smooth depending
                        ;on resolution I want, I guess
```

```
plot,x,y,psym=3
```

```
contour,sarray,/overplot ;with levels if desired.
```

So, is using smooth bogus? I did it to try and make the contours smoother, but I don't understand if it would be better to not use them. Is there a better/more proper way to do something like this?

Thanks for any suggestions!

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