
Subject: Contour Issues... Help please

Posted by [plim.dreaming](#) on Thu, 11 Sep 2008 18:01:27 GMT

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Greetings all!

It has been a while since I last posted here, for me that's a good sign.

Contour plots have always been full of issues. Contour plots and "histogram"... It's like the user wants to do one thing and the program wants to do another...

I have a set of irregularly distributed sources. 2 dimensional space.

x, y.

I would like to plot a contour of their density distribution. So I figured, i'll use hist_2d to grid the space into bins of 0.1 by 0.1 and then contour plot the result.

```
result =
```

```
hist_2d(hmk,jmh,bin1=0.1,bin2=0.1,max1=max(hmk),max2=max(jmh),  
min1=min(hmk), min2=min(jmh))
```

```
levels = 30
```

```
step=(max(result)-min(result))/levels
```

```
userlevels=indgen(levels)*step + min(result)
```

```
contour,result,levels=userlevels,background=1,color=black,xs tyle=1,ystyle=1
```

Right?! Anybody see any major error thus far?

The thing is that the contour plot comes out with its axis ranging from 0 to 50 whereas the input data only ranges from -1 to 4. And I can't figure out why.

Any help is greatly appreciated,

Plim

Subject: Re: Contour Issues... Help please

Posted by [kishore1818](#) on Mon, 15 Sep 2008 18:26:03 GMT

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On Sep 11, 3:01 pm, plim.dream...@gmail.com wrote:

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> Plim

Hi

In your contour program you missed some params.

For example

```
contour,Z(dim1,dim2),x(dim1),y(dim2),levels=lvs,position=po  
s1,xrange=[limit1,limit2],thick=3,xsty=1,ysty=1,charsize=0.9 ,/  
follow
```

just follow above method.

Kishore

Subject: Re: Contour Issues... Help please
Posted by [leon.wars](#) on Thu, 16 Oct 2008 14:04:09 GMT
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On 15 sep, 20:26, kishore1...@gmail.com wrote:

> On Sep 11, 3:01 pm, plim.dream...@gmail.com wrote:

>

>

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```

Hi !

What do you mean with dim1 and dim2?

I have two vectors both with 9125 elements. After hist_2d, I get an array of [24,15].

When I'm trying to plot the contours of the array mentioned above

the axis are ranging in different scales. Could you help me?

thanks and have a nice day!

Subject: Re: Contour Issues... Help please
Posted by [Jeremy Bailin](#) on Fri, 17 Oct 2008 19:16:07 GMT
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On Oct 16, 10:04 am, leon.w...@gmail.com wrote:
> On 15 sep, 20:26, kishore1...@gmail.com wrote:
>
>
>
>> On Sep 11, 3:01 pm, plim.dream...@gmail.com wrote:
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> thanks and have a nice day!
```

You need the x and y coordinates of "result". If you create result using:

```
result = hist_2d(data, min1=min1,max1=max1,bin1=bin1,
min2=min2,max2=max2,bin2=bin2)
```

then(*) you end up with result being nx by ny, where

```
nx = (max1-min1)/bin1
```

```
ny = (max2-min2)/bin2
```

with coordinate values

```
xcoords = min1 + bin1*lindgen(nx)
```

```
ycoords = min2 + bin2*lindgen(ny)
```

In this case, xcoords and ycoords are what you want to feed into contour.

(*)However, watch out for floating point arithmetic issues that may give you one bin more than you think you should have. nx and ny are really ceil() of the expressions I gave.

-Jeremy.
