
Subject: Re: stippling or cross hatching in contour plot
Posted by [David Fanning](#) on Fri, 05 Oct 2007 21:47:04 GMT
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MA writes:

- > I have a couple of maps (contour plots with filled, colored contours)
- > that I'd like to overlay with stippling or hatching without blocking
- > the color underneath. Does anybody have a suggestion on this problem?
- > I'm trying to mark areas with high or low significance in the plot. A
- > simple contour doesn't work very well since the data is pretty noisy,
- > and I end up getting a lot of lines.
- >
- > The only way to hatch things that I've found is with the `c_orientation`
- > keyword in the contour procedure. My problem with that is that it will
- > always hatch above the topmost defined level. I.e. if I want to hatch
- > between values of 25 and 50, and set `levels=[25,50]`, it will hatch
- > above 50 as well. Also, it erases the colors underneath the hatched
- > portions.

As usual with IDL contours, you can't let IDL choose the contours for you. You have to choose them yourself, and the lowest one better be coincident with the `MIN(data)` if you expect to make sense of what you are doing. :-)

<http://www.dfanning.com/tips/nlevels.html>

I don't see how it can erase the colors underneath, unless you forget to use the `NOERASE` keyword. But the hatching has no choice but to be drawn on top of the color, assuming you have drawn the colors before the hatching. If it seems to be erasing, maybe the hatching is too dense. You could lighten up on that.

- > Or should I use `polyfill` instead? I've done stippling before by
- > defining a pattern for `polyfill`. I think this would cover over the
- > underlying color contours, too. Unless I redefine the pattern in each
- > box with the correct color...

In direct graphics, `POLYFILL` and `Contour` just replace pixels, they don't "cover" anything up. Perhaps you could create an example of what you mean.

Cheers,

David

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Subject: Re: stippling or cross hatching in contour plot
Posted by [MA](#) on Mon, 08 Oct 2007 15:44:15 GMT

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Hello David,
thanks for your comments. Here's a very short piece of code to illustrate my problem.

```
;; create some data  
array=FindGen(100)  
array=Reform(array,10,10)
```

```
Window,2  
loadct,2  
;; contour data with color  
contour,array,levels=indgen(100),c_colors=indgen(100)+1,/fill  
;; try to put hatching on top  
contour, array,levels=[0,15,25],c_orientation=[45,-45,0],/fill,  
noerase  
end
```

> As usual with IDL contours, you can't let IDL choose the contours
> for you. You have to choose them yourself, and the lowest one better
> be coincident with the MIN(data) if you expect to make sense of
> what you are doing. :-)
I've done that

> I don't see how it can erase the colors underneath, unless
> you forget to use the NOERASE keyword.
You were right, I forgot the NOERASE

Still, the problem remains that c_orientation will apply its hatching to all levels above the ones specified. Run the code above and see what I mean. All levels above 0 are hatched at 45deg angle, all levels above 15 are hatched at 45 AND -45 deg angle, and all levels above 25 are hatched at 45, -45 and 0deg angle. If I specify only one value for c_orientation=45, then the whole plot ends up being hatched at 45deg. I can't figure out how to hatch only between 0 and 15, or 15 and 25, for example.

I've tried using POLYFILL instead, with the pattern keyword, and defining the pattern as a solid color for points where I don't want

stippling, and defining the pattern as solid color with a couple of black dots where I do want stippling. It works, but the plot ends up being made up of lots of little squares, which doesn't look as smooth as the contour plot.

I hope this explanation is a little clearer.
Thanks!
