
Subject: Re: Fast Filled Contour Plots

Posted by [lecacheux.alain](#) on Tue, 17 Apr 2012 22:18:54 GMT

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On 17 avr, 21:33, David Fanning <n...@idlcoyote.com> wrote:

> As I was working on this, Chris Torrence graciously supplied
> some IDL 8.x code to do the same thing. I've included the
> code Chris sent me in the article. Unfortunately, it
> probably does more to expose the limitations of the new
> function graphics system than it does to illuminate the
> features. But, perhaps I have done something wrong. If
> anyone has suggestions (Alain?) for how I can fix this,
> I am all ears.

Your welcome, David.

The problem in Chris Torrence's code comes from the fact that the longitude range in MAP_CONTINENTS is -180°,180° by default, while you are using 0°,360° in your example. The trick would be to overplot a suitable map over your image:

```
im = IMAGE(scaledData, x, y, RGB_TABLE=rgb, XRANGE=xrange,  
YRANGE=yrange, GRID_UNITS='degrees', POSITION=[0.1,0.1,0.9,0.9])  
mp = map('EQUIRECTANGULAR', LIMIT=limit, LABEL_POSITION=0,  
POSITION=[0.1,0.1,0.9,0.9], /CURRENT)  
mc = MapContinents(FILL_COLOR=!COLOR.DARK_GRAY, LIMIT=limit)
```

Everything is now correctly clipped and displayed, including the grid overlay.

Note the use of FILL_COLOR instead of COLOR to get continents of the right color.

There is no bug here, just tricky usage of partly (un)documented keywords...

alx.

Subject: Re: Fast Filled Contour Plots

Posted by [David Fanning](#) on Tue, 17 Apr 2012 22:52:23 GMT

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Alain writes:

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> longitude range in MAP_CONTINENTS is -180°,180° by default, while you
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> mc = MapContinents(FILL_COLOR=!COLOR.DARK_GRAY, LIMIT=limit)

- > Everything is now correctly clipped and displayed, including the grid
- > overlay.
- > Note the use of FILL_COLOR instead of COLOR to get continents of the
- > right color.
- > There is no bug here, just tricky usage of partly (un)documented
- > keywords...

Thanks, that works great! I've updated the page with this useful information.

http://www.idlcoyote.com/graphics_tips/fastfill.php

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

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

Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: Fast Filled Contour Plots

Posted by [David Fanning](#) on Wed, 18 Apr 2012 04:32:07 GMT

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Folks (and Alain in particular),

- > Thanks, that works great! I've updated the page with this
- > useful information.
- >
- > http://www.idlcoyote.com/graphics_tips/fastfill.php

I had to run off to play tennis this afternoon, so just managed to get this updated article on the web page before I left.

I've just come back to understand it a little better, and I notice there is a sort of "shadow" grid under the outside grid. In fact, if you look carefully, you can see two grids seemingly being rendered. I think the "outside grid" is the one with the labels on the edge of the map, and the "inside" grid is the gray values on the interior of the map.

Any ideas for how to deal with the inner grid?

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

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

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Subject: Re: Fast Filled Contour Plots

Posted by [lecacheux.alain](#) on Wed, 18 Apr 2012 09:06:29 GMT

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On 18 avr, 06:32, David Fanning <n...@idlcoyote.com> wrote:

> Folks (and Alain in particular),

>

>> Thanks, that works great! I've updated the page with this

>> useful information.

>

>> http://www.idlcoyote.com/graphics_tips/fastfill.php

>

> I had to run off to play tennis this afternoon, so just

> managed to get this updated article on the web page before

> I left.

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> I've just come back to understand it a little better,

> and I notice there is a sort of "shadow" grid under the

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>

> Any ideas for how to deal with the inner grid?

>

> Cheers,

>

> David

>

> --

> David Fanning, Ph.D.

> Fanning Software Consulting, Inc.

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

> Sepore ma de ni thui. ("Perhaps thou speakest truth.")

>

>

I cannot experiment by myself today, but here is my guess:
The MAP function already creates an object grid. The LABEL_POSITION=0 puts it "outside". You can suppress it by doing LABEL_SHOW=0 and, likely, you can adjust it (step, labels, etc...) by using (poorly documented) keywords... You added to my code a MAPGRID call, producing the additional grid with default properties ("inside" labels, etc...); I think that you can merely suppress it.
alx.

Subject: Re: Fast Filled Contour Plots
Posted by [David Fanning](#) on Wed, 18 Apr 2012 12:24:56 GMT
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alx writes:

> I cannot experiment by myself today, but here is my guess:
> The MAP function already creates an object grid. The LABEL_POSITION=0
> puts it "outside". You can suppress it by doing LABEL_SHOW=0 and,
> likely, you can adjust it (step, labels, etc...) by using (poorly
> documented) keywords... You added to my code a MAPGRID call, producing
> the additional grid with default properties ("inside" labels, etc...);
> I think that you can merely suppress it.

Ah, ok, sorry. I didn't realize I put that there. So, now I have removed the second grid, and I have a single grid. But, I want the grid lines to recede into the background of the plot. I don't want them to be the strongest visual element in the plot. I want people to concentrate on the data!

I've figured out how to retrieve the grid from the map object, and I can change its color and presumably other properties, but this also changes the color of the labels, which I *don't* want to do. Is there a way to have my cake and eat it too, without creating a second grid, perhaps without labels, that I stack on top of the first?

Cheers,

David

--

David Fanning, Ph.D.

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Subject: Re: Fast Filled Contour Plots
Posted by [David Fanning](#) on Wed, 18 Apr 2012 12:30:53 GMT
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David Fanning writes:

- > I've figured out how to retrieve the grid from the map
- > object, and I can change its color and presumably other
- > properties, but this also changes the color of the
- > labels, which I *don't* want to do. Is there a way
- > to have my cake and eat it too, without creating
- > a second grid, perhaps without labels, that I stack
- > on top of the first?

Ah, never mind. I've found the LABEL_COLOR property,
as well as others. This is beginning to look like
what I intend it to look like.

Cheers,

David

--

David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: <http://www.idlcoyote.com/>
Sepore ma de ni thui. ("Perhaps thou speakest truth.")
