
Subject: cgScaleVector and diverging colorbar help
Posted by [sam.tushaus](#) on Thu, 25 Jun 2015 15:59:24 GMT
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Hello all! I'm trying to create a plot with a diverging colorbar. I would like white to correspond to 0, and my data is typically in the range [-5,70] on a latitude-longitude grid.

I've been using this page (http://www.idlcoyote.com/code_tips/scaleimage.html) as a reference. The first problem comes when I try to use cgImage to display my scaled data - the map becomes highly distorted. Is there any way to fix this?

My second problem comes when I try to use cgContour to display my scaled data instead of cgImage. The contouring looks generally correct, but the whole range of the colorbar is used in the contouring. This is a problem because my data range is [-5,70] and I want 0 to be white.

I really appreciate any comments or hints on how to fix this. Thanks!

Subject: Re: cgScaleVector and diverging colorbar help
Posted by [David Fanning](#) on Thu, 25 Jun 2015 16:16:11 GMT
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sam.tushaus@gmail.com writes:

> Hello all! I'm trying to create a plot with a diverging colorbar. I would like white to correspond to 0, and my data is typically in the range [-5,70] on a latitude-longitude grid.
>
> I've been using this page (http://www.idlcoyote.com/code_tips/scaleimage.html) as a reference. The first problem comes when I try to use cgImage to display my scaled data - the map becomes highly distorted. Is there any way to fix this?
>
> My second problem comes when I try to use cgContour to display my scaled data instead of cgImage. The contouring looks generally correct, but the whole range of the colorbar is used in the contouring. This is a problem because my data range is [-5,70] and I want 0 to be white.
>
> I really appreciate any comments or hints on how to fix this

```
data = cgScaleVector(cgDemoData(7), -5, 70)
Loadct, 0 ; Reset colors
cgLoadct, 1, NColors=10, Clip=[100,250]
cgLoadCt, 3, NColors=140, Bottom=11, /Reverse
TVLCT, cgColor('white', /Triple), 10
cgImage, BytScl(data, Top=151), Position=[0.125, 0.1, 0.925, 0.75]
cgColorbar, NColors=151
cIndex
END
```

Cheers,

David

--

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

Subject: Re: cgScaleVector and diverging colorbar help
Posted by [David Fanning](#) on Thu, 25 Jun 2015 16:19:28 GMT
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David Fanning writes:

```
>
> sam.tushaus@gmail.com writes:
>
>> Hello all! I'm trying to create a plot with a diverging colorbar. I would like white to correspond
>> to 0, and my data is typically in the range [-5,70] on a latitude-longitude grid.
>>
>> I've been using this page (http://www.idlcoyote.com/code\_tips/scaleimage.html) as a
>> reference. The first problem comes when I try to use cgImage to display my scaled data - the map
>> becomes highly distorted. Is there any way to fix this?
>>
>> My second problem comes when I try to use cgContour to display my scaled data instead of
>> cgImage. The contouring looks generally correct, but the whole range of the colorbar is used in
>> the contouring. This is a problem because my data range is [-5,70] and I want 0 to be white.
>>
>> I really appreciate any comments or hints on how to fix this
>
> data = cgScaleVector(cgDemoData(7), -5, 70)
> Loadct, 0 ; Reset colors
> cgLoadct, 1, NColors=10, Clip=[100,250]
> cgLoadCt, 3, NColors=140, Bottom=11, /Reverse
> TVLCT, cgColor('white', /Triple), 10
> cgImage, BytScl(data, Top=151), Position=[0.125, 0.1, 0.925, 0.75]
> cgColorbar, NColors=151
> clIndex
> END
```

Whoops! The cgColorbar command should have a range on it:

```
cgColorbar, NColors=151, Range=[-5, 70]
```

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

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

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

Subject: Re: cgScaleVector and diverging colorbar help

Posted by [David Fanning](#) on Thu, 25 Jun 2015 16:23:36 GMT

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David Fanning writes:

> Whoops! The cgColorbar command should have a range on it:

>

> cgColorbar, NColors=151, Range=[-5, 70]

Sigh... Going back to bed. Let's try this again:

```
data = cgScaleVector(cgDemoData(7), -5, 70)
Loadct, 0 ; Reset colors
cgLoadct, 1, NColors=10, Clip=[100,250]
cgLoadCt, 3, NColors=140, Bottom=11, /Reverse
TVLCT, cgColor('white', /Triple), 10
cgImage, BytScl(data, Top=150), Position=[0.125, 0.1, 0.925, 0.75]
cgColorbar, NColors=151, Range=[-5, 70]
cIndex
END
```

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: cgScaleVector and diverging colorbar help

Posted by [sam.tushaus](#) on Thu, 25 Jun 2015 16:31:07 GMT

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Thanks! The scaling looks great. However, my image is still distorted (<http://imgur.com/zj4DKnt>, should be Great Lakes region).

Also, do you think I might be able to automate the color table creation, using the range/min/max?

On Thursday, June 25, 2015 at 11:23:40 AM UTC-5, David Fanning wrote:

> David Fanning writes:

>

>> Whoops! The cgColorbar command should have a range on it:

>>

>> cgColorbar, NColors=151, Range=[-5, 70]

>

> Sigh... Going back to bed. Let's try this again:

>

> data = cgScaleVector(cgDemoData(7), -5, 70)

> Loadct, 0 ; Reset colors

> cgLoadct, 1, NColors=10, Clip=[100,250]

> cgLoadCt, 3, NColors=140, Bottom=11, /Reverse

> TVLCT, cgColor('white', /Triple), 10

> cgImage, BytScl(data, Top=150), Position=[0.125, 0.1, 0.925, 0.75]

> cgColorbar, NColors=151, Range=[-5, 70]

> clIndex

> END

>

> Cheers,

>

> David

> --

> David Fanning, Ph.D.

> Fanning Software Consulting, Inc.

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

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

Subject: Re: cgScaleVector and diverging colorbar help

Posted by [David Fanning](#) on Thu, 25 Jun 2015 16:44:40 GMT

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sam.tushaus@gmail.com writes:

> Thanks! The scaling looks great. However, my image is still distorted (<http://imgur.com/zj4DKnt>, should be Great Lakes region).

Set the /KEEP_ASPECT keyword on your cgImage call.

> Also, do you think I might be able to automate the color table creation, using the range/min/max?

Certainly, IDL is a programming language!

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: cgScaleVector and diverging colorbar help

Posted by [sam.tushaus](#) on Thu, 25 Jun 2015 17:10:29 GMT

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On Thursday, June 25, 2015 at 11:44:43 AM UTC-5, David Fanning wrote:

> sam.tushaus@gmail.com writes:

>

>> Thanks! The scaling looks great. However, my image is still distorted
(<http://imgur.com/zj4DKnt>, should be Great Lakes region).

>

> Set the /KEEP_ASPECT keyword on your cgImage call.

>

>> Also, do you think I might be able to automate the color table creation, using the
range/min/max?

>

> Certainly, IDL is a programming language!

>

> Cheers,

>

> David

> --

> David Fanning, Ph.D.

> Fanning Software Consulting, Inc.

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

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

Haha of course! I'll figure something out :)

Do you have any tips on how to use cgContour to plot my data instead of cgImage?

Subject: Re: cgScaleVector and diverging colorbar help

Posted by [David Fanning](#) on Thu, 25 Jun 2015 18:52:32 GMT

[View Forum Message](#) <> [Reply to Message](#)

sam.tushaus@gmail.com writes:

> Do you have any tips on how to use cgContour to plot my data instead of cgImage?

Yes, have you ever had a look at my web page? Tips galore! In particular, these pages:

http://www.idlcoyote.com/graphics_tips/graphics_tips.php
<http://www.idlcoyote.com/gallery/index.html>

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: cgScaleVector and diverging colorbar help
Posted by [sam.tushaus](#) on Fri, 26 Jun 2015 18:25:13 GMT
[View Forum Message](#) <> [Reply to Message](#)

On Thursday, June 25, 2015 at 1:52:36 PM UTC-5, David Fanning wrote:

> sam.tushaus@gmail.com writes:

>

>> Do you have any tips on how to use cgContour to plot my data instead of cgImage?

>

> Yes, have you ever had a look at my web page? Tips galore! In

> particular, these pages:

>

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

> <http://www.idlcoyote.com/gallery/index.html>

>

> Cheers,

>

> David

> --

> David Fanning, Ph.D.

> Fanning Software Consulting, Inc.

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

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

I was having some problems with cgContour yesterday, but everything seems to be great today! I guess the computer and I just needed a break. Thanks for all your help!
