
Subject: Re: Horrible map reprojections

Posted by [Martin Schultz](#) on Thu, 07 Sep 2000 11:01:20 GMT

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Ben Marriage wrote:

```
>
> Hi all,
>
> IDL> print,!VERSION
> { x86 linux unix 5.3 Nov 11 1999}
>
> I'm trying to set up a particular map reprojection, and get some rather
> horrible results. Can somebody try this on their machine to see if it is
> reproducible please?
>
> window,0,xs=1000,ys=300
> map_set,0,180,0,limit=,xmar=0,$
>   ymar=0,noborder=1,/grid,clip=0,/iso,/mercator
> map_continents,/hires
>
> One effect is that the reprojection does not extend all the way to the
> right hand side of the plotting area (should be 0 deg long, instead it
> is about -10 deg long). Another problem is this produces lines cutting
> across the window (caused by the map_continents part).
>
> This is only part of the problem, when trying to contour some data using
> a similar reprojection, I get lines cutting across the contour plot. I
> thought it might be a missing data problem, so set all missing data to
> !VALUES.F_NAN. No difference.
>
> Has anybody else had a similar problem/solution?
>
> Thanks,
> Ben
```

There are two things wrong here:

- (1) make sure that the "center" longitude is at the center of your LIMIT (or at least within and not at the border)
- (2) you can get rid off the silly lines if you omit the clip=0 keyword.

The following looks ok to me (same version and platform as you have):

```
map_set,0,180,limit=[-30,0,30,360],xmar=0,$
  ymar=0,noborder=1,/grid,/iso,/mercator
map_continents,/hires
```

Cheers,

Martin

--

```

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[[

```

Subject: Re: Horrible map reprojections
Posted by [Liam E. Gumley](#) on Thu, 07 Sep 2000 14:21:27 GMT
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Ben Marriage wrote:

```

> IDL> print,!VERSION
> { x86 linux unix 5.3 Nov 11 1999}
>
> I'm trying to set up a particular map reprojection, and get some rather
> horrible results. Can somebody try this on their machine to see if it is
> reproducible please?
>
> window,0,xs=1000,ys=300
> map_set,0,180,0,limit=[-30,-180,30,180],xmar=0,$
> ymar=0,noborder=1,/grid,clip=0,/iso,/mercator
> map_continents,/hires
>
> One effect is that the reprojection does not extend all the way to the
> right hand side of the plotting area (should be 0 deg long, instead it
> is about -10 deg long). Another problem is this produces lines cutting
> across the window (caused by the map_continents part).
```

I prefer to use the MAP_SET keyword SCALE to create map projections which fill a window:

```

window, /free, xsize=1000, ysize=300
map_set, 0, 180, xmargin=0, ymargin=0, scale=165e6, /mercator
map_continents
map_grid, /label
```

```

> This is only part of the problem, when trying to contour some data using
> a similar reprojection, I get lines cutting across the contour plot. I
> thought it might be a missing data problem, so set all missing data to
> !VALUES.F_NAN. No difference.
```

It might be an artifact of the projection. Try it again using the projection I suggest above.

Cheers,

Liam.

<http://cimss.ssec.wisc.edu/~gumley>

Subject: Re: Horrible map reprojections

Posted by [Martin Schultz](#) on Thu, 07 Sep 2000 14:53:27 GMT

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Ben Marriage wrote:

>

> Martin Schultz wrote:

>

>> (1) make sure that the "center" longitude is at the center of your

>> LIMIT (or at least within and not at the border)

>> (2) you can get rid off the silly lines if you omit the clip=0

>> keyword.

>>

>> The following looks ok to me (same version and platform as you have):

>> map_set,0,180,limit=,xmar=0,\$

>> ymar=0,noborder=1,/grid,/iso,/mercator

>> map_continents,/hires

>>

>

> Thanks Martin, that kinda solves one problem. However, the contour

> problem still remains. Take a look at

> http://www.met.ed.ac.uk/~aaron/funny_lines.gif. There are lines drawn

> from one edge of the plot to the other (the data when filled with the

> /cell_fill keyword looks OK), just when a line contour is drawn over the

> top, these parallel lines appear. They look to be where the data is

> trying to connect one point to the same point, but in a different region

> of the plot window?

>

> Thanks,

> Ben

Yeah. That's the big problem I still haven't solved in a satisfactorily general manner (admitting that I haven't tried too hard). It would be very nice, if you could contact support@rsinc.com with your problem and request that they finally improve the stability and functionality of the mapping tools in IDL. Sure, most of the time you can get them to work, but it's always a pain and not very user-friendly at all.

What you are facing with these contours somehow has to do with how

trying to connect one point to the same point, but in a different region
of the plot window?

Thanks,
Ben
