Subject: Re: Weird Map Projection
Posted by K. Bowman on Wed, 30 Aug 2006 20:02:44 GMT
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In article <MPG.1f5f88cbea27da24989ca3@news.frii.com>,
David Fanning <davidf@dfanning.com> wrote:

> Folks,
>
> OK, here is a question from the mail bag that I don't know
> the answer to.
>
> How can I set up a map projection space, using MAP_SET
> if possible, that has longitude 360 on the LEFT and
> longitude 0 of the RIGHT.

In the example, there are no labels for 90 and 270, so it is not possible to tell whether longitude actually decreases to the right or whether it is just labeled in a "creative" way. (That is, the longitudes could be 360, 90, 180, 270, 0 or 360, 270, 180, 90, 0.)

If you really need longitude to decrease to the right, assuming the data array and associate longitudes vary like this

```
IDL> x = 360 - 90*lindgen(5)
IDL> print, x
       360       270       180       90         0
```

Just flip the coordinates (not the data) like this

```
IDL> x1 = -x + 360
IDL> print, x1
         0        90       180       270       360
```

and use a conventional MAP_SET. Then

```
CONTOUR, z, x1, y, ...
```

and label "manually"

```
FOR i = 0, 360, 90 DO YXOUTS, x1[i], y0, STRTRIM(x[i], 2)
```

If your data has longitude *increasing* to the right, but you want to plot it backwards, flip the data, not the longitudes.

Ken Bowman

Subject: Re: Weird Map Projection
Posted by David Fanning on Wed, 30 Aug 2006 20:12:24 GMT
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Kenneth Bowman writes:

> In the example, there are no labels for 90 and 270, so it is not possible to
> tell whether longitude actually decreases to the right or whether it is just
> labeled in a "creative" way. (That is, the longitudes could be 360, 90, 180,
> 270, 0 or 360, 270, 180, 90, 0.)
>
> If you really need longitude to decrease to the right, assuming the data array
> and associate longitudes vary like this
>
> IDL> x = 360 - 90*lindgen(5)
> IDL> print, x
> 360 270 180 90 0
>
> Just flip the coordinates (not the data) like this
>
> IDL> x1 = -x + 360
> IDL> print, x1
> 0 90 180 270 360
>
> and use a conventional MAP_SET. Then
>
> CONTOUR, z, x1, y, ...
>
> and label "manually"
>
> FOR i = 0, 360, 90 DO YXOUTS, x1[i], y0, STRTRIM(x[i], 2)
>
>
> If your data has longitude *increasing* to the right, but you want to plot it
> backwards, flip the

Well, shoot, that's what I thought. I just assumed it
was wrong. :-)

Thanks,

David

--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.dfanning.com/
Sepore ma de ni thui.
(Opata Indian saying, meaning "Perhaps thou speakest truth.")