
Subject: Re: I'm doing something wrong with map_image
Posted by [David Fanning](#) on Wed, 01 Jun 2011 03:48:28 GMT
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almost_like_a_metaphor writes:

> OK, from your example, what I want to display is a window that zooms
> in on just that blue box - where the coordinates of the box bound the
> window. Since I'm using simple cylindrical projection, I thought I
> could get away with just putting the image as a background to a plot
> window, as long as the axes and image corners aligned. I think my
> issue is that I was insisting on thinking of it as a data plot with an
> image background, and I really need to think of it as a displayed map
> image with shapes overplotted.
>
> So, if my base image is a global map, and all I want to do is take one
> 3x3 degree piece of it, display that, and plot my grid lines and data-
> overlay on it, do I have to create a small, subsampled "image" from
> your example above? Or can I simply display a smaller part of the
> image? in cgimage, image[lonrange,latrange]? Though in that case I
> think I'll have to convert my lat/lon ranges to image coordinates.

Let's suppose that each pixel represents 0.12 degree of latitude
or longitude (i.e., 360/3000. or 180/1500.) We can make a longitude
and latitude vector, like this:

```
lon = Scale_Vector(Findgen(3000), -180, 180)  
lat = Scale_Vector(Findgen(1500), -90, 90)
```

Now, which indices in the longitude vector represents, say, 0 and 20
degrees of longitude? We can use Value_Locate to find out:

```
Print, Value_Locate(lon, [0,20])  
1499 1666
```

We do the same thing with the latitude vector.

```
Print, Value_Locate(lat, [0,20])  
749 916
```

Is this right?

```
Print, lon[[1499,1666]]  
-0.0600128 19.9867
```

```
Print, lat[[749,916]]  
-0.0600433 19.9933
```

Pretty close. So, we just zoom into this portion of the image and set the map projection space up accordingly.

```
image = congrid(shift(cgDemoData(7), 180, 0), 3000, 1500)
subimage = image[1499:1666, 749:916]
cgLoadCT, 0
cgimage, subimage, /keep, position=p
map_set, /noerase, position=p, /cylindrical, $
    limit=[-0.0600433, -0.0600128, 19.9933, 19.9867]
map_continents
map_grid
plots, 10, 10, psym=4, color=cgcolor('yellow')
```

Cheers,

David

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

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