
Subject: Re: Plot curved line on a globe projection
Posted by [David Fanning](#) on Sun, 28 Jul 2013 19:16:49 GMT
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ljs15@fsmail.net writes:

```
> I want to plot some straight line sections on a gridded globe plot (i.e. a line joining two points
> with different lat/lon coordinates), but want these lines to follow the curve of the globe.
>
> I did a test (which I thought would work!) using the following code, but it just plots a straight line:
>
> ;Coordinates etc
> latcentre = 30
> loncentre = 0
> angle = 0
>
> ;Plot globe
> set_plot, 'ps'
> !p.font=0
> device, /encap, xsize=6, ysize=6, /inches
> loadct, 0
> map_set, latcentre, loncentre, angle, $
>      /orthographic, /isotropic, /grid, /horizon, /noborder
> map_grid, latdel=5, lonel=5, glinestyle=0, glinethick=0.5, color=cgcolor('black')
> oplot, [10,30], [30,50], color=cgcolor('black')
> device, /close
>
> Can anyone offer any help? Is there anything simple I'm missing? I've searched online, but only
> seem to be able to find posts related to contouring on globe plots.
```

You can use Map_2Points to get the points making up a great circle route, but there won't be much difference. Here is an example. The green line is a straight line, the red is equally spaced in distance, and the blue is equally spaced in longitude.

```
;Coordinates etc
latcentre = 30
loncentre = 0
angle = 0

;Plot globe
;set_plot, 'ps'
;!p.font=0
;device, /encap, xsize=6, ysize=6, /inches
cgdisplay, 600, 600
loadct, 0
cgmap_set, latcentre, loncentre, angle, limit=[30, 0, 50, 40], $
      /orthographic, /isotropic, /horizon, /noborder
```

```
cgmap_grid, latdel=5, lonel=5, glinestyle=0, glinethick=0.5
cgPlotS, [10,30], [30,50], Color='grn7'; Straight line.
cgPlotS, Map_2Points(10, 30, 30, 50, DPath=1, NPath=50), $
    Color='red' ; Evenly spaced in distance
cgPlotS, Map_2Points(10, 30, 30, 50, /RHUMB, NPath=50), $
    Color='blue' ; Evenly spaced in longitude.
;device, /close
END
```

Cheers,

David

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David Fanning, Ph.D.

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

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