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Subject: Re: Over-PLOT() on MAP()?

Posted by [penteado](#) on Sat, 11 Dec 2010 21:56:34 GMT

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On Dec 11, 4:58 pm, Matt Haffner <matt.haff...@gmail.com> wrote:

> I hope I'm missing something obvious, but I can't seem to get this to  
> do anything but put symbols at the center of the projection:

>

> IDL> m = map('Hammer')

> IDL> p = plot([190, 230], [25, 35], /over, symbol='o', /sym\_filled,

> sym\_size=2, /data, sym\_color="blue")

>

> Annotations and text go in the right place:

>

> t = text(80, 25, 'Hello', /data)

>

> But PLOT() isn't using the coordinate system at all. Even if the

> projection range is changed via LIMIT, all symbols end up in the

> middle of the new projection.

plot() seems to have inherited the same limitation as iplot with  
respect to overplotting on maps:

[http://groups.google.com/group/comp.lang.idl-pvwave/browse\\_thread/read/thread/7dad5b4234801dea](http://groups.google.com/group/comp.lang.idl-pvwave/browse_thread/read/thread/7dad5b4234801dea)

You need to use its map projection to convert the coordinates to  
Cartesian:

```
m=map('sinusoidal')
```

```
lats=[60.,30.,0.,-60.,-45.,60.]
```

```
lons=[-60.,0.,120.,30.,-60.,-60.]
```

```
xy=map_proj_forward(lons,lats,map_structure=m.map_structure)
```

```
p=plot(xy,/over,color='red')
```

Doing that I noticed a bug where my grid lines have a tendency for  
disappearing when the map is selected, or something is overplotted, if  
the labels are inside the grid (if label\_position is larger than 0 and  
smaller than 1). Sending the labels to the outside (0 or 1) makes the  
problem go away, but in projections like that, also makes for an ugly  
plot.

So plot() should be made map-aware like image() and contour() are.  
While at it, it should give the option to connect the points with  
great circles instead of straight lines.

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