Subject: Re: plot, lons, lats overlayed on a map Posted by T Bowers on Mon, 25 Jan 1999 08:00:00 GMT

View Forum Message <> Reply to Message

Liam Gumley wrote in message <36ACDB45.A741D494@ssec.wisc.edu>...

- > T Bowers wrote:
- >> How do I create a plot that overlays a map correctly?

>

- > The strategy outline in your email will give misleading results even if
- > you line up the map and plot edges. The orthographic projection does not
- > give a uniform x/y grid (which you get from PLOT). Thus you need to
- > create the map projection first, and then plot your points on the map
- > projection. For example (assuming you have IDL 5.1 or 5.2):

>

- > map\_set, 35, 125, /ortho, xmargin=[5,5], ymargin=[5,5], scale=10e6
- > map\_grid, /box
- > map continents, /hires
- > oplot, lons, lats, psym=6

>

- > You can modify the SCALE keyword to MAP\_SET to zoom in or out. It's much
- > more convenient than using the awkward LIMIT keyword. And the BOX
- > keyword to MAP\_GRID creates lat/lon labels along the map edges.

>

Hmmm... it works! But...I've got the problem that the next data station(s) may

be10 deg. south of this cluster and I need to make sure that when the updated

set of lats and lons comes through (I just append to the arrays with lats = [lats, newLat]

lon = [lons. newLon]

) that the new plot will adjust automatically to encompass ALL the points. That's

where I was trying to go with the xrange[], yrange[] keywords to plot and the

limit[] keyword to map\_set. I guess(??), if there is an algorithm to convert a surface

distance to a scale, maybe it could work. e.g. I would take the larger of (maxLon -minLon) and (maxLat -minLat), add and subtract 5% of the result to get a 5% margin, and use this distance to calculate what scale I could use so it

would encompass all the points. Sound reasonable, or would wrestling with the

limit keyword be better?

Oh! Also, I don't \*have\* to use the orthographic projection, any will do as long

as they overplot well. That's the top priority.

<del>-</del>			
Ihan	/C	1 10	m
Than	N.S. I	பு	111.
	, .		

todd