
Subject: New procedure to plot great circles on a map
Posted by [Liam Gumley](#) on Tue, 04 May 1999 07:00:00 GMT
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A few days ago, I wrote:

> I seem to recall there is a way to draw great circles on a map. However
> the best I can come up with is
> map_set, /orth, /isot, /cont, /grid
> plots, [-45,-45], [45,-45]
> I really want a line between the two points that takes the shortest
> distance (in this case it would follow the longitude grid line).
> Any hints?

After no responses from the newsgroup (everyone must be outside enjoying spring or fall?), I contacted RSI technical support, and the response was that in IDL 4.0.1, you could provide just endpoints and the line would conform to the map projection (I **knew** I remembered it from somewhere!). However, because of several requests to change it, a line just drawn between two endpoints is a straight line in IDL 5.0 and higher (who made this request?).

Anyway, I like a challenge, so I put together a procedure named great_circle.pro that plots a great circle curve between a pair of latitude/longitude points on an existing map projection. Great circles crossing the international date line are handled correctly. You can find it at

ftp://origin.ssec.wisc.edu/pub/gumley/great_circle.pro

It requires the neat ESRI routine compass.pro which is available at

<ftp://origin.ssec.wisc.edu/pub/gumley/compass.pro>

Cheers,
Liam.

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