
Subject: Re: how to calculate distance from pairs of latitude/longitude measurements?

Posted by [David Fanning](#) on Wed, 11 Mar 2009 20:33:48 GMT

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llo writes:

> I tried the following formula I found in your link:
>
> Distance between points
>
> The great circle distance d between two points with coordinates
> {lat1,lon1} and {lat2,lon2} is given by:
>
> $d = \arccos(\sin(\text{lat1}) \cdot \sin(\text{lat2}) + \cos(\text{lat1}) \cdot \cos(\text{lat2}) \cdot \cos(\text{lon1} - \text{lon2}))$
>
> A mathematically equivalent formula, which is less subject to rounding
> error for short distances is:
>
> $d = 2 \cdot \arcsin(\sqrt{(\sin((\text{lat1} - \text{lat2})/2))^2 + \cos(\text{lat1}) \cdot \cos(\text{lat2}) \cdot (\sin((\text{lon1} - \text{lon2})/2))^2})$
>
> the result is 0.8777. 0.8777 distance from montreal to albany ????

Try MAP_2POINTS in the IDL distribution.

Cheers,

David

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David Fanning, Ph.D.
Coyote's Guide to IDL Programming (www.dfanning.com)
Sepore ma de ni thui. ("Perhaps thou speakest truth.")
