
Subject: Re: Matching Lats and Lons from two arrays
Posted by [Jeremy Bailin](#) on Wed, 27 Aug 2008 12:49:47 GMT
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On Aug 26, 11:47 am, wilsona <awils...@bigred.unl.edu> wrote:

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> I have 2 seperate arrays of Latittudes and Longitudes.
> CS_LATLON(0,4607) is one latitude array and dlat(192,139) is the
> other
> CS_LATLON(1,4607) is one longitude array and dlon(192,139) is the
> other.
> I want to index through each element in both CS_LATLON arrays and
> find
> which point(s) in the dlat and dlong arrays are closest.
> I tried using nested loops but that gave me 12 million+ loops which
> is
> too many for my liking. I now am trying search2d
> NUM_PNTS = N_ELEMENTS(CS_LATLON(0, *)) - 1
>
> FOR J = 0, NUM_PNTS DO BEGIN
>   CLOSE_LATS = SEARCH2D(dlat, 0, 0, CS_LATLON(0,J),
> CS_LATLON(0,J), INCREASE=0.5,  $
>   DECREASE=0.5)
>   lat1 = CS_LATLON(0,J) * PI / 180.0
>   FOR K = 0, CLOSE_LATS DO BEGIN
>     lat2 = dlat(K) * PI / 180.0
>     d_long = CS_LATLON(1,J) - dlon(K) * PI / 180.0
>     DISTANCE = 10800.0 / PI * acos(sin(lat1) * sin(lat2)
> +
> cos(lat1) *    $
>               cos(lat2) * cos(d_long))
>   ENDFOR ; K
> ENDFOR ; J
> This is not working they way I would like. Any suggestions on this
> would be greatly appreciated.
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You might find WITHINSPHRAD in JBIU useful:

<http://astroconst.org/jbiu/jbiu-doc/astro/withinsphrad.html>

-Jeremy.
