Subject: Re: Matching Lats and Lons from two arrays Posted by Jeremy Bailin on Wed, 27 Aug 2008 12:49:47 GMT View Forum Message <> Reply to Message

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On Aug 26, 11:47 am, wilsona <awils...@bigred.unl.edu> wrote:
> 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
 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.
You might find WITHINSPHRAD in JBIU useful:
http://astroconst.org/jbiu/jbiu-doc/astro/withinsphrad.html
-Jeremy.
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