Subject: Re: Indices ?
Posted by sdj on Thu, 02 Dec 2004 16:03:17 GMT
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OK, so let me explain what I need to do and why I think that the aforementioned information is necessary. Please excuse me if this message is a tad long...

I have two satellite sensors giving me SST values on two different grids:
sensor1 is 4320 lon points by 2160 lat points
sensor2 is 4096 lon points by 2048 lat points

I need to interpolate the sensor1 data onto the sensor2 grid. To do this I have found via this newsgroup a useful routine written way back in 1994 by Dan Bergmann: interp_sphere.pro

The interp_sphere.pro routine is called in the following way:
IDL> grid = INTERP_SPHERE(lat,lon,data)
where
lat: The latitudes on the grid where interpolated
values are desired (in degrees)
lon: The longitudes on the grid where interpolated
values are desired (in degrees)
data: An array (3,ndata) where ndata is the number of
data points, and can be any number larger than N.
each row of data should contain a longitude, a
latitude, and a value to be interpolated.

Therefore in my case:
lat => (lat_sensor2[valid_lat_s2])
lon => (lon_sensor2[valid_lon_s2])
data =>
(lat_sensor1[valid_lat_s1],lon_sensor1[valid_lon_s1],data_se nsor1[valid])

My problem lies in finding the correct indices for the 1d arrays. i.e the indices: 'valid_lat_s2' ; 'valid_lon_s2' ; 'valid_lat_s1' ; 'valid_lon_s1'

The valid index for the data_sensor1 array is easy enough to find:
valid = where(data_sensor1 NE land)

If have a grid_sensor2 array which acts as a land/sea mask, how can I get the
'valid_lat_s2' and 'valid_lon_s2' indices ?

And finally returning to my original post, how do I relate the 'valid' indices of the data_sensor1 array to the 'valid_lat_s1' and

'valid_lon_s1' of the lat_sensor1 and lon_sensor1 arrays ?

I hope I have managed not to confuse you too much. I realize that I might be just complicating my life, but I would rather hope that I might be almost there...

Again thanks very much for your help.

Best Regards,
Pepe

David Fanning wrote:
> George N. White III writes:
>
>> David gave one approach. I sometimes find it helpful, e.g,
>> to apply criteria such as "lon > 0.5*lat", to create
>> arrays with all rows(lon)/columns(lat) the same:
>>
>> lon=b#transpose(1+lonarr(y))
>> lat=(1+lonarr(x))#transpose(c)
>
> Oh, that's a good idea. Although I'm still not clear
> what you *do* with the information. :-)
>
> Cheers,
>
> David
>
> --
> David Fanning, Ph.D.
> Fanning Software Consulting, Inc.
> Coyote's Guide to IDL Programming: http://www.dfanning.com/