Subject: Re: Another cartesian to spherical question
Posted by workmanj1 on Mon, 22 Dec 2008 15:55:21 GMT
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On Dec 22, 8:29 am, workma...@gmail.com wrote:
> OK, maybe simpler. If I have 3 arrays, one of lat coordinates, one of
> lon coordinates, and one with the corresponding value at that point.
> I want to pick some dlat,dlon and bin all the values in that region.
>
> Next I want to project it onto a 2-d spherical grid for use with map
> projections.
>
> Any ideas?

EDIT- the built in hist_2d will bin by lon,lat but won't take the f
(lon,lat) and bin that by lon,lat. Are there routines where you can
bin the value at a point by it's 2-d coordinates?

Subject: Re: Another cartesian to spherical question
Posted by Maarten[1] on Mon, 22 Dec 2008 16:18:46 GMT
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On Dec 22, 8:29 am, workma...@gmail.com wrote:
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The drizzle, decimate etc. discussion [1] at David's site has details
about this problem. I've used code from that discussion in CAMA to
solve the problem you describe, see the file
regrid_swaths_to_lat_lon.pro in [2]

[1] http://www.dfanning.com/code_tips/drizzling.html
[2] http://www.knmi.nl/omi/research/validation/cama/

Best,

Maarten

Subject: Re: Another cartesian to spherical question
Posted by ben.bighair on Mon, 22 Dec 2008 16:23:37 GMT

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On Dec 22, 10:55 am, workma...@gmail.com wrote:
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Hi,

I think you want to use JD Smith's HIST_ND (see http://www.dfanning.com/programs/hist_nd.pro) which will provide you with all you could ever need to perform slick binning tricks.

I am not sure how you would convert that 3D binned array to an image to project onto 2d map. Do you want the sum or mean of the f(lon,lat) values in each bin? In that case you could bin the lon-lat pairs and then use REVERSE_INDICES to collect all of the f(lon,lat) values in each bin.

CHeers,
Ben

Subject: Re: Another cartesian to spherical question
Posted by workmanj1 on Mon, 22 Dec 2008 16:28:40 GMT
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On Dec 22, 9:18 am, Maarten <maarten.sn...@knmi.nl> wrote:
> On Dec 22, 8:29 am, workma...@gmail.com wrote:
>
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> [2]http://www.knmi.nl/omi/research/validation/cama/
>
> Best,
>
> Maarten

Thanks, I'm taking a look now.

Subject: Re: Another cartesian to spherical question
Posted by workmanj1 on Mon, 22 Dec 2008 16:31:34 GMT
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On Dec 22, 9:23 am, "ben.bighair" <ben.bigh...@gmail.com> wrote:
> On Dec 22, 10:55 am, workma...@gmail.com wrote:
>
>> On Dec 22, 8:29 am, workma...@gmail.com wrote:
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> then use REVERSE_INDICES to collect all of the f(lon,lat) values in
> each bin.
>
> CHeers,
> Ben

Thanks,
I think I figured out how to do a 2d histogram weighted by f (lon,lat). What I'm trying to do is bin the sum, not mean. So if I have a lon lat cell from [[-45.5,-44.5],[-.5,.5]] with 5 elements each equaling 1 then I'd want the value in that bin to be 5. If you want the specifics of what I need to do it is one page back under cartesian to spherical coordinates. This is the last data analysis routine I need to get straight before I start simply submitting my final project to ques and finishing my doctorate.

Thanks,
Jared
