Subject: Re: Lonlat2reg.pro vs. Grid program Posted by Peter Albert on Tue, 23 Oct 2007 09:38:47 GMT

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Hi Nick,

it has been quite a while since I wrote lonlat2reg, and it has even been quite a while since I quit using IDL, so my comments here should be taken with a pinch of salt. However, when looking at the source code, I am pretty sure that your problem has to do with setting dlat to a negative number. In the end, this leads to negative elements in the one-dimensional index variable "s" which is sent to histogram, and in turn to negative index values "iy" which point into the output field. I'd guess that half of your Average_value1 is just zero (or no_data), but again, I can't test this. If you could do a test with lat0 = -90.0 and dlat = 1.0, things could possibly be better (but please be aware that in this case you either have to modify your code, too, or swap one of the two average arrays: "your" glat[0,0] is 89.5, the glat[0,0] as returned from lonlat2reg would be -89.5; with other words, glat = findgen(180) - 89.5 should be o.k.)

Cheers.

```
Peter
On 20 Okt., 11:25, Nick < jungbin...@hotmail.com> wrote:
> Hello, thankful users.
>
> As you know, lonlat2reg.pro is a very useful grid program.
> Yesterday I compared the result from lonlat2reg with code which I
> made.
> I anticipated that these results would be the same, but weren't.
>
  Why are they different? Could you please let me know?
>
  My code is like this...
>
> :====lonlat2reg
> result = lonlat2reg(value,lon,lat, lon0=-180.,lat0=90.,dlon=1.,
> dlat=-1., nlon=360., nlat=180.)
> Average value1 = result.avg(*,*)
>
> :====Mv code
> glon = findgen(360) - 179.5
> glat = -findgen(180) + 89.5
   for k=0, 179 do begin
   for j=0, 359 do begin
```

idx = where(lon | t glon(j) + 0.5) and lon ge glon(j) - 0.5 and lat le

```
> glat(k)+0.5 and lat gt glat(k)-0.5, nn)
     if nn ge 1 then begin
>
      S_{value(j,k)} = S_{value(j,k)} + total(value(idx),/nan)
>
      N_{value(j,k)} = N_{value(j,k)} + nn
>
     endif
>
>
   endfor ;j
   endfor;k
>
   Average_value2 = S_value / N_value
>
> My code is really slow, but I think it is easier understandable than
> lonlat2reg.pro
> So I was supposed to use lonlat2reg.pro if Average_value1 and
> Average_value2 would be the same.
```

> Thank you for your attention, Nick

Subject: Re: Lonlat2reg.pro vs. Grid program Posted by Nick[1] on Tue, 23 Oct 2007 12:41:28 GMT View Forum Message <> Reply to Message

Thank you, Peter.

I could solve the problems because of you.

As you said, I changed my code and it really worked!

Thank you very much.

Cheers, Nick