
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(*,*)  
>  
> ;=====My 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 lt 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
```
