
Subject: Re: How to make IDL faster

Posted by [Chris Lee](#) on Wed, 29 Oct 2003 09:35:02 GMT

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In article <ecee805.0310282135.5448e3af@posting.google.com>, "Park Kyung Won" <parkkw@mail1.pknu.ac.kr> wrote:

```
> Hello
> I write message first time.
> If I want to compare trmm satellite data with ground point data, I used
> to this line.
> geo(0,207,2985) : trmm latitude
> geo(1,*,*) : trmm longitude
> lat : ground location(latitude)
> lon : ground location(longitude)
> rain : automatic weather system rainfall data highf(0,207,2985) : trmm
> brightness temperature data  for i=0,207 do begin
>   for j=1200,1700 do begin
>     for k=0,di(0)-1 do begin
> if geo(0,i,j) gt lat(k)-0.04 and geo(0,i,j) lt lat(k)+0.04 and $
>   geo(1,i,j) gt lon(k)-0.04 and geo(1,i,j) lt lon(k)+0.04 then begin
>     printf,lun3,loc(k),lon(k),lat(k),rain1(k),rain(k),highf(0,i, j)
>   endif
> endfor
> endfor
> endfor
> When I caculate 26 trmm data, I wait almost 2hour. How can I change this
> program?
> Help me.
```

Hi,
(Caveat: I don't know what 'k' is, but it looks unrelated to my solution.
:)

I'm not sure how much accuracy you might lose, but you could speed it up by triangulating one grid onto the other. Assuming you have regular grids on the ground

```
dlon=5 ;degrees
dlat=5;degrees
```

```
sat_on_ground=SPH_SCAT(reform(geo[1,*,*], 207*2895L), $
                        reform(geo[0,*,*],207*2895L), $
                        reform(highf[0,*,*], 207*2895L), $
                        gs=[dlon,dlat], bounds=[0,-90,360,90])
```

;sat_on_ground should be a regular grid with all of the points interpolated onto it.

You probably need to alter that code, I assumed the satellite data was consistent (in time for example). If the 2nd axis (207 points) of the satellite data is orbit number, you might want to loop through SPH_SCAT 207 times using only the 3rd axis to make your grid, then you will have some temporal resolution to your data.

Once you have the two data sets on the same grid, comparing should be easier/faster.

Chris.
