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 <eceee805.0310282135.5448e3af@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 latitute
> geo(1,*,*) : trmm longitute
> lat : ground location(latitute)
> lon : ground location(longitute)
> 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.