Subject: 'loop limit expression too large for loop variable type' error
Posted by Snow53 on Mon, 30 Aug 2010 15:36:31 GMT
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Hi,

My code runs great on small data sets, but I'm trying to use it for larger sets and I've started getting an
"loop limit expression too large for loop variable type' error when I reach the "for j=0, num_ids-1 do begin". Why is this happening and how can I fix it?

THANKS!

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pro fractional_water_extraction_linux

;created by J. Watts (August 2010) .

; input:   1)file with fine spatial resolution data (300 m in this example)
;         2)grid file of coarse resolution (25 km in this example). create using lingen().
;         3)grid file with fine resolution (create by resampling the coarse resolution grid to the resolution of
;         the input fine with fine resolution data; generates pixels with id values with that of the coarse res. grid).
;         This grid was cliped to the same spatial extent of the fine resolution input data.

; output: a coarse resolution (25 km) file with fractional coverage information for each pixel.

; program objective: Determine fractional coverage of a certain DN value for all fine resolution pixels within each
; coarse resolution pixel. Output fractional value for each coarse pixel in envi binary file.




; Open index grids and store in arrays

coarse_grid = lonarr(368,390)
fine_grid = lonarr(30595,32478)
```

```
OPENR, lun1, '/measures/MODIS_MERIS_Water_Cover_panArctic/GlobCover/
25km_EASE_grid_subset_PanArctic_unq_ID', /get_lun
READU, lun1, coarse_grid
close, lun1
free_lun, lun1

OPENR, lun2, '/measures/MODIS_MERIS_Water_Cover_panArctic/GlobCover/
25km_EASE_grid_subset_PanArctic_unq_ID_300m_subGlob', /get_lun
readu, lun2, fine_grid
close, lun2
free_lun, lun2

; Initialize input grid that will hold high resolution VI data

in_data_grid = bytarr(30594,32477, 1)
openr, lun3, '/measures/MODIS_MERIS_Water_Cover_panArctic/GlobCover/
Globcover_NEASE', /get_lun
readu, lun3, in_data_grid
close, lun3
free_lun, lun3

;determine input grid data layer

VI=in_data_grid[*,*,0]

;determine output grid
  out_grid = fltarr(368,390,1)


 ;determine the unique id values from the grid and sort these values
by order

  coarse_ids = fine_grid[UNIQ(fine_grid, SORT(fine_grid))]
  ;print, coarse_ids

  ; determine the number of returned unique coarse_ids

  num_ids = n_elements(coarse_ids)
  ;print, num_ids

  ; loop through each coarse_id number

    for j=0, num_ids-1 do begin        ; this is where I get that
error message

    id = coarse_ids[j]

   ;count how many fine pixels occur at coarse_ids[j]
```

```
    id_index = where(fine_grid EQ id, count)
   count=count
   fcount=float(count)
    print, count



      if count EQ 0 then begin
        Fclass = -9999    ; gives this value to the output pixel

      endif else begin

  ; determine how many fine pixels of a certain class are within the
coarse pixel, and have a value equal to 210.

      class=210

       indexed_pixels=VI(id_index)
       count_class = where(indexed_pixels EQ class,count)
      count2=count
      fcount2=float(count2)

      ; print, count2

      if count EQ 0 then begin
      Fclass = 0
      endif else begin

 ;compute the fraction of pixels with VI equal to 210 out of total
count.



        Fclass = (fcount2 /fcount)
      ;print, Fclass

     endelse
      endelse

  ; place the fractional values in an out-grid
    out_grid[id] = Fclass


    endfor

; write the grid containing the fractional values to a file
openw, out_lun, '/measures/MODIS_MERIS_Water_Cover_panArctic/GlobCover/
GlobCover_Fractional_Water_Maps/GlobCover_FW_C210' , /get_lun
```

```
writeu, out_lun, out_grid
close, out_lun
free_lun, out_lun


end
```