
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!

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 clipped 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
```
