Subject: Optimizing loops
Posted by sam.tushaus on Wed, 02 Dec 2015 19:04:28 GMT
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Hello all! I am working with a large number of satellite data files. The files are quite big, but I've never had this much trouble working with them before, even while doing similar processing.

The basic program structure that's the slowest is below; it also just dominates the processing power as it enters this loop. I need to do this for each file I process.

```
; we want to calculate the percent of each satellite pixel
; covered by land
land_perc = FLTARR(N_ELEMENTS(field1))
FOR j = 0, N_ELEMENTS(field1)-1 DO BEGIN
   dist = (((land_lon - sat_lon[j])*COSD(land_lat))^2. $
         + (land_lat - sat_lat[j])^2.)^0.5*111.12

   ind14 = WHERE(dist LE 14.)
   land14 = land_mask(ind14)
   landy = WHERE(land14 EQ 0, landy_cnt)
   land_perc[j] = FLOAT(landy_cnt)/FLOAT(N_ELEMENTS(land14))*100
ENDFOR
```

If anyone has optimization suggestions, please let me know! Thanks :)