
Subject: Expand

Posted by Kelly Dean on Mon, 05 Jan 1998 08:00:00 GMT

[View Forum Message](#) <> [Reply to Message](#)

I am reading some AVHRR LAC data in the Level 1B format. The image provides 51 latitude/longitude pairs for each 2048 pixel scan line. They are sampled every 40 points starting at point 25 (25, 65, 105,..., 1945, 1985, 2025).

I created a simple IDL routine to expand the 51 values to 2048 values using FOR loops. I am looking for suggestions to make this more efficient.

Kelly Dean

```
+*****+INTER2048+*****+
FUNCTION INTER2048, array51
```

```
start = 24
interval = 40
line_pix = 2048
array2048 = FLTarr(2048)
;
; Assign repeatedly used variables.
;
value = array51
;
; Take care of the beginning part (extrapolation).
;
dvalue = (value(1) - value(0)) / interval
array2048(start) = value(0)
FOR i = start - 1, 0, -1 DO BEGIN
    array2048(i) = array2048(i+1) - dvalue
; PRINT, ' li >',i,array2048(i)
ENDFOR

FOR i = 0, 49 DO BEGIN
    dvalue = ( value(i+1) - value(i) ) / interval
    FOR j = ( start + i * interval + 1 ), ( start + (i+1) * interval ) DO
BEGIN
    array2048(j) = array2048(j-1) + dvalue
; PRINT, ' lj >',j,array2048(j)
ENDFOR
ENDFOR
;
; Take care of the ending part (extrapolation).
```

```
;  
FOR k = j, line_pix-1 DO BEGIN  
    array2048(k) = array2048(k-1) + dvalue  
;    PRINT, 'Ik >',k,array2048(k)  
ENDFOR
```

```
RETURN, array2048
```

```
END
```
