
Subject: Loop Limit Error

Posted by [eak](#) on Wed, 01 Dec 1999 08:00:00 GMT

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All,

Greetings. The function attached below is giving me the following error:

```
IDL> pkp79 = makeRegularStep(pkp.propTime[10880:42511],
pkp.pkp[10880:42511], 15)
% Loop limit expression too large for loop variable type.
<LONG ( 35038)>.
% Execution halted at: MAKEREGULARSTEP 40
C:\kp\idl\makeRegularStep.pro
% $MAIN$
```

I tried to work around this but failed. If one of guru like status can advise me whether I:

- a) Am doing this all wrong the smart way is X.
- b) Should split large arrays in bite size chunks (annoying)
- c) Declare the loop somehow with a better "i" type.
- d) Give up IDL programming and move to Havanna.

The summary of the function is that I have two arrays (PosixMinute, Values). The sample rate is sudo random centered around 15 minutes. I want to get niced regularly sampled data out where value = NAN if no samples in period, value = value if one sample, and if more than one sample in the period average them.

Help as always appreciated!

Thanks

Eric

----- FUNCTION -----

```
;+
; NAME:
; makeRegularStep
;
; PURPOSE:
; This function takes a set of irregularly spaced time series data
along with time stamps
```

```

; and rebins it into regular fixed step values.
;
; CATEGORY:
; Time tool.
;
; CALLING SEQUENCE:
;
; regularStepData = makeRegularStep( timeArray, dataArray, binsize)
;
; INPUTS:
; TimeArray: The time steps of the original data. Must be some type of
posix.
; DataValues: The values of the data at the time steps above.
; Binsize: The size of the regular bin desired in same units as
TimeArray
;
; KEYWORD PARAMETERS:
;
; OUTPUTS:
; Array: An array of regularly sampled data. Contains NAN if no sample
in the cell,
;         average if the cell contains multiple samples.
;
; EXAMPLE:
; regularStepData = makeRegularStep( timeArray, dataArray, binsize)
; will take the irregularly sampled dataArray and return a nice
binsize sampled regularStepData
;
; MODIFICATION HISTORY:
; Written by: Eric A. Kihn , Nov 29, 1999
;-
FUNCTION makeRegularStep, timeArray, dataArray, binsize

```

```

    hist = histogram (timeArray,binsize = binsize, rev = ri) ; assumes
15 min binsize
    tmpArray = fltarr(size(hist, /N_Elements) - 1); Set a new data array
with right num elements
    zsize = size(hist, /N_Elements);
    for i = 0 , zsize -2, 1 do begin

        if (ri(i+1) eq ri(i)) then begin; No Elements in this bin set the
data to NAN
            tmpArray(i) = !VALUES.F_NAN
        endif else begin
            binsize = ri(i+1) - ri(i)
            tmpArray(i) = total(dataArray(ri(ri[i] : ri(i+1)-1)))/binsize
        endelse
    endfor

```

endfor

return, tmpArray

END
