Subject: Two named structures with the same name that won't concatenate. Any suggestions?
Posted by J. Solbrig on Thu, 28 Aug 2008 23:56:01 GMT
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So, I'm really confused. The current code I am building repeatedly uses the line:

```
cld             = [[cld], [startCld(flist[i], pInd, lat[pInd],
lon[pInd], date[pInd], time[pInd])]]
```

where "cld" is an array of named structures and "startCld" is a function that creates a named structure. In both cases, the array is named "cirrusStruct." The concatenation above works 70 times in a row, however, on the 71st time it fails and gives the following error:

```
% Unable to concatenate variables because the dimensions do not agree:
<STRUCT    Array[1]>.
% Execution halted at: FINDTHINCIRRUS     467 /home/jsolbrig/geoprof-
lidar/findThinCirrus.pro
%                    $MAIN$
```

Now, after the error has occurred, if I use the "startCld" routine from command line to create a structure "a," then type "help, cld, a, /structure" they appear to be exactly alike, however still will not concatenate.

```
IDL> help, cld, a
CLD             STRUCT    = -> CIRRUSSTRUCT Array[70]
A               STRUCT    = -> CIRRUSSTRUCT Array[1]

IDL> help, cld, a, /str
;Help info for "help, cld, /str"
** Structure CIRRUSSTRUCT, 12 tags, length=112, data length=108:
   STARTDATE       LONG          20060701
   STARTTIME       DOUBLE        0.016666668
   STARTFILE       STRING    '/sn1/jsolbrig/GEOPROF-Lidar/
jul06/2006182000103_00927_CS_2B-GEOPROF-
LIDAR_GRANULE_P1_R04_E00.hdf.zip'
   ENDFILE         STRING    '/sn1/jsolbrig/GEOPROF-Lidar/
jul06/2006182000103_00927_CS_2B-GEOPROF-
LIDAR_GRANULE_P1_R04_E00.hdf.zip'
   STARTPROF       DOUBLE          151.00000
   ENDPROF         DOUBLE          151.00000
   STARTLAT        DOUBLE         -1.4628147
   ENDLAT          DOUBLE         -1.4628147
   STARTLON        DOUBLE          25.093336
   ENDLON          DOUBLE          25.093336
```

```
   MAXTHK          DOUBLE          0.0000000
   MINTHK          DOUBLE          0.0000000

;Help info for "help, a, /str"
** Structure CIRRUSSTRUCT, 12 tags, length=112, data length=108:
   STARTDATE       LONG          20060701
   STARTTIME       DOUBLE          9.8166666
   STARTFILE       STRING    '/sn1/jsolbrig/GEOPROF-Lidar/
jul06/2006182081529_00932_CS_2B-GEOPROF-
LIDAR_GRANULE_P1_R04_E00.hdf.zip'
   ENDFILE         STRING    ''
   STARTPROF       DOUBLE          35189.000
   ENDPROF         DOUBLE          0.0000000
   STARTLAT        DOUBLE          18.281832
   ENDLAT          DOUBLE          0.0000000
   STARTLON        DOUBLE          -118.93538
   ENDLON          DOUBLE          0.0000000
   MAXTHK          DOUBLE          0.0000000
   MINTHK          DOUBLE          0.0000000

;Concatenating arrays of structures
DL> cld = [[cld], [a]]
% Unable to concatenate variables because the dimensions do not agree:
A.
% Execution halted at: FINDTHINCIRRUS    467 /home/jsolbrig/geoprof-
lidar/findThinCirrus.pro
%                    $MAIN$
```

After what I've said above, there are still a couple more points that should be made.

1) The routine I am working on has previously concatenated up to 4,000 structures into the same array.

2) One of the 70 previous structures is coming directly from the same portion of the code that is failing.

```
endif else if true1[pInd] eq 0 and true2[pInd] eq 1 then begin
      ;continuing previous cloud
      prevBase       = layBase[cirrusLays[1], pInd]
      prevTop        = layTop[cirrusLays[1], pInd]

      ;starting second cloud
      cldMax                = n_elements(cld)
      cld            = [[cld], [startCld(flist[i], pInd, lat[pInd],
lon[pInd], date[pInd], time[pInd])]]  ;FAILS HERE
      prevBase       = [prevBase, layBase[cirrusLays[0], pInd]]
      prevTop        = [prevTop, layTop[cirrusLays[0], pInd]]
      twoCldStep[pInd]       = 3
```

If anyone has a suggestion as to how to fix this problem, I would greatly appreciate your input.