Subject: xyz triplet array to a "flat" 2D array?
Posted by T Bowers on Fri, 21 Jan 2000 08:00:00 GMT
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Does anybody have a quickie that'll convert data in xyz triplets
to "flat" format? e.g.

```
x y z          to       89.5 89.6 89.7 89.8
89.7 20.1 00.1      20.1           00.1
89.6 20.3 00.2      20.2                00.3
89.8 20.2 00.3      20.3   00.4 00.2
89.5 20.3 00.4
```

with x running across the top and y down the first column, blanks
are NaN's or whatever. Like it's been interpolated, but without
the interpolation ;).

I've come close, but no cuban. Here's what I was playing around
with last night. I gave up cause I just don't see it.

Thanks alot all

```
;///////////////
function colsToFlat, dataInCols

 xData = dataInCols[0,*]
 yData = dataInCols[1,*]
 zData = dataInCols[2,*]

 sortedXData = xData[sort(xData)]
 sortedYData = yData[sort(yData)]
 sortedUniqXData = xData[uniq(xData,sort(xData))]
 sortedUniqYData = yData[uniq(yData,sort(yData))]
 xSortOrder = sort(xData)
 ySortOrder = sort(yData)

 numDataPtsInX = n_elements(uniq(xData,sort(xData)))
 numDataPtsInY = n_elements(uniq(yData,sort(yData)))

 xFlat = sortedXData ;sortedUniqXData
 yFlat = sortedYData ;sortedUniqYData
 zFlat = fltarr(n_elements(xFlat), n_elements(yFlat))
 zFlat[xSortOrder,ySortOrder] = zData[*]

 ; +1 in next line to make room for x row and y column. dataFlat[0,0] just
 ; unused
 dataFlat = fltarr((n_elements(xFlat)+1), (n_elements(yFlat)+1))
 dataFlat[*] = !Values.F_NaN
```

```
 dataFlat[1:*,0] = xFlat
 dataFlat[0,1:*] = yFlat
 dataFlat[1:*,1:*] = zFlat

 ;//Need to remove duplicate x and/or y entries

 return, dataFlat
end
;///////////////
```