
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  
;//////////
```
