Subject: array dimensions and subscripts
Posted by Benjamin Hornberger on Tue, 27 Apr 2004 14:46:11 GMT
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Hi all,

I have a 3d data array A (n_columns, n_rows, n_data) where columns and rows make up an image and for each pixel in the image I recorded n_data different data values.

Then I have a 1d array B with n_data entries, and I want to subtract B from A such that for each element in A, the element from B in the corresponding data channel is subtracted. Obviously, A-B won't work. I can imagine two ways:

1. For loop

```
result = fltarr(n_columns, n_rows, n_data) ;; initialize
for i=0, n_data-1 do results[*, *, i] = A[*, *, i] - B[i]
```

2. Blowing up B to 3d (which I can't manage to do without a for loop either)

```
B1 = fltarr(n_column, n_rows, n_data)
for i=0, n_data-1 do B1[*, *, i] = B[i]
result = A - B1
```

But these solutions don't seem very elegant and efficient to me. Is there any way to make it work with a single array operation using the * subscript, or something similar?

Thanks for your help,
Benjamin