Subject: Re: prob. w/ subtracting scaler from an array
Posted by davidf on Wed, 05 Nov 1997 08:00:00 GMT
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Charlotte DeMott (demott@denali) uncovers an interesting
feature of IDL when she writes:

> hi, i've come across a very strange problem with IDL 5.0 and was
> wondering if anyone can find what is hopefully an obvious mistake
> that i'm overlooking. here's the scenaio:
>
> IDL> print, raw(long,*,day)
> -29.0149
> -77.3963
> IDL> x = total(pwgtd(long,*,day),2)
> IDL> print, x
> 9.79075
> IDL> print, raw(long,*,day)- x
> -38.8057
> IDL> print, raw(long,*,day)- 5
> -34.0149
> -82.3963
> i'm confused about why "raw(long,*,day) - x" returns a scalar (what
> i want is the 1D array) while "raw(long,*,day) - 5" correctly returns
> the 1D array. any ideas? thanks.

The reason for this is that x is not a scaler. It is an
array with one element in it. (Try HELP, x instead of PRINT, x).
When IDL subtracts one array from another the result is
always an array of the same size as the *smallest* array.
For example,

```
a = [3,5,2,6,9]
b = [4,1]
c = a - b
Help, c
```

C is a two-element array.

To make x a scaler, of course, you can subscript it, like this:

```
IDL> x = total(pwgtd(long,*,day),2)
IDL> x = x[0]
```

Cheers,

David

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