Subject: Subtracting a single variable from an array
Posted by polystethylene on Wed, 07 Jul 2010 17:04:38 GMT
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Hello all,

I'm faced with one of those problems that seems so absurdly simple that I have no angle of attack in terms of investigating the blighter; it's such a simple thing and yet it's falling over, and I can't for the life of me see why.

Here's what's going on:

I'm creating a sin wave out a time array, where the argument is (t-t0), where t0 is the first entry of the array.

```
tlist   =  input[0,*,a]
tfirst  = input[0,0,a]
targ  = (tlist - tfirst)


injectlc = medianflux +
(lcamp[i]*medianflux)*(sin(lcomega*(targ) + lcphase[i]))
```

The actual line putting the sine wave together doesn't matter, I put it there for completion's sake.

Printing the array gives me:

```
IDL> print,input[0,*,a]
      5158.3722
      5158.3731
      5158.3740
etc...
```

as I'd expect.

Printing tfirst gives me:

```
IDL> print,tfirst
      5158.3722
```

So all is well.

However, if I print:

```
IDL> print,(input[0,*,a]-tfirst)
      0.0000000
```

What's the deal here?

If I print:
```
IDL> print,(input[0,*,a]-5158.3722)
   0.00013553243
    0.0010267878
    0.0019064685
    0.0027861492
    0.0036774046
```
etc...

It works. So how come I can subtract the value by typing it out explicitly, but can't type the variable containing the same info?

The array is a double array, and consequently tfirst is a double. I presume subtracting the value by typing it means I'm subtracting a float instead of a double, but why would that matter? Even if consistency was an issue, shouldn't it be subtracting the double that works, not the float?

```
IDL> help,(input[0,*,a])
<Expression>    DOUBLE    = Array[1, 359]

IDL> help,tfirst
TFIRST          DOUBLE    = Array[1]
```

I also tried REFORMing the array to cut out the excess extra dimension before subtracting tfirst, but no luck.

I swear I've spent the vast majority of my brief IDL career doing subtractions from arrays in much the same way, so what's wrong here?

Advanced thanks to the person who spots my stupid mistake, puts the dunce cap on me and sends me to the corner.

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