Subject: Re: Subtracting a single variable from an array
Posted by Paul Van Delst[1] on Wed, 07 Jul 2010 17:41:24 GMT
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polystethylene wrote:
> 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)

what if you try:

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

?

The reform() gets rid of all the degenerate dimensions that are futzing things up (in particular the leading ones).

cheers,

paulv

>
>
>  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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