
Subject: Re: arithmetic operation on array
Posted by [David Fanning](#) on Mon, 12 Aug 2013 23:18:49 GMT
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Phillip Bitzer writes:

```
> Here are the sample code I used:
>
> data = RANDOMU(1L, 360, 180, 456)
> avg = MEAN(data, DIM=3)
> mData1 = FLTARR(360, 180, 456)
>
> tic & for i=0, 455 do mData1[:,*,i] = data[:,*,i] - avg & toc
>
> mData2 = FLTARR(360, 180, 456)
>
> tic & mData2 = data - Rebin(avg, 360, 180, 456) & toc
> tic & data = TEMPORARY(data) - Rebin(avg, 360, 180, 456) & toc ;just for completeness
>
> data = RANDOMU(1L, 360, 180, 456) ;redefine data - we changed it above
> mData3 = FLTARR(360, 180, 456)
>
> tic & mData3 = data - avg[:, *, 0] & toc
>
> I used mData (modified data) arrays so I can check I get the same answer, regardless of the
method.
>
> The four times I get are, in order relative to the above:
> % Time elapsed: 0.12749481 seconds.
> % Time elapsed: 0.33231401 seconds.
> % Time elapsed: 0.33304191 seconds.
> % Time elapsed: 0.019619942 seconds.
>
> So, it seems the mysterious extra dimension method is the fastest, by an order of magnitude.
Whoa.
```

Well, running your code, I find this:

```
Elapsed Time: 0.168000
Elapsed Time: 0.376000
Elapsed Time: 0.347000
Elapsed Time: 0.009000
```

But, that last number is truly unbelievable. A quick Help on mData3 reveals this:

```
IDL> help, mdata3
MDATA3      FLOAT    = Array[360, 180]
```

Whoops! I think you did one subtraction, not 456. :-)

Cheers,

David

--

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Coyote's Guide to IDL Programming: <http://www.idlcoyote.com/>

Sepore ma de ni thue. ("Perhaps thou speakest truth.")
