
Subject: Re: Bug in IDL or, may be in my head ?
Posted by [Michael Galloy](#) on Fri, 23 May 2014 22:39:44 GMT
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On 5/23/14, 2:01 AM, franciscoaiglesias@gmail.com wrote:

```
> Hi all,  
>  
> Any clue what's going on here ?  
>  
> a = randomn(seed, 248, 256, 9972) * 100. + 4.e3  
>  
> print, total(a) ; gives 1.42030e+12  
> print, total(a, /double) ;gives 2.5324144e+12  
> print, total(total(total(a, 1),1));gives 2.53250e+12  
>  
> Thanks !  
>
```

Check out Kahan summation:

http://en.wikipedia.org/wiki/Kahan_summation_algorithm

I have an implementation in mglib:

```
IDL> print, mg_total(a)  
% Loaded DLM: MG_ANALYSIS.  
2.53241e+12
```

Get mglib at:

github.com/mgalloy/mglib

-Mike
