

---

Subject: Re: mean() function

Posted by [Maarten\[1\]](#) on Fri, 13 Jan 2006 08:57:40 GMT

[View Forum Message](#) <> [Reply to Message](#)

---

savoie@nsidc.org wrote:

> Would you mind explaining this a bit for me? What's a proper running  
> average? And why is it better in general?

It assumes that values are reasonably close to the average,  
mathematically it is equivalent to taking the total, and then dividing,  
but it avoids some precision problems.

In IDL code it requires an explicit loop over the data, which is slow.  
An alternative is to do everything in double precision, but that is  
just postponing the inevitable.

Code to calculate the mean in an array X:

```
mean = 0.  
for ii = 0, n_elements(X)-1 do $  
    mean += (X[ii] - mean) / (ii + 1)
```

Maarten

---