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Subject: Re: randomn problem

Posted by [JD Smith](#) on Tue, 13 Mar 2007 16:25:34 GMT

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On Sun, 11 Mar 2007 16:04:39 -0700, askemer wrote:

> Hmm, that's funny. I've tried it on Linux and on OSX. I wonder if print,  
> stddev(randomn(seed, 1e8)) works on your computer too? If so, it could be  
> a problem with my memory allocation.  
>  
> -Andy

Clearly accumulating round-off:

```
IDL> print, stddev(randomn(seed, 1e8))
0.927200
```

In fact stddev.pro uses MOMENT, which goes to some trouble to avoid round-off, as follows:

```
Resid = X - Mean
; Var = TOTAL(Resid^2, Double = Double) / (nX-1.0);Simple formula

; Numerically-stable "two-pass" formula, which offers less
; round-off error. Page 613, Numerical Recipes in C.
Var = (TOTAL(Resid^2, Double = Double) - $
(TOTAL(Resid, Double = Double)^2)/nX)/(nX-1.0)
```

Though in this case it doesn't do much to help.

JD

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