
Subject: possible bug in a_correlate()
Posted by [t.osborn](#) on Fri, 01 Aug 2003 15:02:15 GMT
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Dear all,

another possible bug to check with you all [this one could be more major than the total() one reported earlier today]!

IDL Version 5.4 (OSF alpha).

```
IDL> x=findgen(50)+randomn(seed,50)
```

```
IDL> print,correlate(x[0:48],x[1:49])  
% Compiled module: CORRELATE.  
0.998140
```

```
IDL> print,a_correlate(x,[1])  
% Compiled module: A_CORRELATE.  
0.940559
```

Shouldn't these two give the same answer? The first correlates elements 0-48 with 1-49, while the second computes the lag-1 autocorrelation of the 50-element vector.

A quick check through the IDL code for a_correlate() seems to indicate a possible source of the bug. The function Auto_Cov computes the mean over the full length of the vector, whereas I think it should compute the mean over each segment separately (0:nx-m-1) and (m:nx-1), where m is the lag.

Have I got this right, and has anyone else noticed or corrected this?

Cheers

Tim
