Subject: smooth function with nan keyword but still getting "Floating illegal operand" messages
Posted by jkj on Sat, 20 Dec 2008 12:10:02 GMT
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I have been using the SMOOTH function for a single vector containing NaN values - and therefore I had the NaN keyword set - but have still been getting "% Program caused arithmetic error: Floating illegal operand" messages.

On switching to TS_SMOOTH, since it is a vector, the same data produces none of the error messages, but the code takes _much_ longer to run and the smoothed results are significantly different. There is no NaN keyword for TS_SMOOTH but it obviously takes the NaN values into consideration.

If I am using vector data with a fair amount (~20-30%) NaN values and I use the SMOOTH function, then I'm just going to have to put up with the "Floating illegal operand" messages? This is version 5.5 and I get the same thing when running on 6.1, but maybe the error message is not produced in version 7?

A sample vector is here: http://safaripass.com/mydata.save

I observe that for the "mydata" vector with a boxcar width of 5, TS_SMOOTH loses most of the data above array index 517, which I do not like. The boxcar behavior I would like is to discount NaN values within the box and return an average of what is left-over - SMOOTH is doing exactly this but TS_SMOOTH is requiring "boxcar" number of consecutive non-NaN values before it assigns an average.

Why would SMOOTH have a NaN keyword and still produce error messages? It looks like in order to get the best boxcar average of this quality of data without the "Floating illegal operand" messages that I will have to write an explicit boxcar average? any thoughts? Leaving a trail of these messages does nothing to build the researcher's confidence in the code! Apparently the SMOOTH function is internally still executing a division even when no valid elements exist within the boxcar.

Thanks,
-Kevin