Subject: Re: Yet again, The Sky is Falling!
Posted by Paul Van Delst[1] on Thu, 08 Mar 2007 18:24:56 GMT
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yp wrote:
> This is yet another floating point mystery, and I am unable to figure
> out which is the right way to deal:
>
> I wrote this program ("Operation") in which I made sure that all
> calculations are done in double precision. The program accepts 6
> mandatory arguments and returns the output to "result".
>
> Syntax: Operation, A, B, C, D, E, F, result
>
> I get variable results (after 3rd decimal point) when I pass some of
> the arguments as numbers and when I pass the same arguments as pre-
> defined variables.
>
> Case#1:
>
> IDL> Operation, A, B, 0.0D, 0.0D, 0.0D, F, result
> IDL> help, result
> RESULT DOUBLE = Array[7]
>
> IDL> print, result
> 1.0247013 1.0279051 1.0365066 1.0447064
> 1.0477210 1.0543893 1.0569390
>
>
> Case#2:
>
> IDL> C = (D = (E = 0.0D))
> IDL> Operation, A, B, C, D, E, F, result
> IDL> help, result
> RESULT DOUBLE = Array[7]
>
> IDL> print, result
> 1.0250284 1.0281385 1.0367149 1.0450368
> 1.0480349 1.0547703 1.0573193
>
> Why is such discrepancy? In my problem the accuracy after 3rd decimal
> point is not so important, however, after seeing the results I lose
> confidence on IDL's capability on Real number arithmetic!
>
> May be I am missing something?

Eliminating the most obvious possible problem:

Were A, B, or F modified in the first call and then not reinitialised before the second?

cheers,

paulv

--
Paul van Delst Ride lots.
CIMSS @ NOAA/NCEP/EMC Eddy Merckx