Subject: Floating illegal operand
Posted by Ed Wright on Thu, 03 Oct 2002 17:09:06 GMT
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Time to discuss my favorite IDL subject, Floating illegal operand...

Yesterday, I received an inquiry from a user of a DLM I wrote questioning me about the following:

IDL> cspice_pxform, 'GNS_GIM_CEM1', 'J2000', 74276223.927918d0, rotmat
% Program caused arithmetic error: Floating illegal operand

The procedure calculates a series of rotation matrices between two arbitrary frames (in this case the Genesis vehicle and the J2000 inertial frame) at a stated time.

The output matrix, rotmat, was correct. Nothing wrong there. I wrote a small C program, linked against the same library as the DLM, to reproduce the error. The program ran, produced the same numerical results to round off, but signaled no FPE error. Similar behavior for a FORTRAN version.

Question: the signal originates in the C library against which I link the DLM. How does the IDL environment capture this type of signal? Should the C program show no signal?

As always,
Ed Wright