Subject: Inverting large matrices using LA_LUDC and LA_LUSOL.
Posted by Pitufa on Thu, 05 Jan 2006 00:15:11 GMT
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Hi,

I was wondering if someone had a tip for my following problem:

I am trying to calculate a matrix of the form:

W = M^(-1)##A

where M = A##B, and:

size(A) =
2 3840 1942 9 7457280
size(B) =
2 1942 3840 9 7457280

I do this (or rather try) by using:
M = MATRIX_MULTIPLY(B,A)
LA_LUDC, M, Index , /DOUBLE, STATUS=STATUS
if status ne 0 then stop, 'Status ne 0.'

W = LA_LUSOL(M, Index, A , /DOUBLE)

But W##B is not equal to the identity matrix (the maximum difference
with the identity matrix is 6788.3314 !!), and the status returned is
0.

However, if I do the following:
M = MATRIX_MULTIPLY(B,A)
M2 = M
LA_LUDC, M, Index , /DOUBLE, STATUS=STATUS
if status ne 0 then stop, 'Status ne 0.'
W = LA_LUSOL(M, Index, M2 , /DOUBLE)
then the maximum difference with the identity matrix is 0.27161849
(even if the first case gave me this, I still have a problem).

IDL uses LAPACK routines to do the above operation, and apparently this
is the best option for this kind of operations.

Does anyone know what I might be doing wrong?

Thanks you for your time,

Carolina.