How to change the domain (grid) size

This is a little complicated only because of the multigrid solver mgrid. It is
to allow reuse of array space in mgrid.f90 (which was originally in fortran77).
But all this could now be circumvented by making use of f90's dynamic allocation of memory.

Here are the directions for the current form of the model

1. Choose grid dimensions
NI, NJ , NK , the number of grid cells in x,y,z directions
such that the grid can be subdivided a maximum number of times,
(by a factor of 2) to form "ngrid" levels of grid

For example, NI=48, NJ=24, NK=32 - -
NI constrains the grid levels to 4, i.e. ngrid= 4
corresponding to NI=24, 12, 6, 3,
NI= 48,24,12,6 and NK=32,16,8,4.

This is needed for the coarsening in the multigrid
solver for the pressure.

Set NI, NJ, NK in MODULE dimensions in the file mymodules.f90
Set the first 3 numbers in file mg.in to be NI,NJ,NK

2. Change the parameter ngrid in file preproc.f90

preproc.f90 is a standalone program - compile it using
ifort preproc.f90 -o preproc
Run preproc - Use the output (written to the screen) in the following way

3. In mymodules.f90 set parameter maxout to be the output value of maxdim

4. In subroutine mgrid.f90 set the following parameters
ngrid (determined by you based on NI,NJ,NK)
maxout (same as in mymodules.f90, written out as maxdim by preproc)
maxint (this is written out by preproc)
int1 (this is written out by preproc - it is ntint for the 1st grid, m=1)

Now remove all the .o files and recompile