How to plot data:

1-Run the xml using this syntax: $ /Path_to_this_compiled_program/ViscoElasticFlowSolver TheName.xml

the program will create some TheName-#.chk files that contain U,V,W,Txx,Txy,Txz,Tyy,Tyz,Tzz and g#.dat files which contain n_Owens (V8) and some other variables values.

2-To show TheName-#.dat files: First,(2-1) Convert chk files to dat using this syntax in terminal: $ /Path_to_this_PostProcessing_Tool/FldToTecplot *chk *xml . Then (2-2) load TheName-#.dat files into Tecplot using the tecplot data loader from file tab. Then (2-3) go to Data tab --> Edit Time Strands, tick the "multiple zoones" checkbox and fill "zones per group" textbox with number 20, toggle "constant delta" at the bottom and click Apply. Then (2-4) tick the "Slices" checkbox at the plot window at the left side of screen to the contours.

*(2-5) Use "details" button beside "contour" at "Plot" window to change the contours' to you desired variable.

*(2-6) To make a diagram for a variable in time at a certain point you should go to "Tools" tab --> "Probe..." then click on the contour slide at the main window.

3-In order to plot g#.dat files first,(3-1) you have to load these files into Tecplot and then a few more steps which are really time-consuming. So I suggest to go for the minimum required number of .dat files. After loading g#.dat files, Tecplot would start with "XY Line" plot mode. So, you should (3-2) switch to "3D Cartesian" plot mode by the drop-down menu at the top of "plot" window. Then (3-3) go to "Data" tab --> Create Zone --> Circular. (3-4) In the new popped up window change Radius to 0.5 and click "Create" button (or hit Enter) for as many times as number of g#.dat files you have loaded. Then (3-5) go to "Data" tab --> Interpolate --> Inverse distance and select each dat file in "source zone" with a circular zone at the "destination zone" and click "interpolate" button. (3-6) go to "Data" tab --> Edit Time Strands, select all the circular zones, toggle on "constant delta" at the bottom and click "Apply". then (3-7) tick the "Slices" checkbox at the plot window at the left side of screen to the contours.

*(3-8) Use "details" button beside "contour" at "Plot" window to change the contours' to you desired variable.

*(3-9) To make a diagram for a variable in time at a certain point you should go to "Tools" tab --> "Probe..." then click on the contour slide at the main window.

For steady state solution, see all the .dat files

For Pulsatile solution, see 384-512 .dat files