

STRUCTURE OF THE INPUT FILE

GLOBAL PROBLEM

Files

Topology

Level
Set

Time
Dependence

Convergence

Axis

Frames
Of
Reference

Probe
Set

Stat
Parameters

Restart

DGFluid PROBLEM

Physics

Properties

Boundary Conditions

Initial Conditions

Nondimensionalisation

Source Term

Numerics

Spatial
Discretisation

Temporal
Discretisation

Non Linear Solver

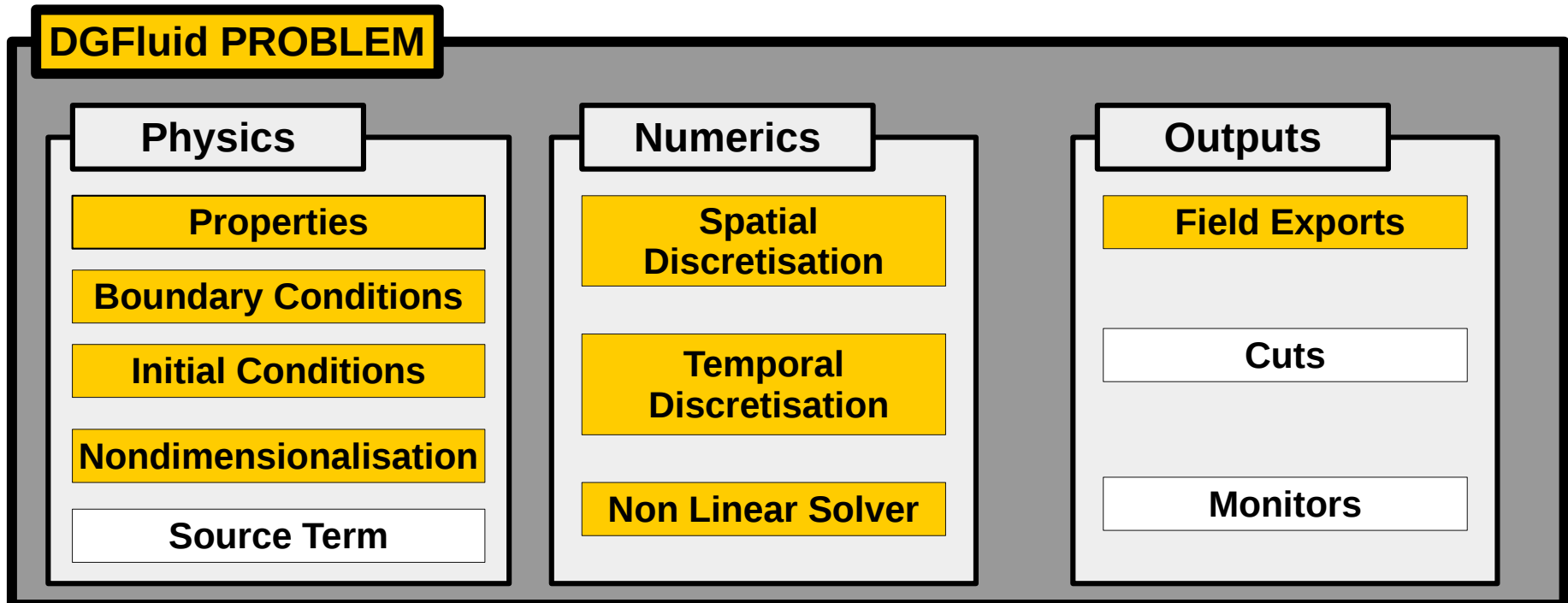
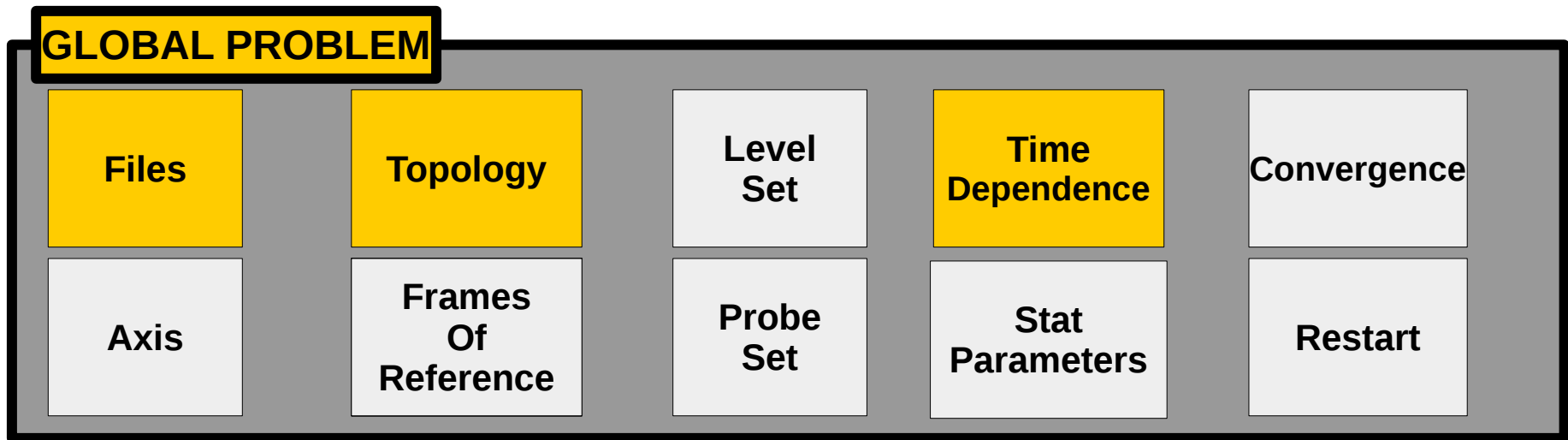
Outputs

Field Exports

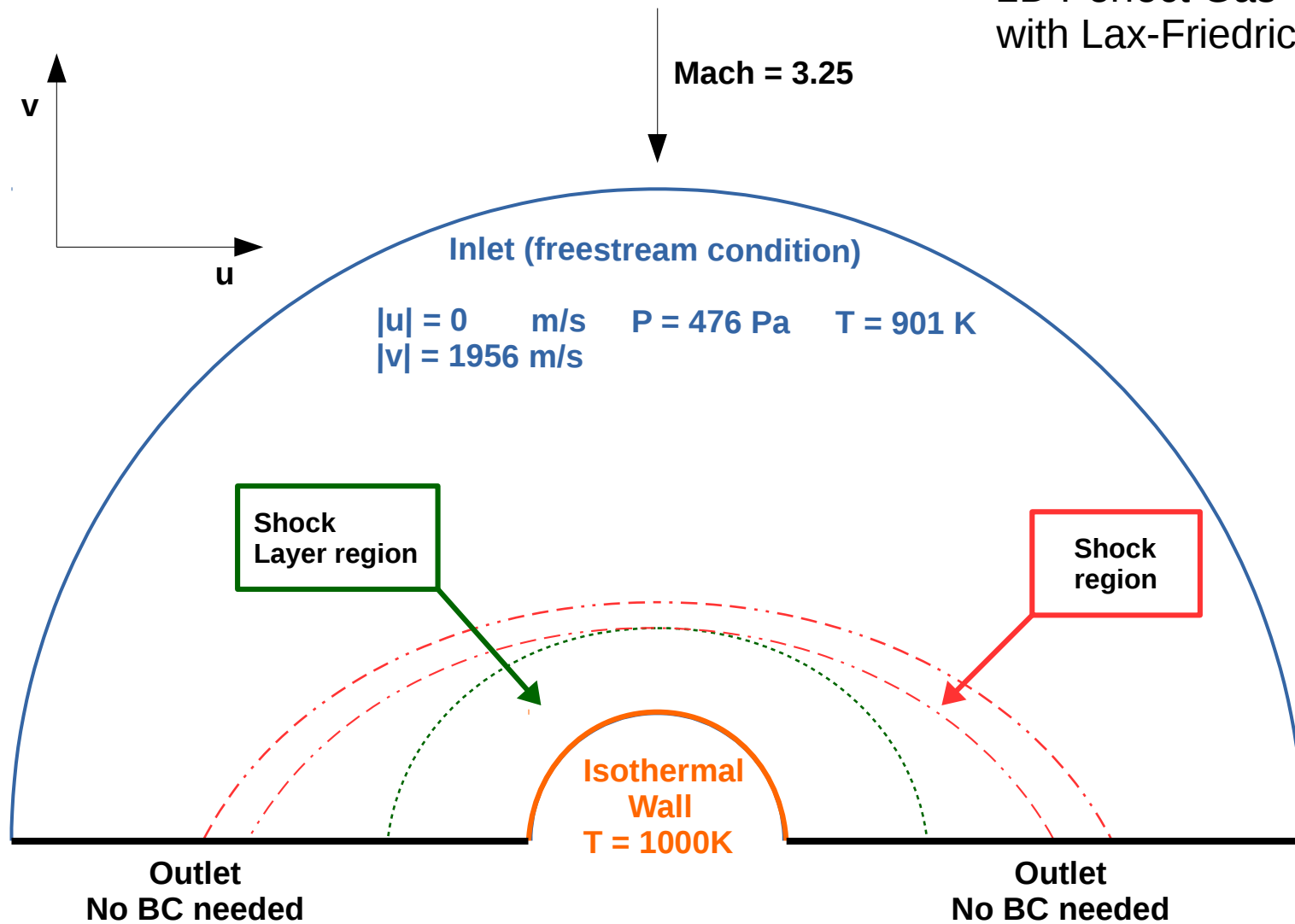
Cuts

Monitors

STRUCTURE OF THE INPUT FILE for our case

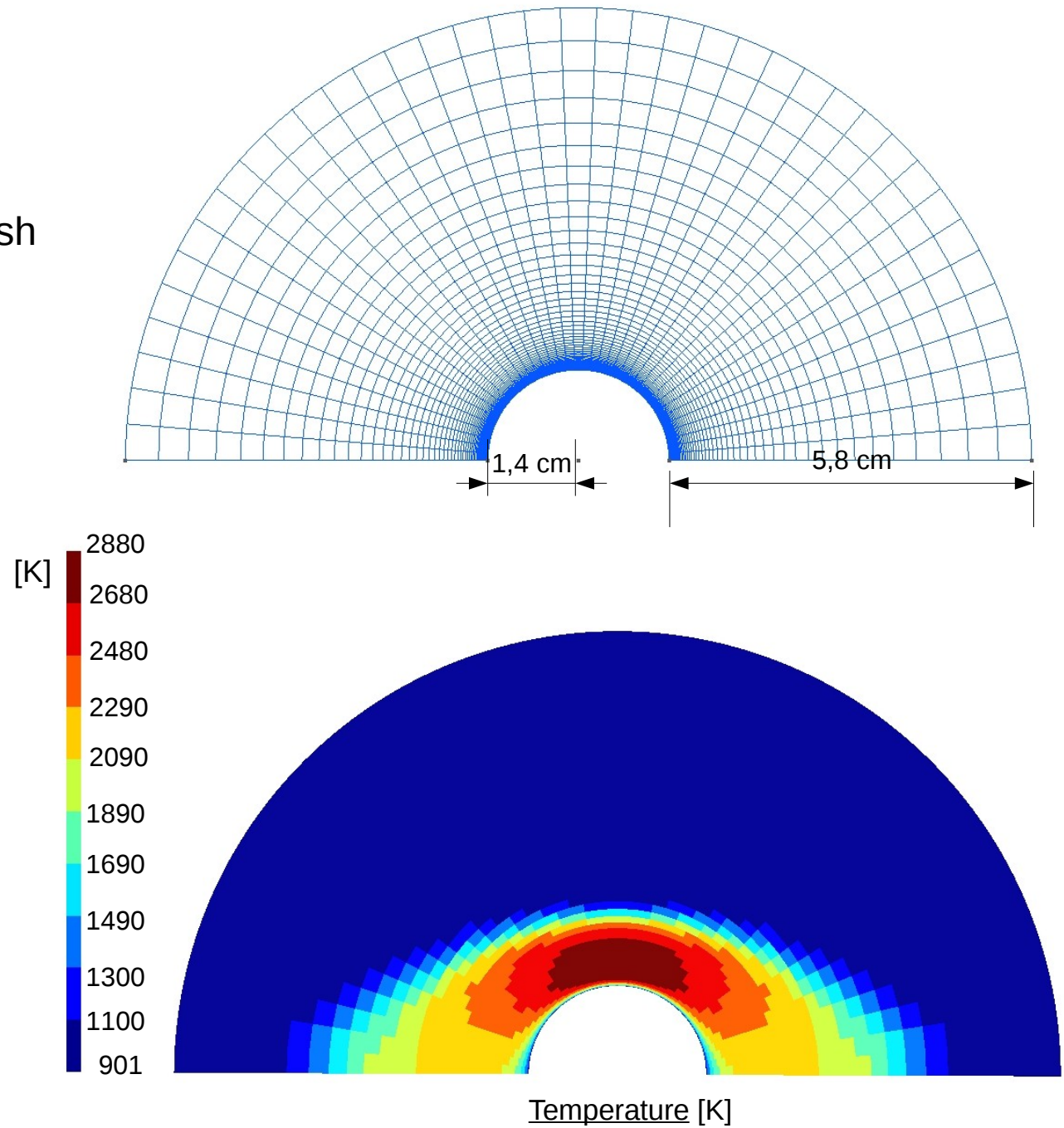


2D Perfect Gas
with Lax-Friedrichs flux

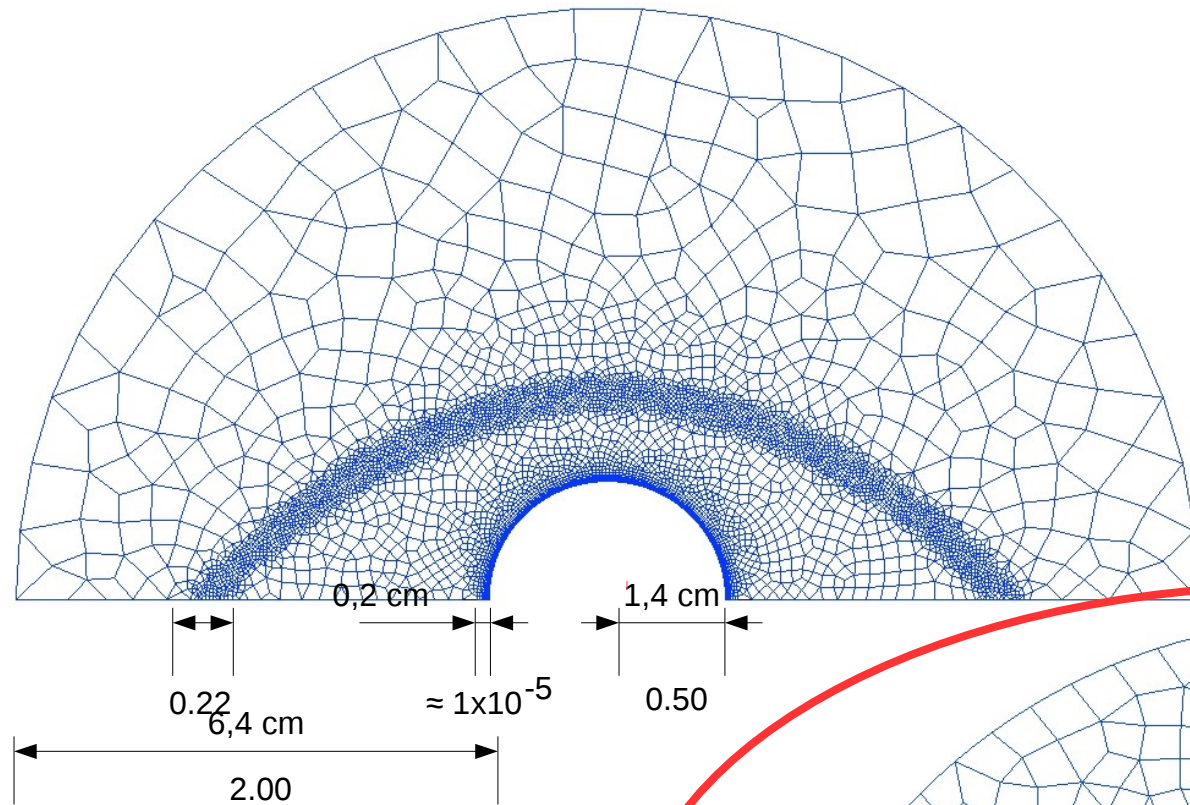
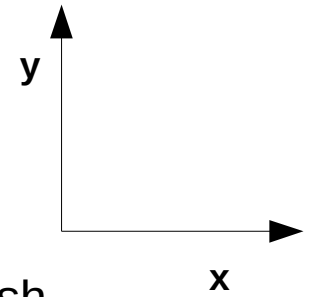


Unrefined Meshes

Coarse structured mesh
3323 elements

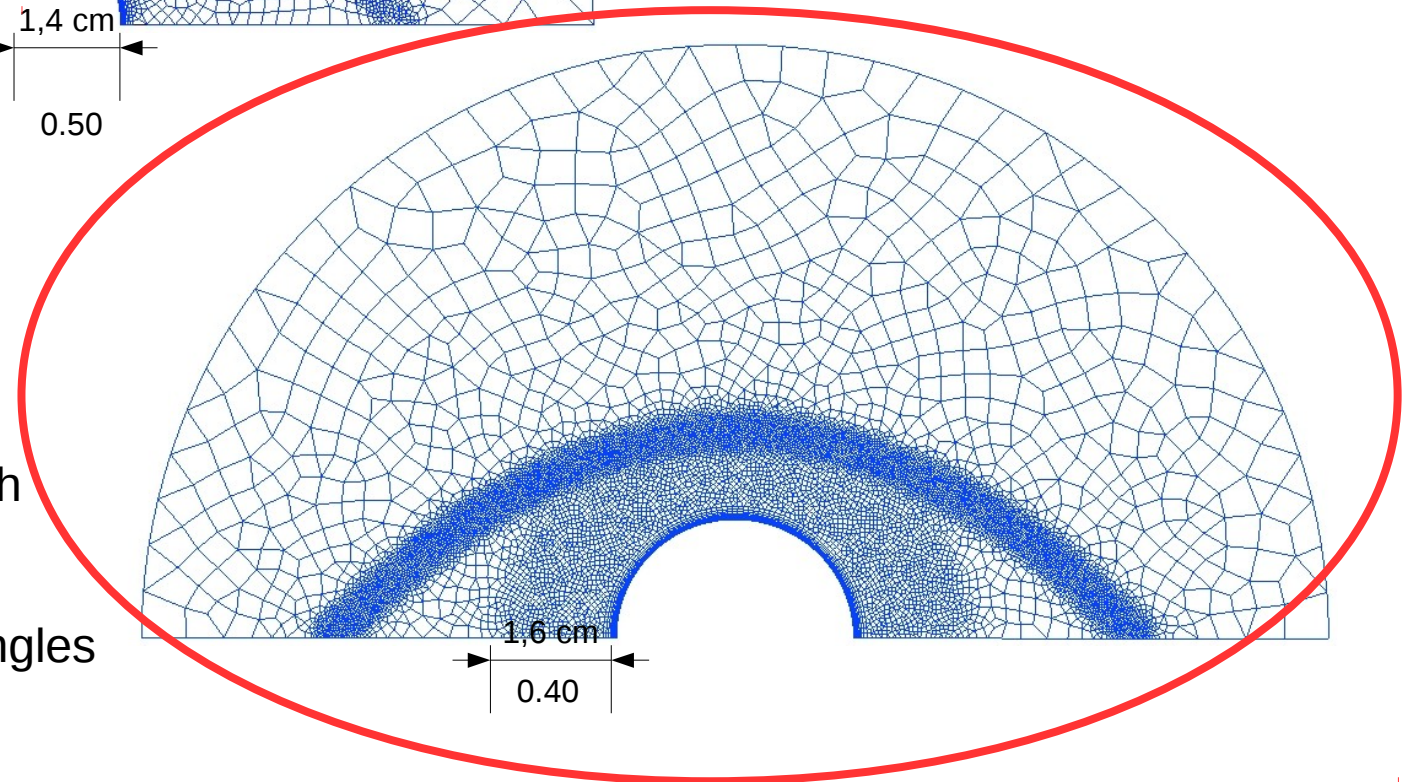


Refined Meshes

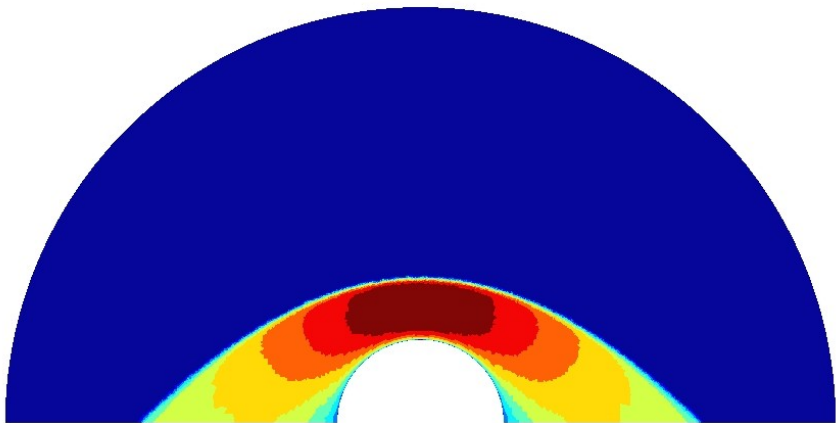


Unstructured mesh
7424 elements
- 1154 triangles
- 5764 quadrangles

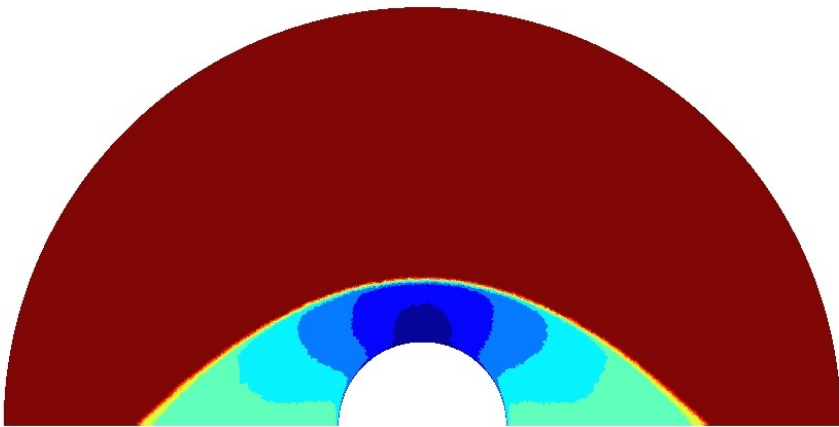
Unstructured mesh
15 606 elements
- 2865 triangles
- 11652 quadrangles



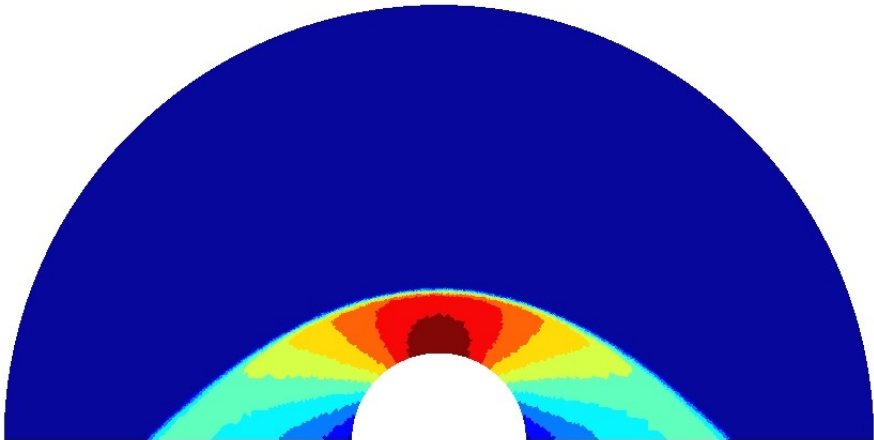
Solution on Refined 15606 elements mesh P0



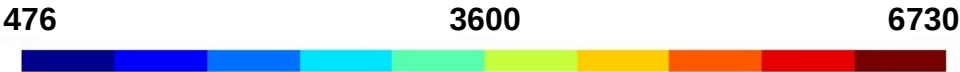
Temperature [K]



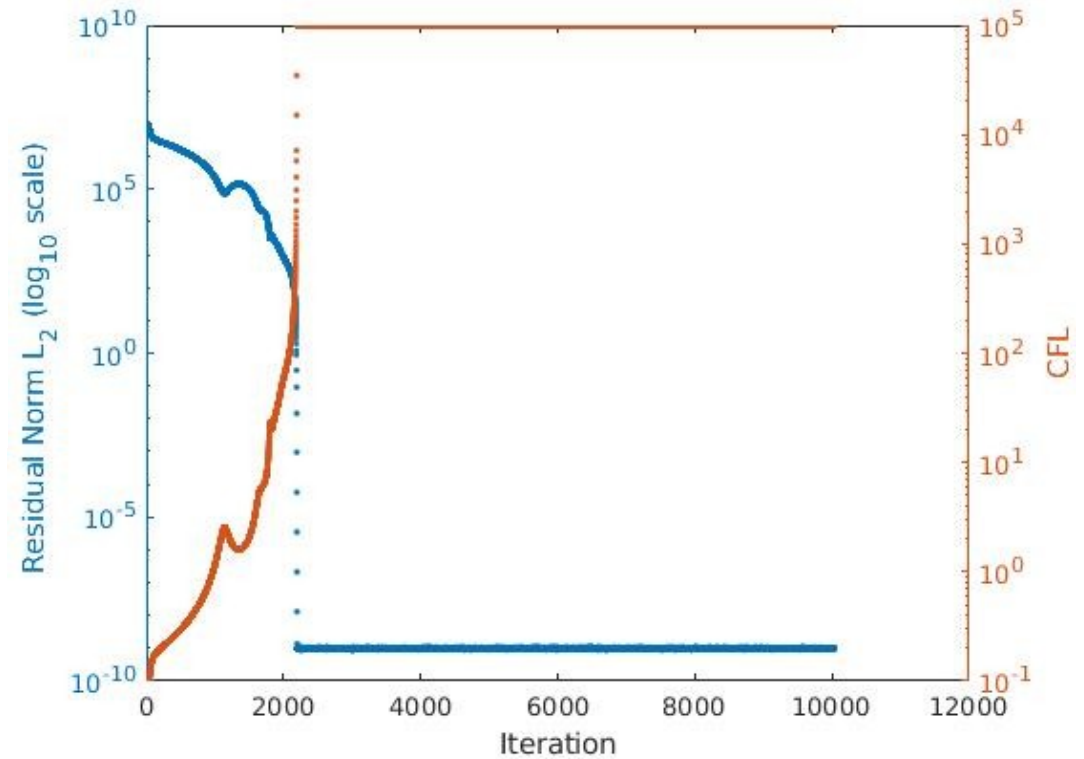
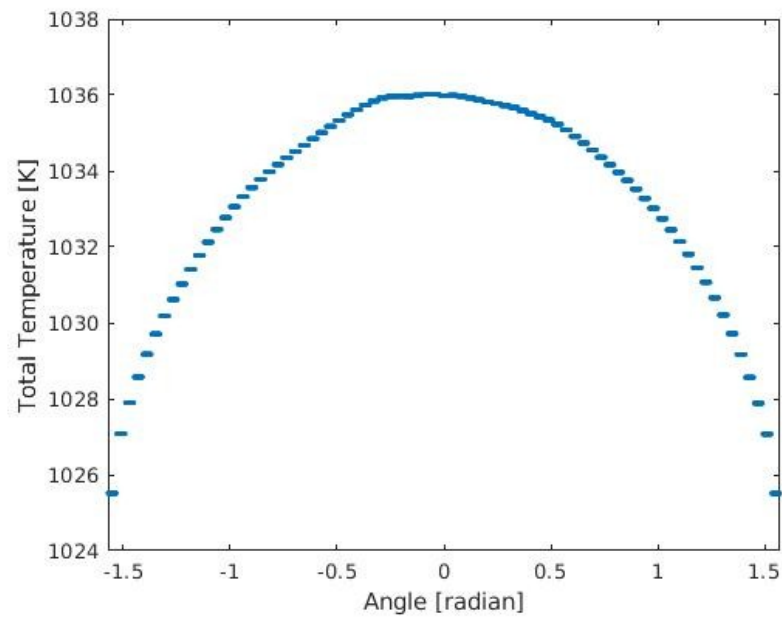
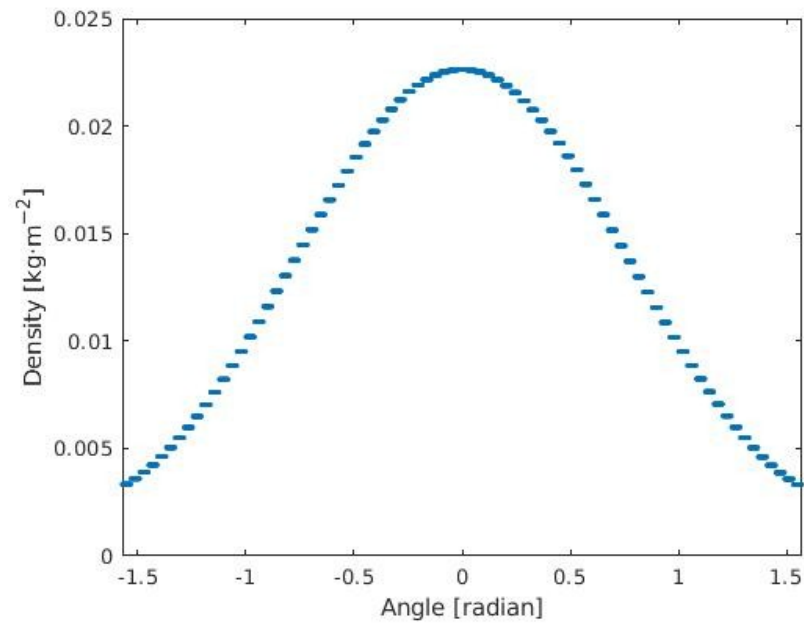
Mach Number



Pressure [Pa]

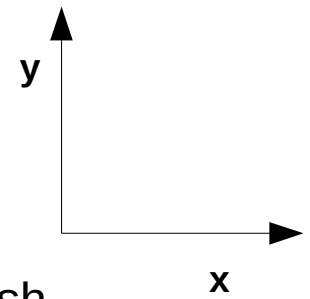


Solution along the wall on Refined 15 606 elements mesh P0

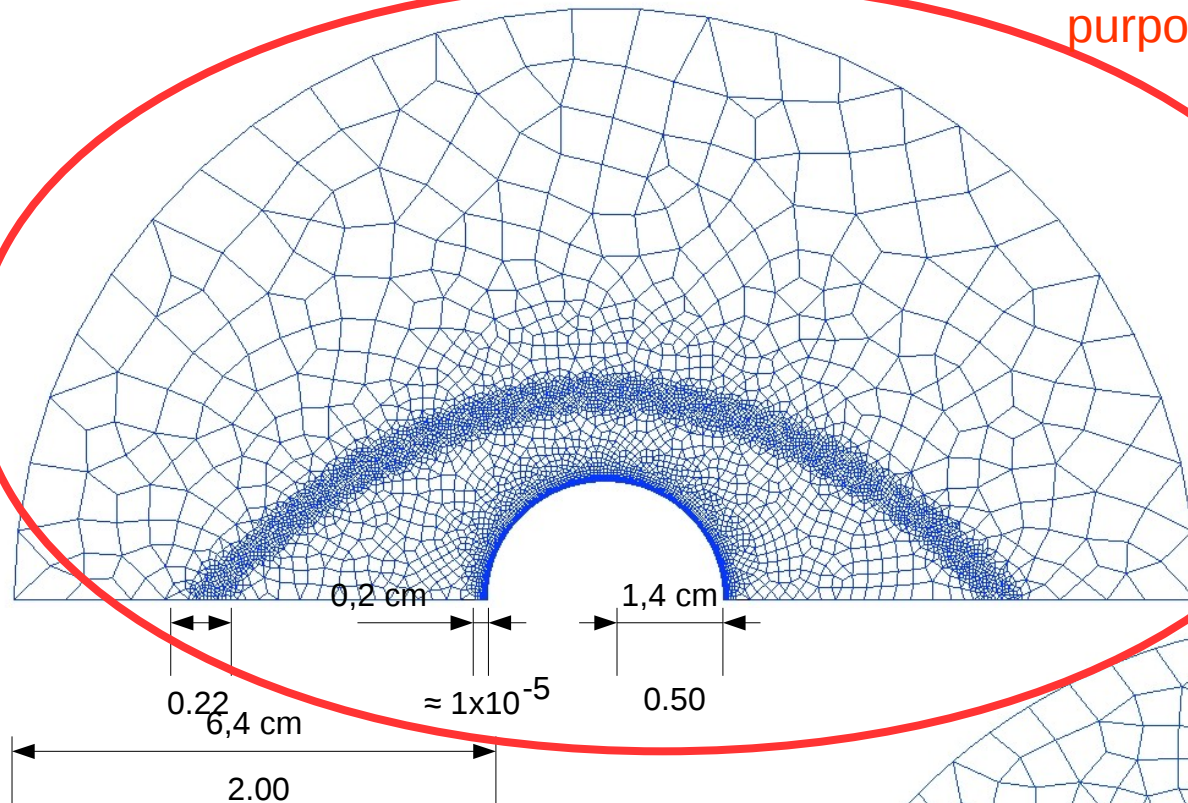


Refined Meshes

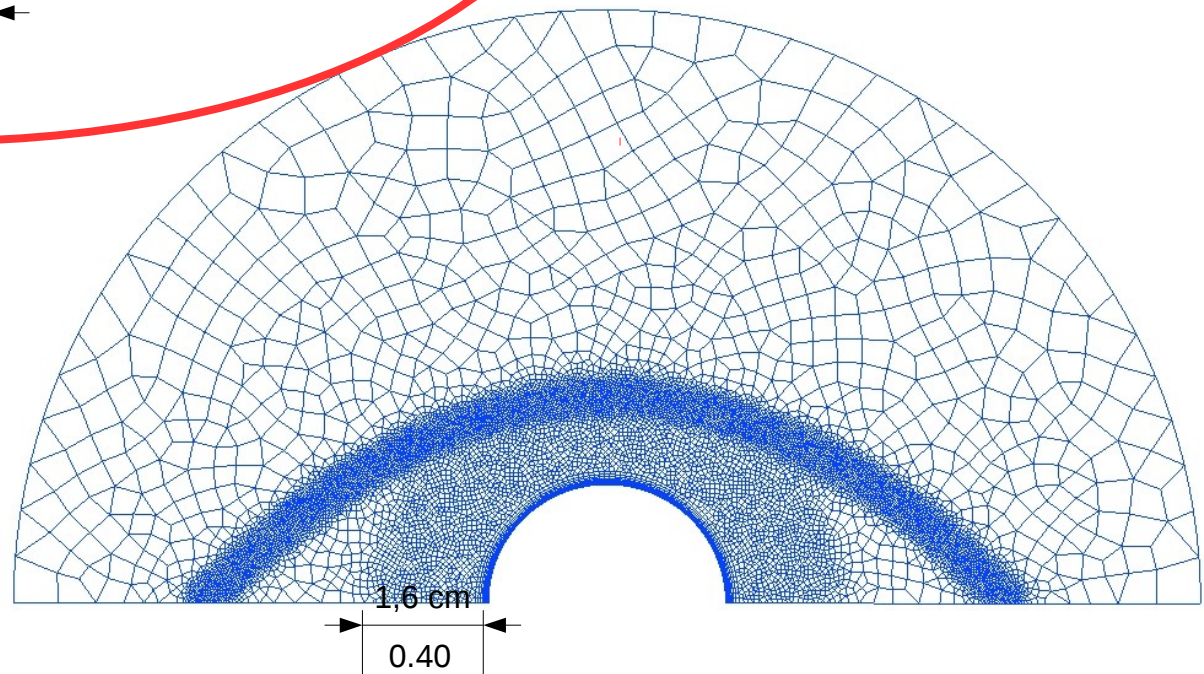
For testing
purposes



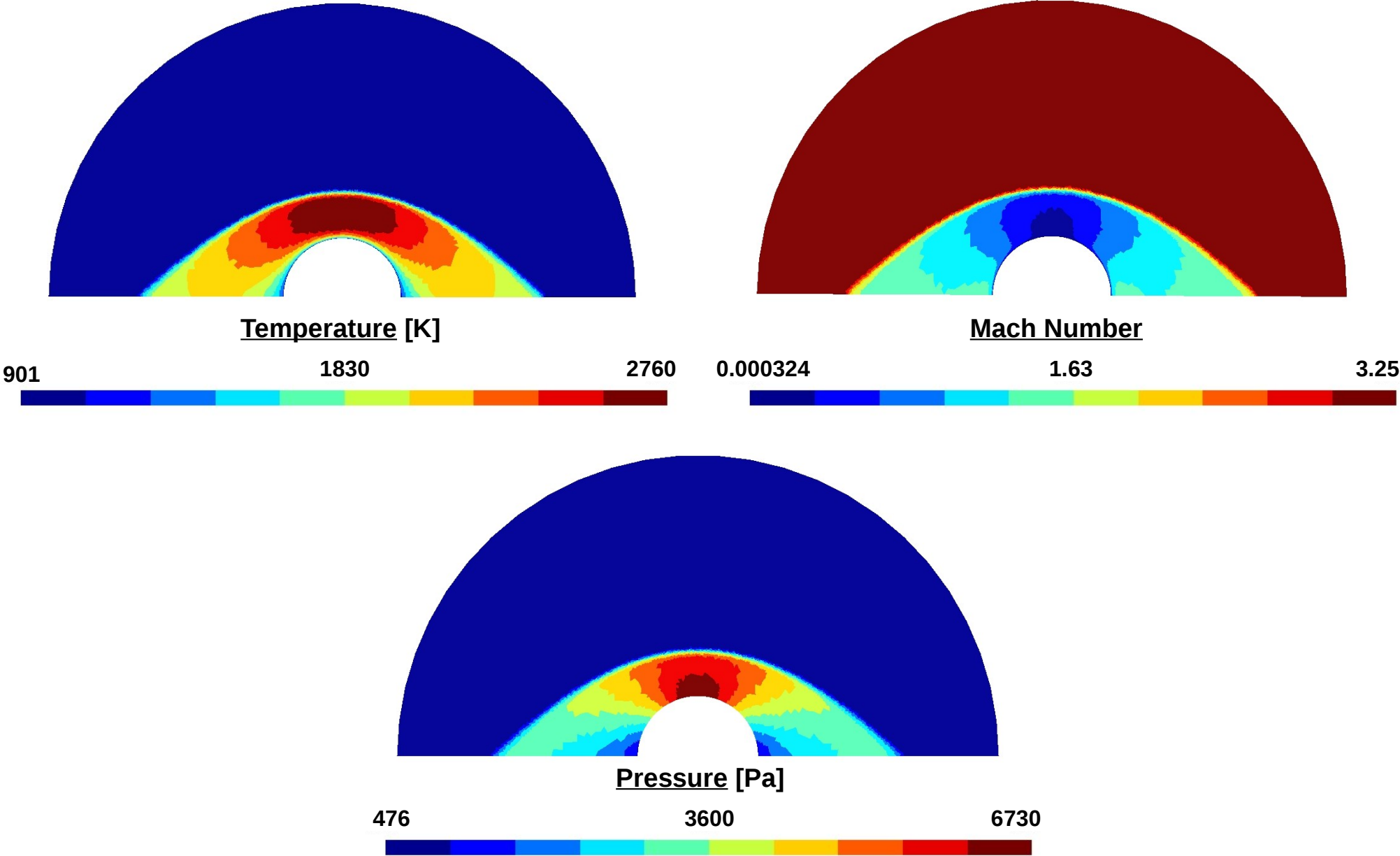
Unstructured mesh
7424 elements
- 1154 triangle
- 5764 quadrangle



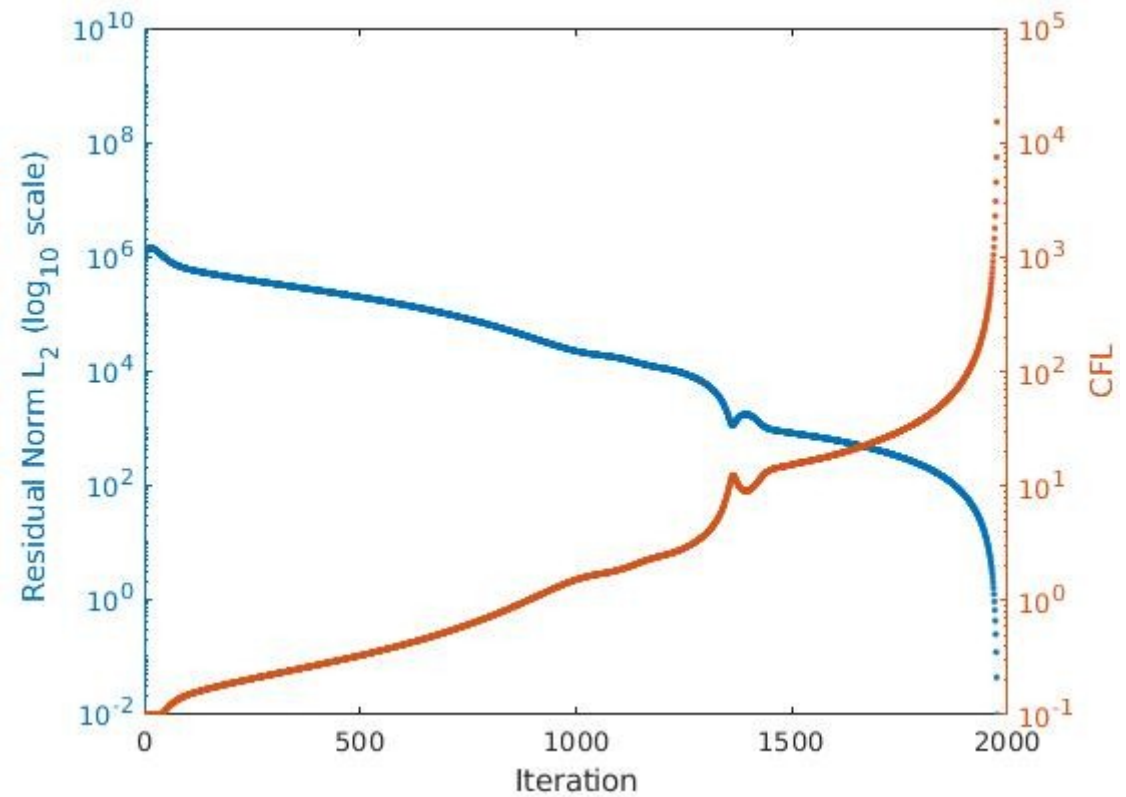
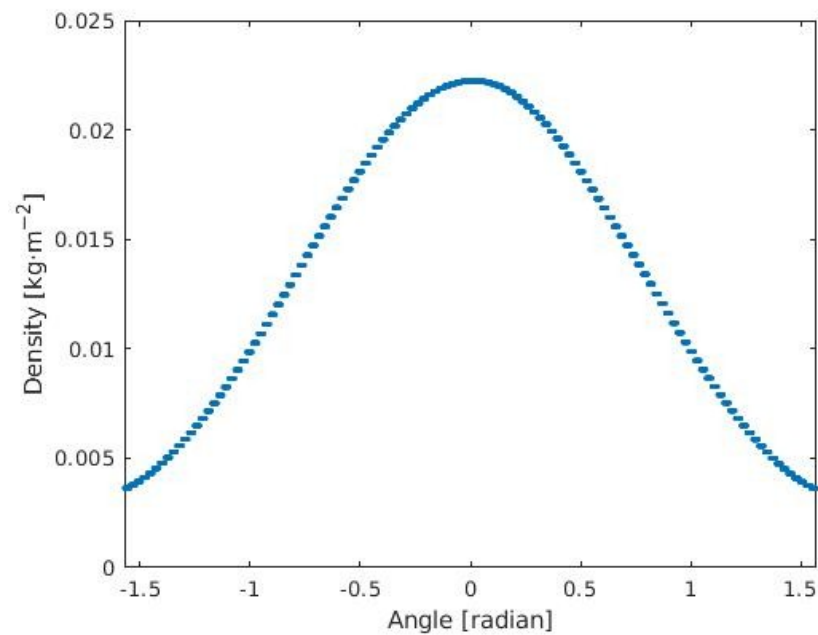
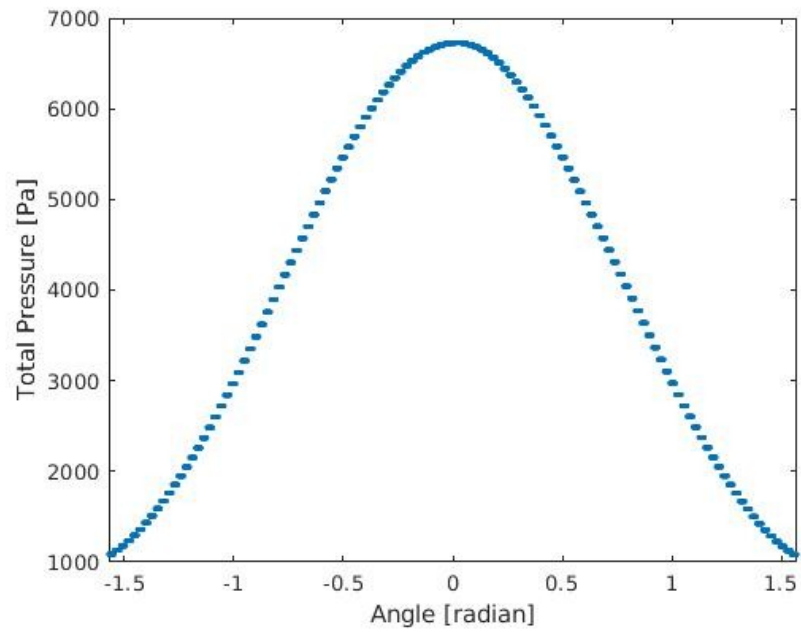
Unstructured mesh
15 606 elements
Triangle + quadrilateral



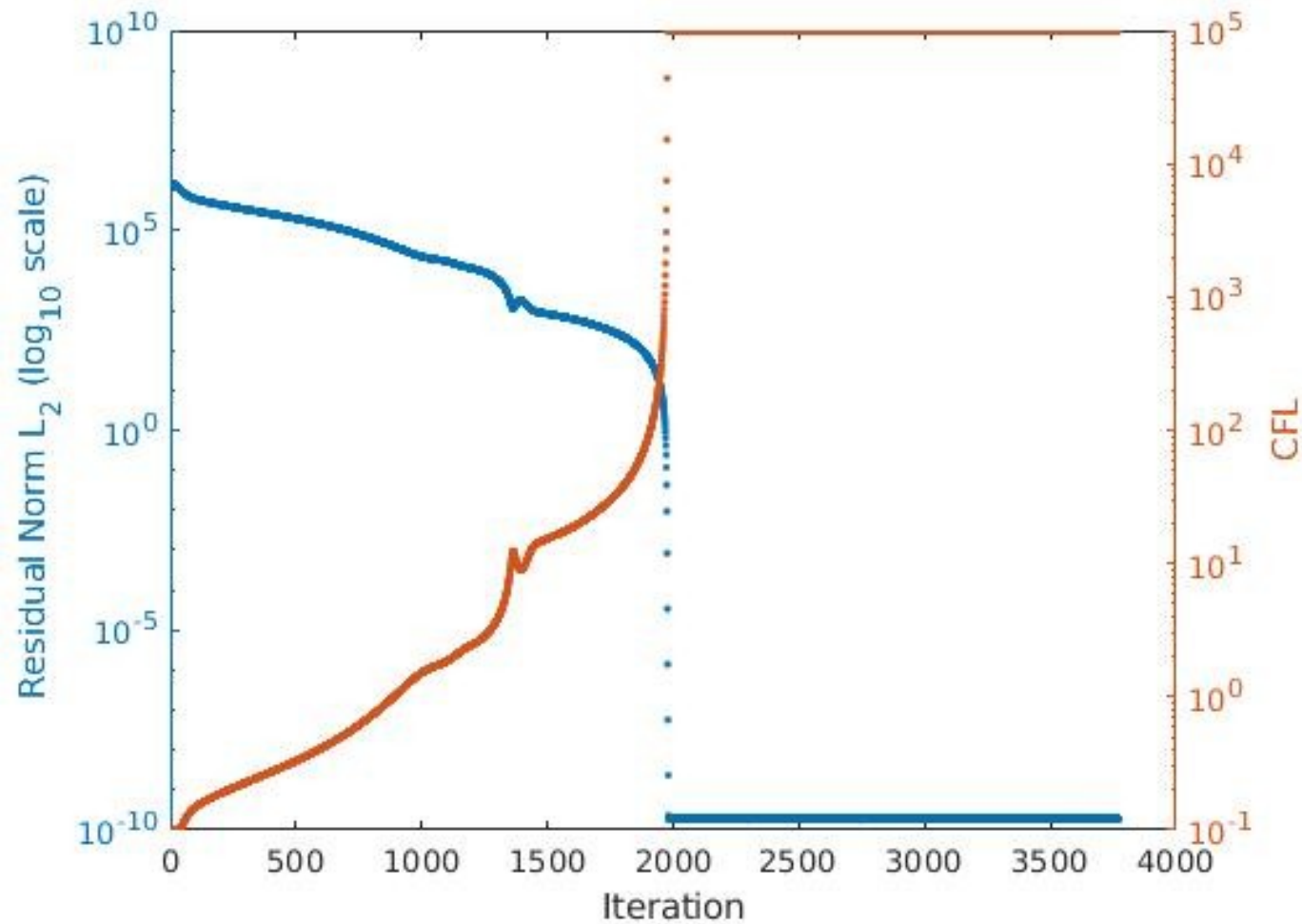
Solution on Refined 7424 element mesh P0



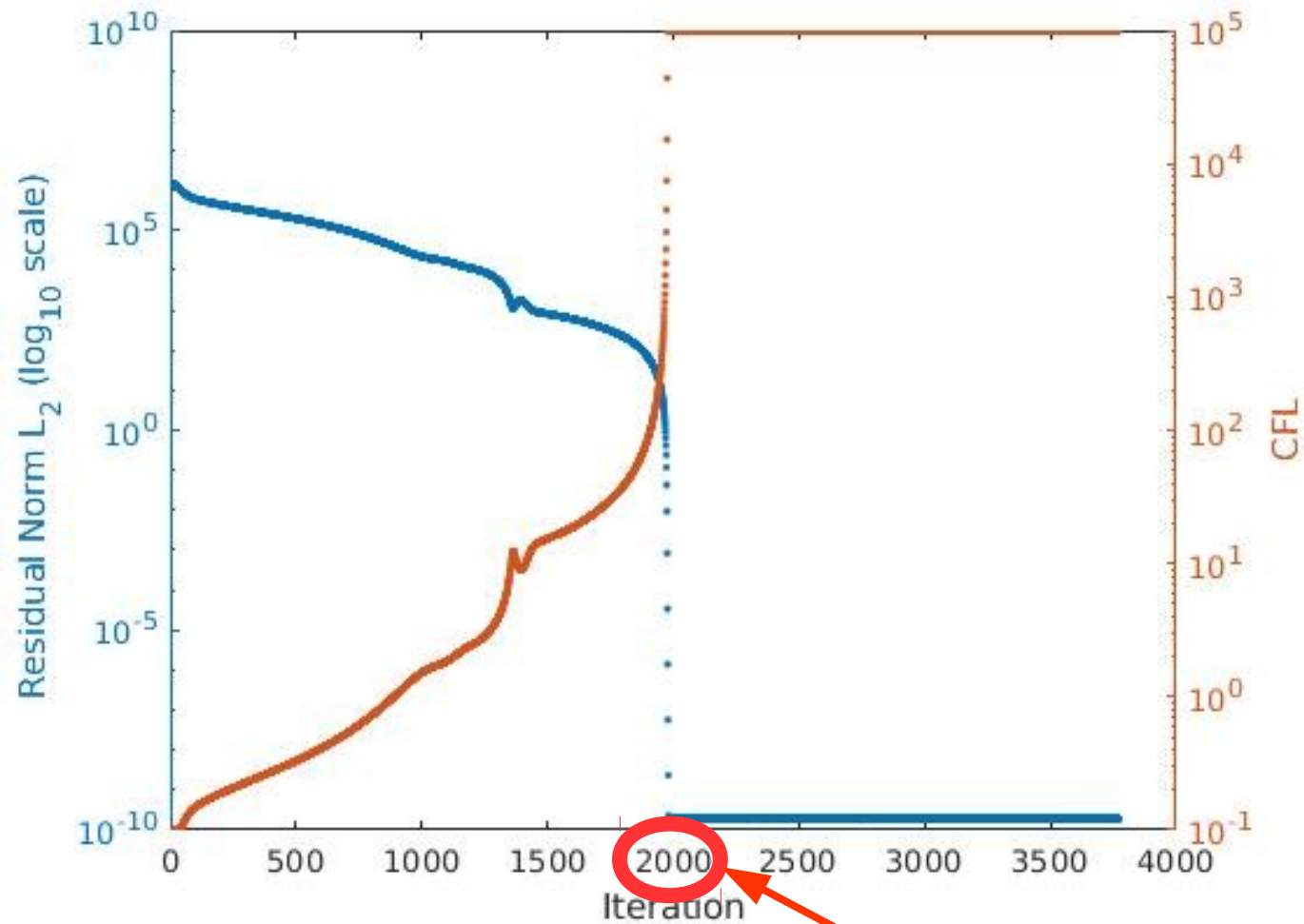
Solution along the wall on Refined 7424 element mesh P0



Solution along the wall on Refined 7424 elements mesh P0
try to get more precision... (ie increase the order of the
polynomial to $\text{deg}P=1$)

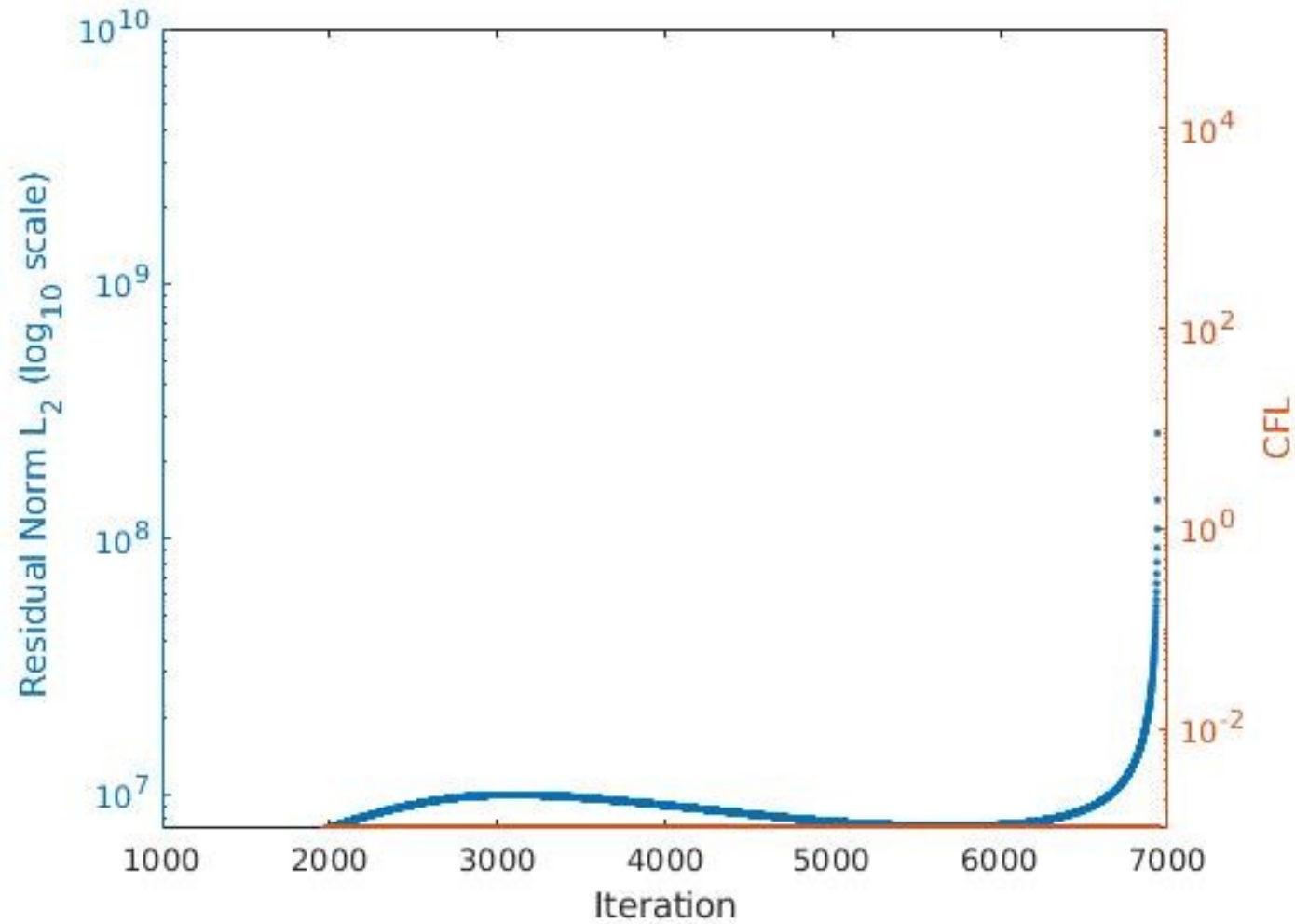


Solution along the wall on Refined 7424 elements mesh P0
try to get more precision... (ie increase the order of the
polynomial to $\text{deg}P=1$)



Restart from here in
P1

Solution along the wall on Refined 7424 element mesh **P1**
without Artificial Viscosity



Solution along the wall on Refined 7424 element mesh **P1**
WITH Artificial Viscosity

COMING SOON !