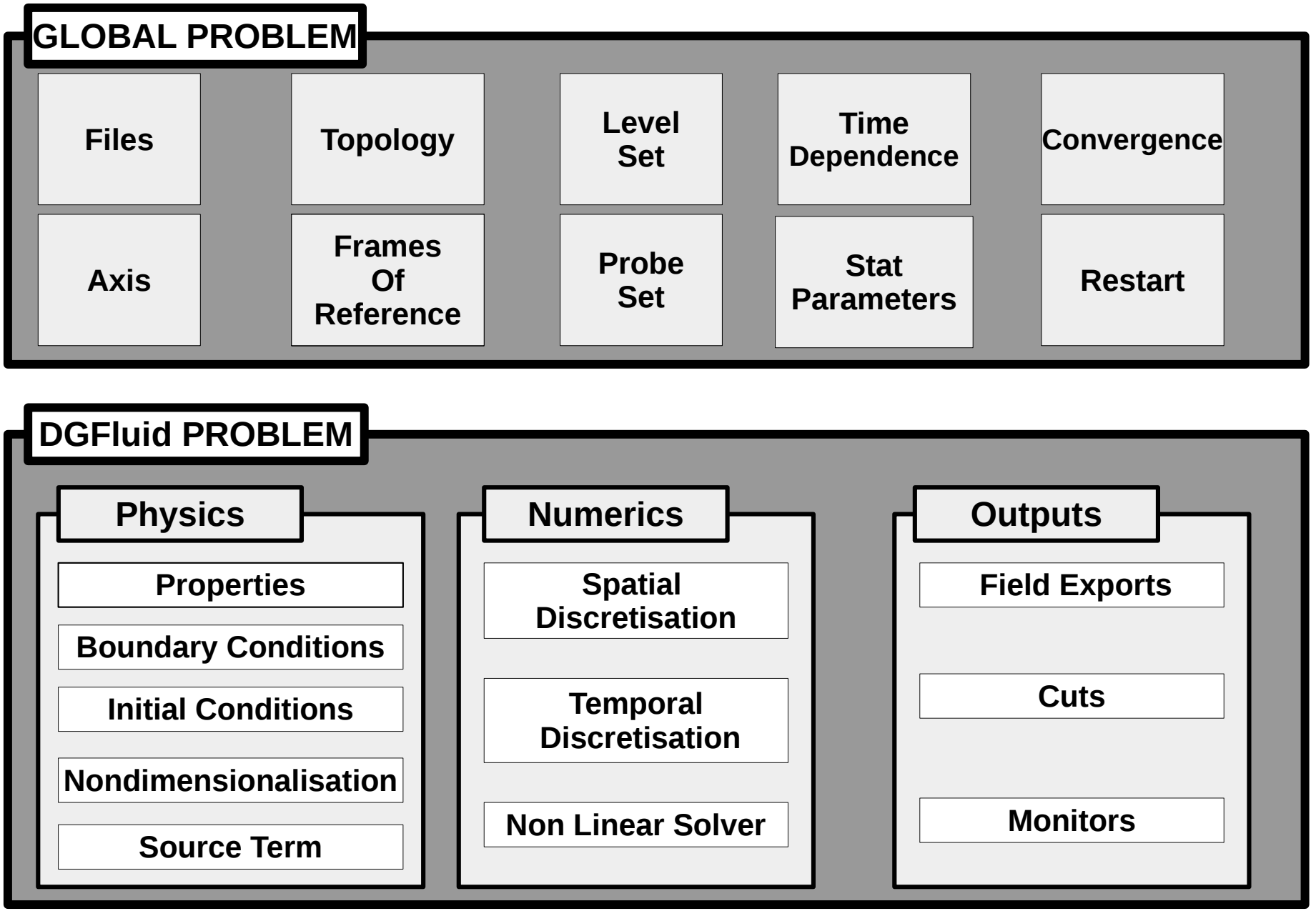
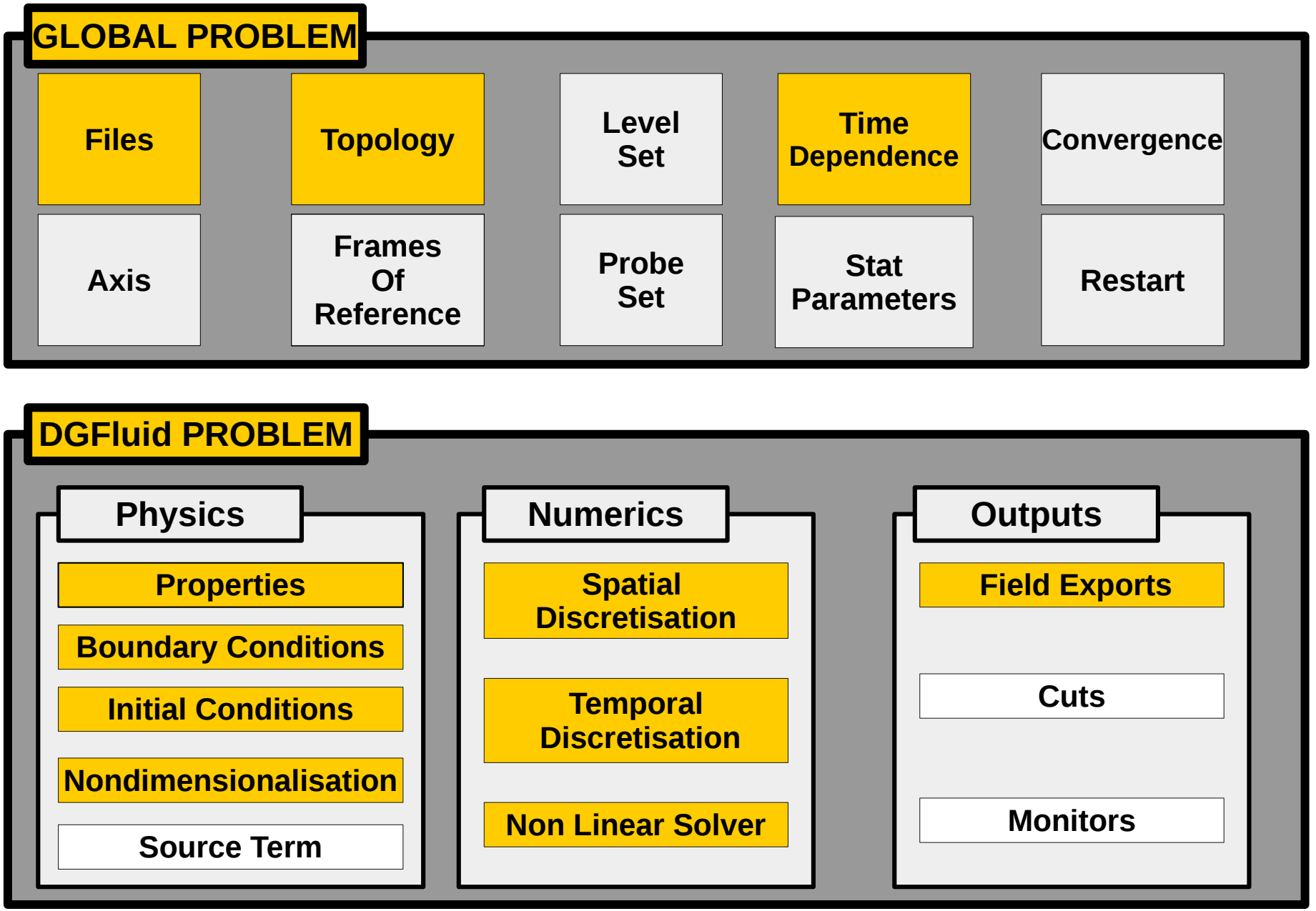
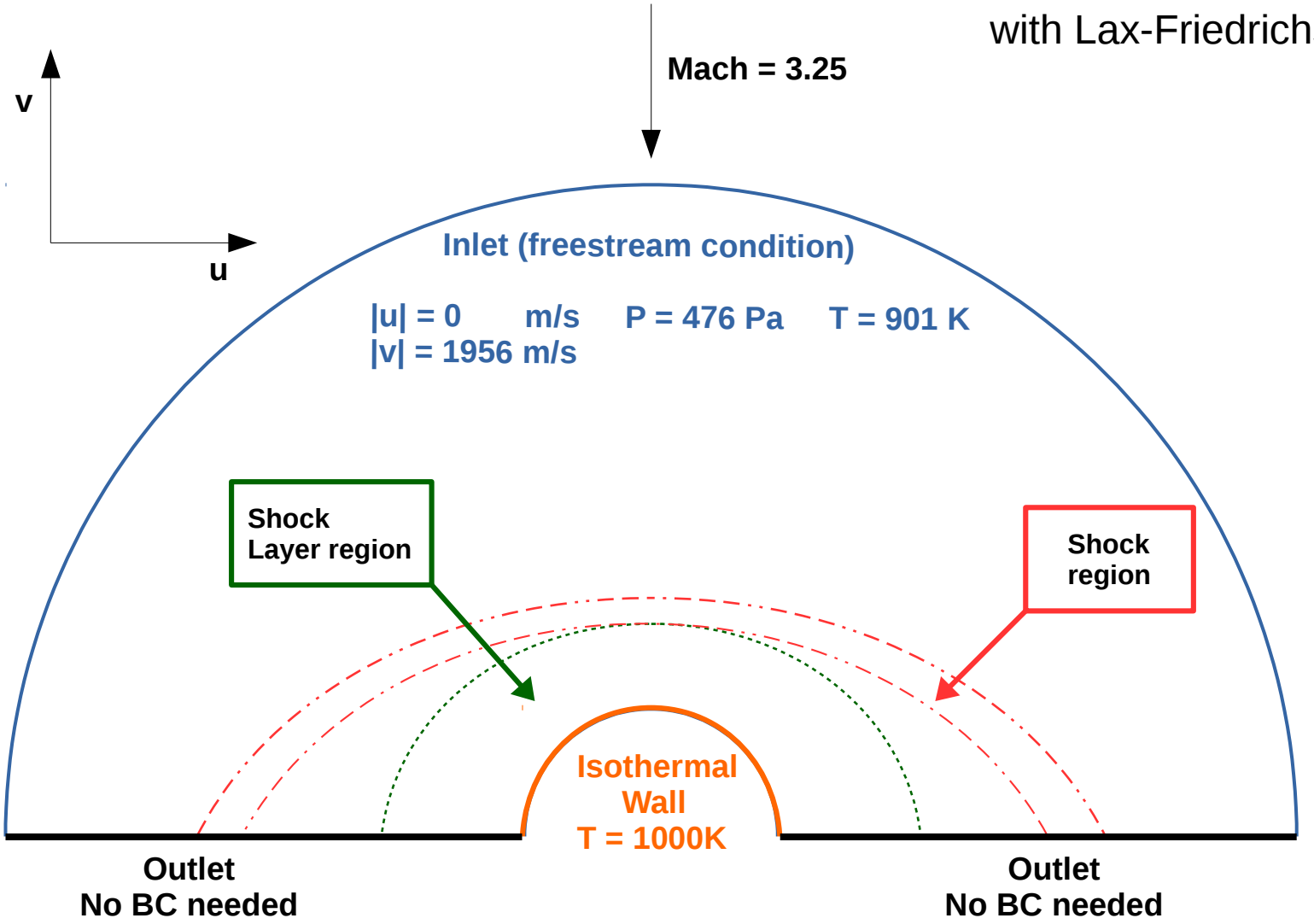
STRUCTURE OF THE INPUT FILE



STRUCTURE OF THE INPUT FILE for our case

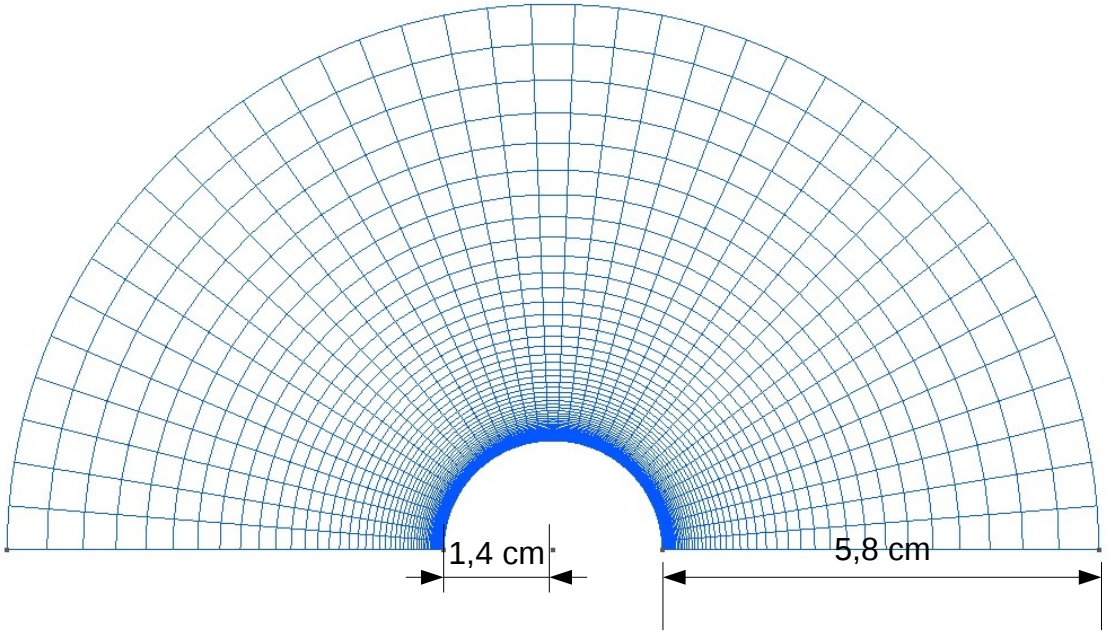


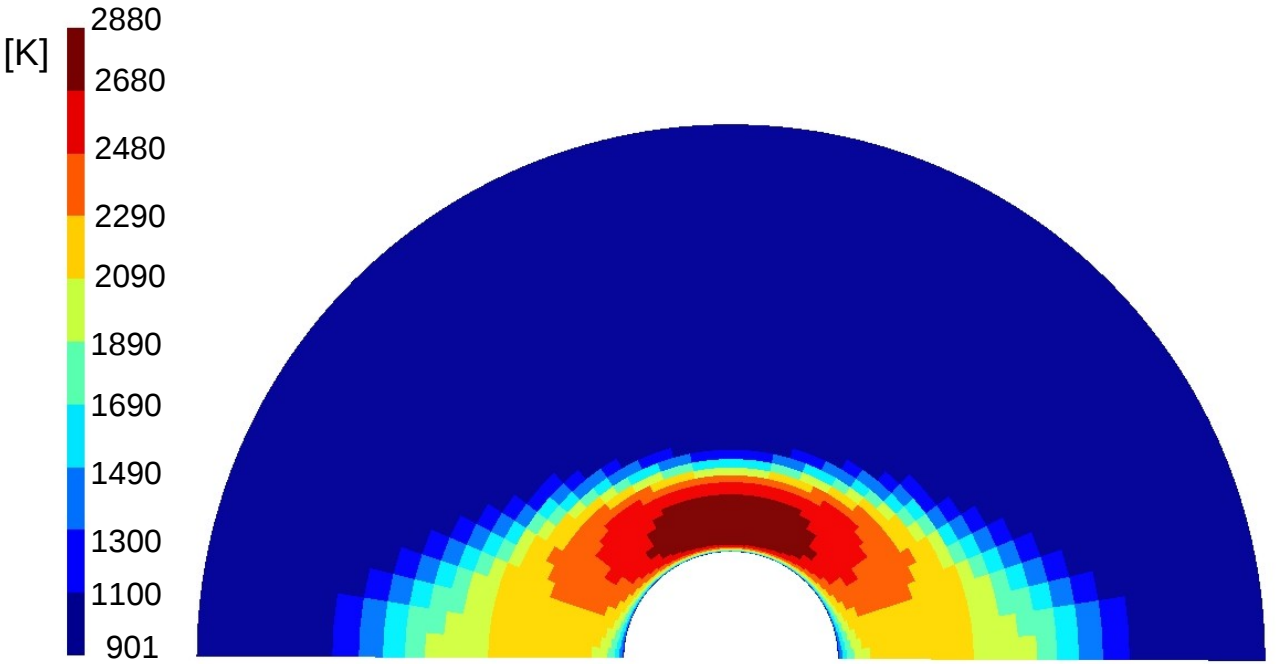
2D Perfect Gas
with Lax-Friedrichs flux



Unrefined Meshes

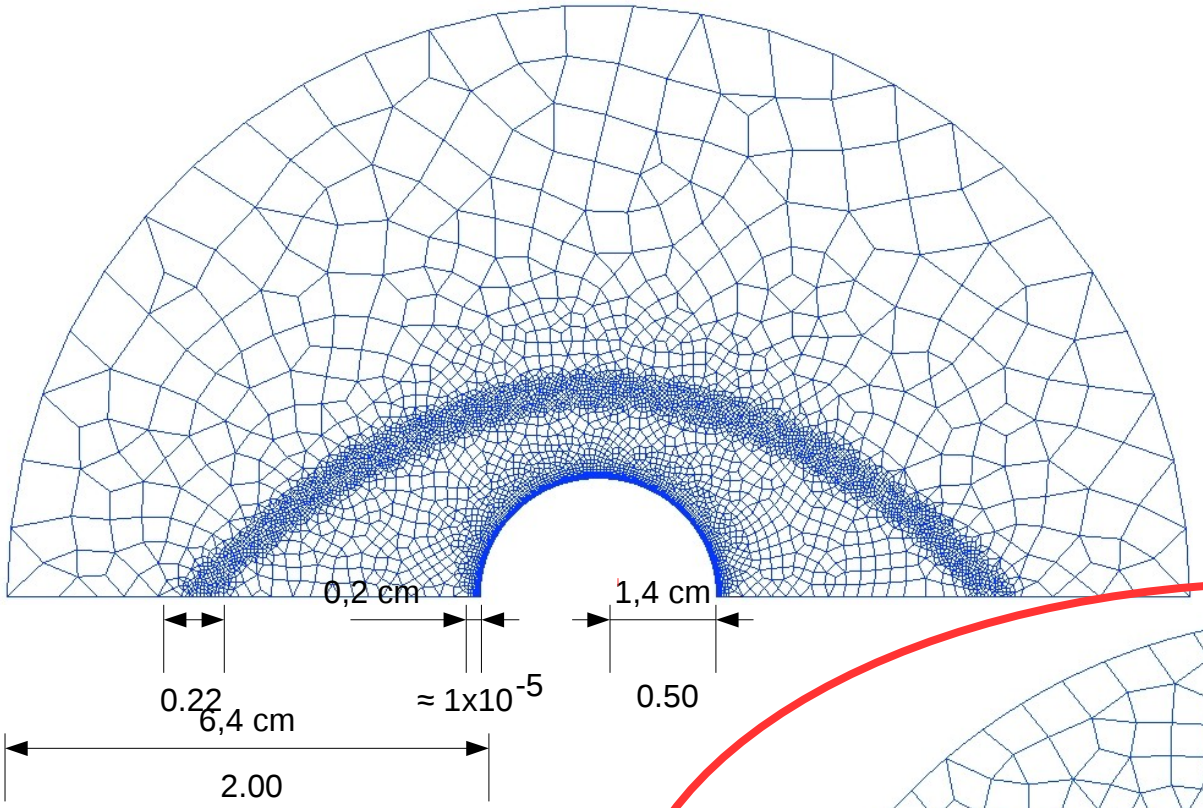
Coarse structured mesh
3323 elements

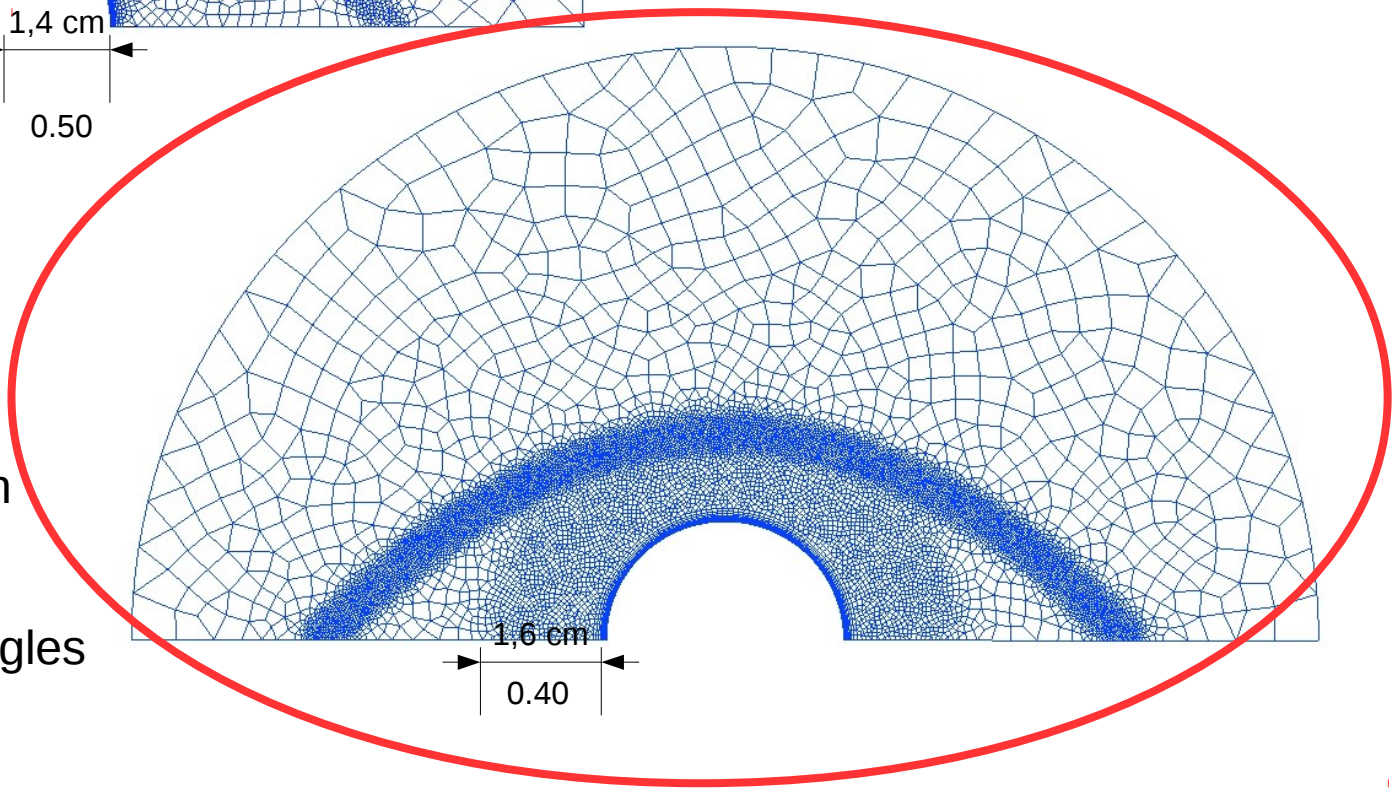


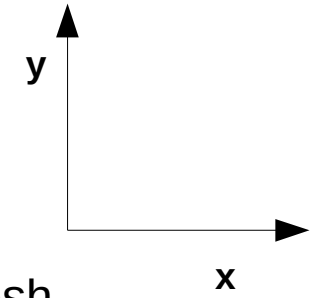


Temperature [K]

Refined Meshes



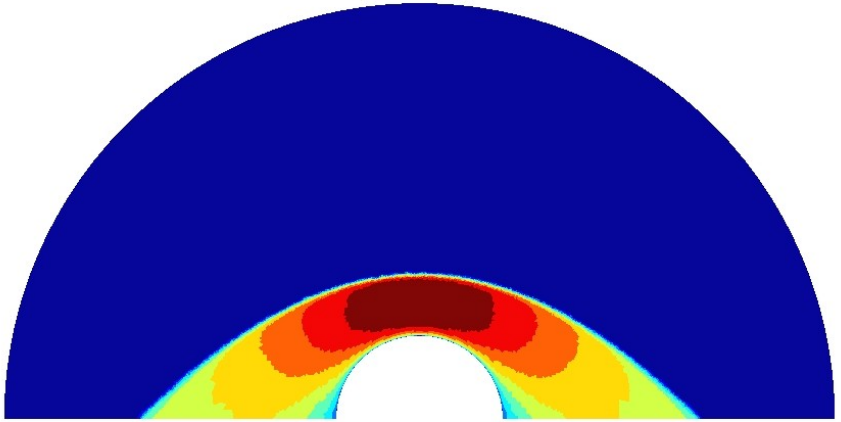




Unstructured mesh
7424 elements
-1154 triangles
- 5764 quadrangles

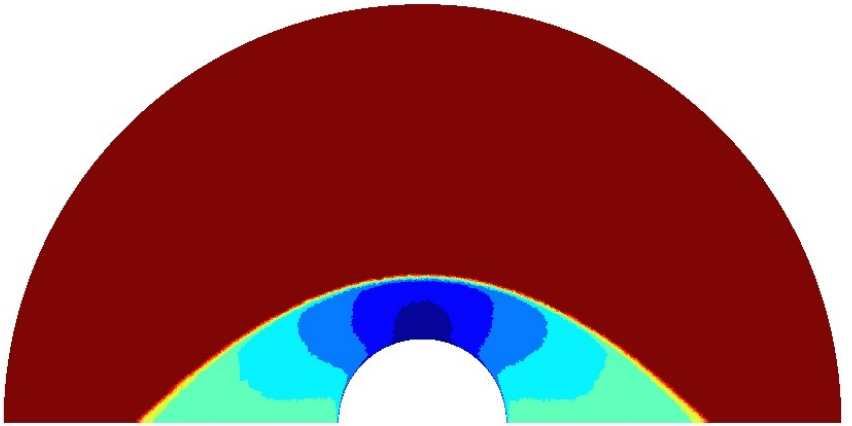
Unstructured mesh
15 606 elements
- 2865 triangles
- 11652 quadrangles

Solution on Refined 15606 elements mesh P0



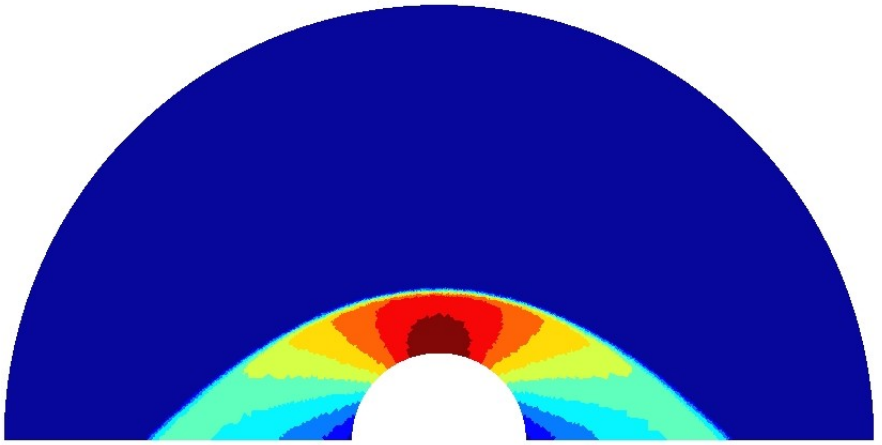
Temperature [K]

901 1830 2770



Mach Number

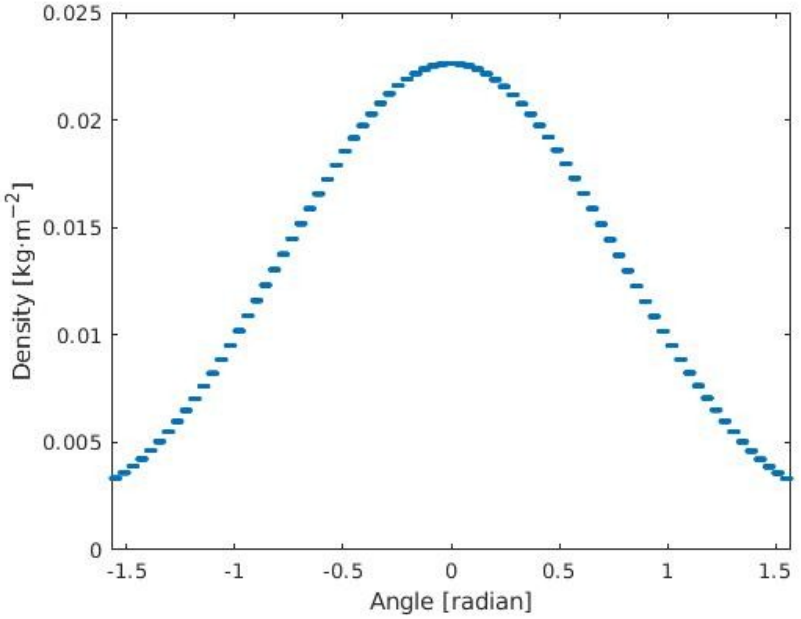
0 1.63 3.25

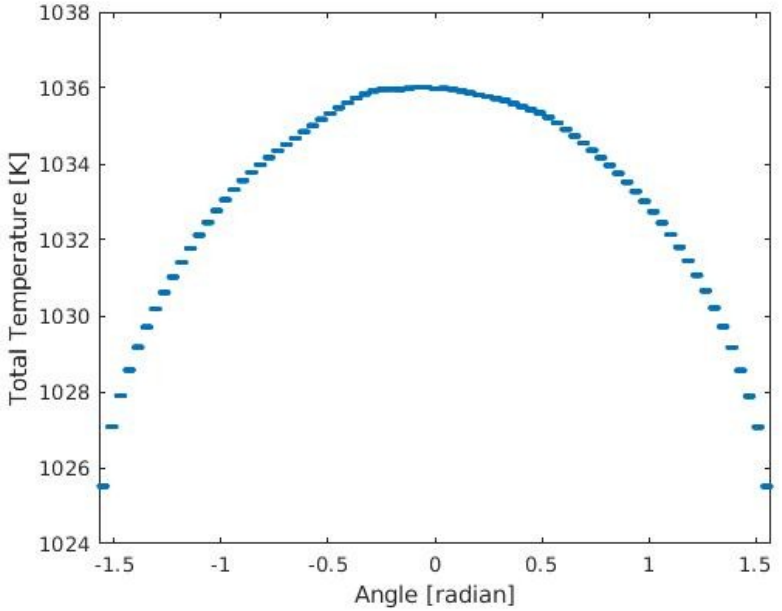


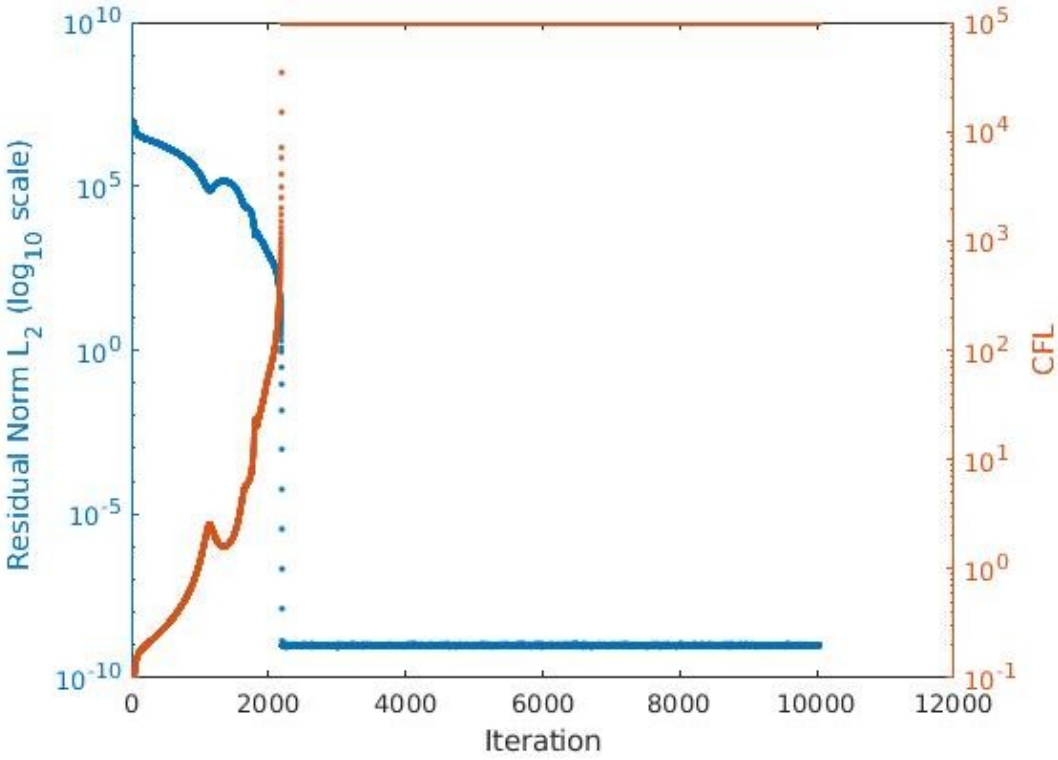
Pressure [Pa]

476 3600 6730

Solution along the wall on Refined 15 606 elements mesh P0

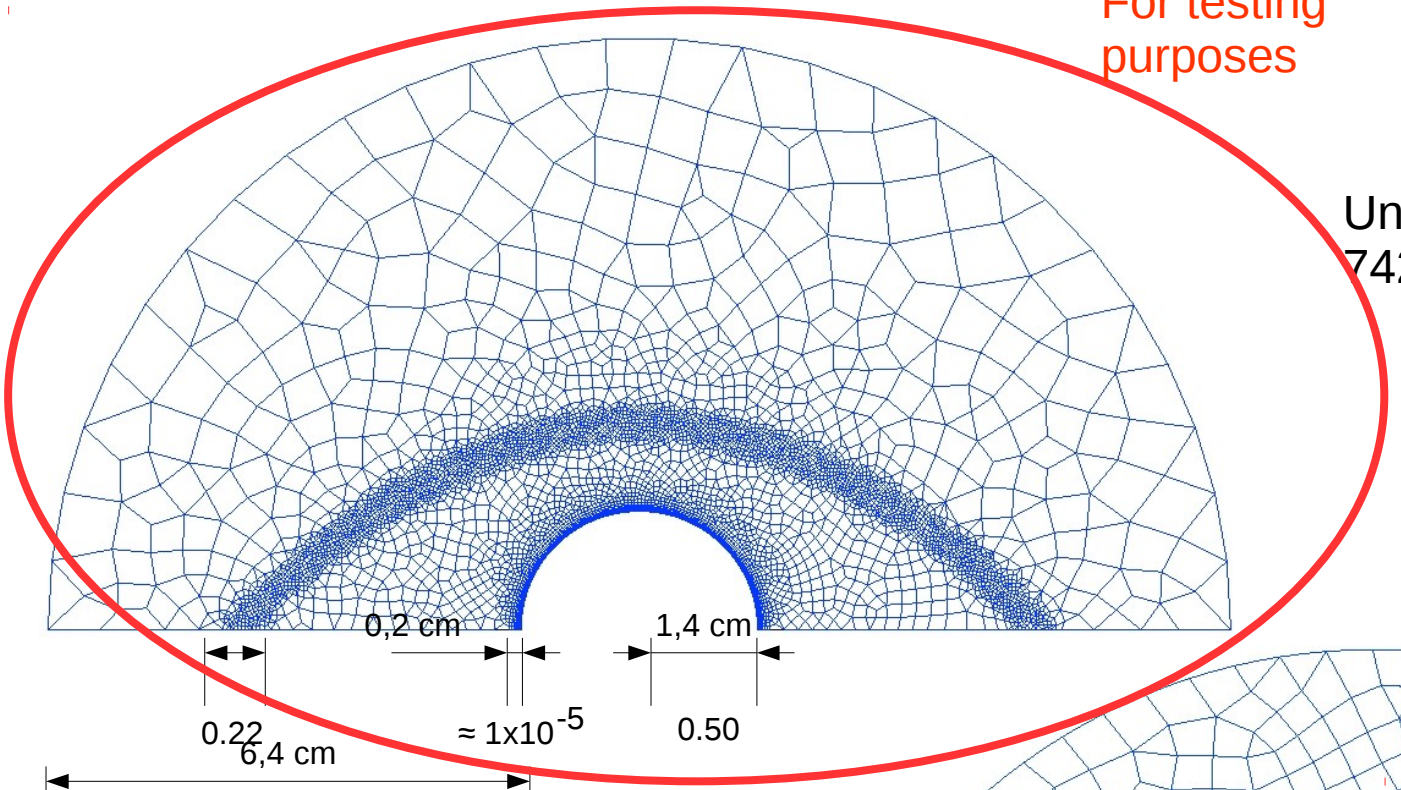


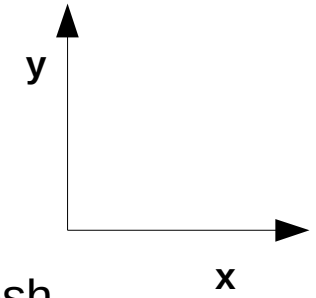




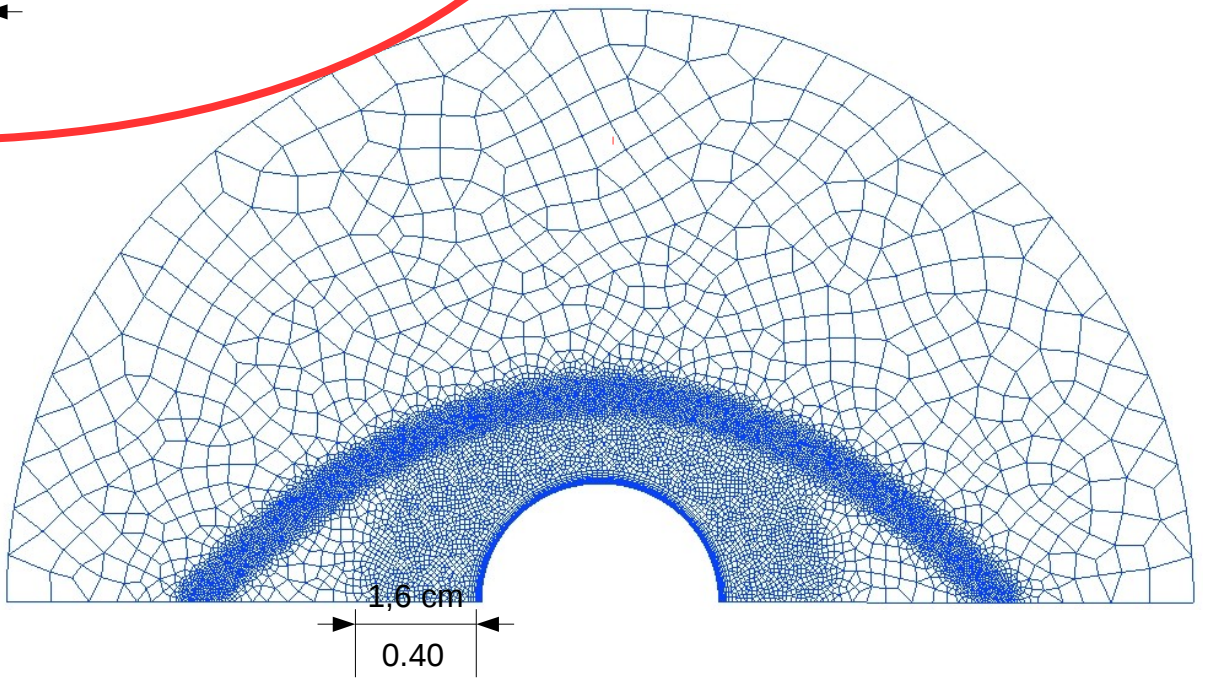
Refined Meshes

For testing purposes



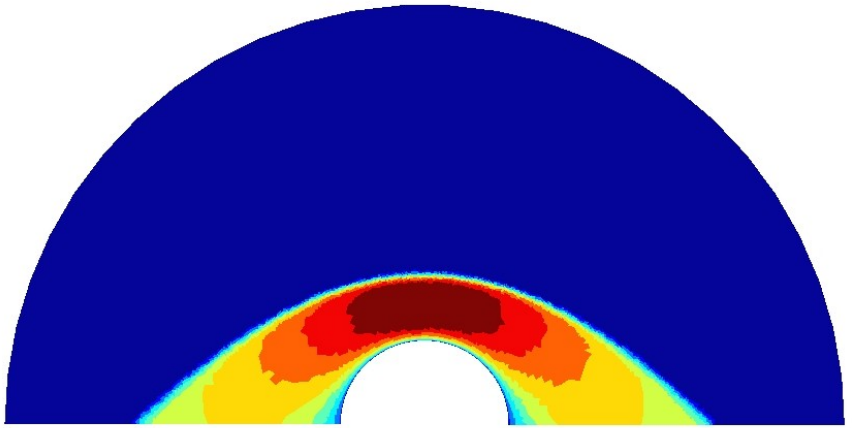


Unstructured mesh
7424 elements
-1154 triangle
- 5764 quadrangle



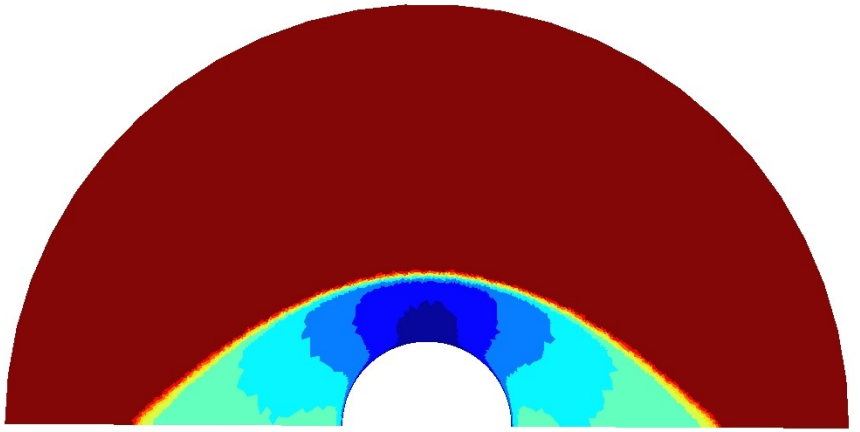
Unstructured mesh
15 606 elements
Triangle + quadrilateral

Solution on Refined 7424 element mesh P0



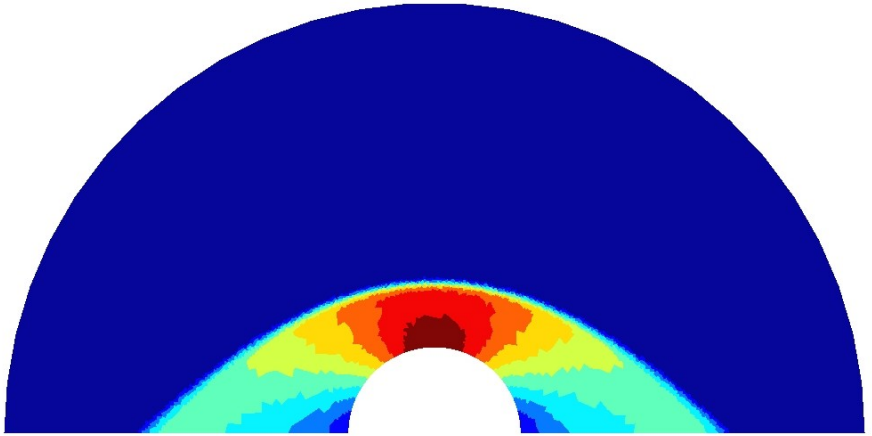
Temperature [K]

901 1830 2760



Mach Number

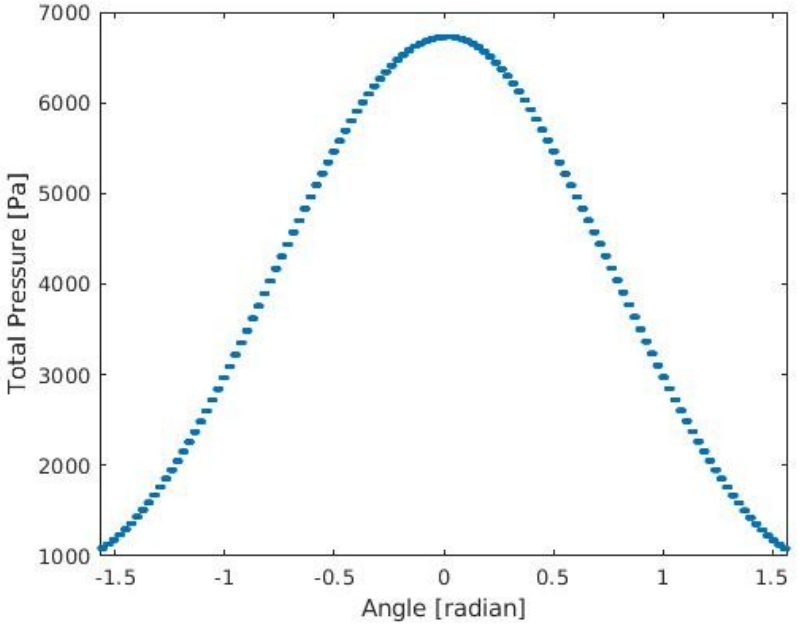
0.000324 1.63 3.25

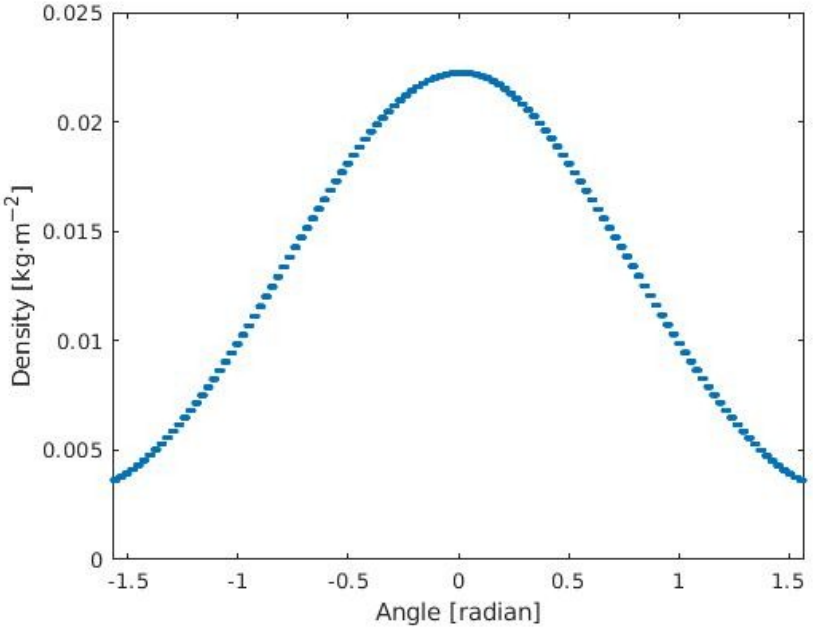


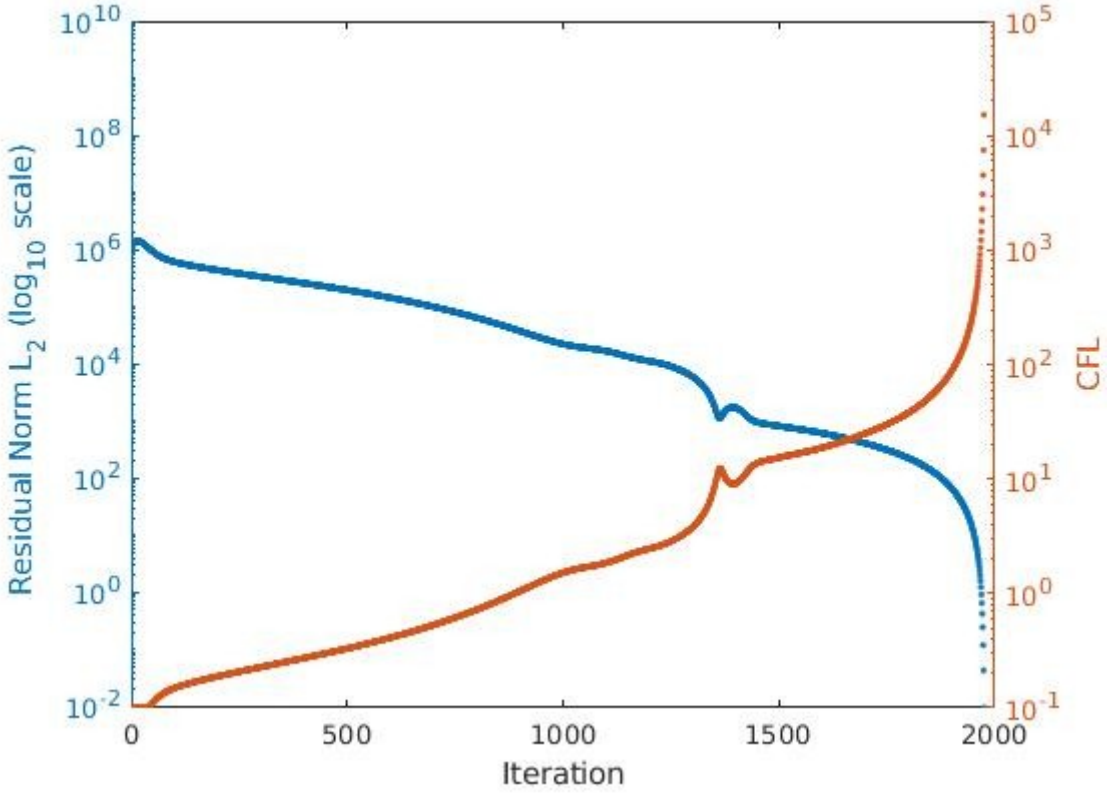
Pressure [Pa]

476 3600 6730

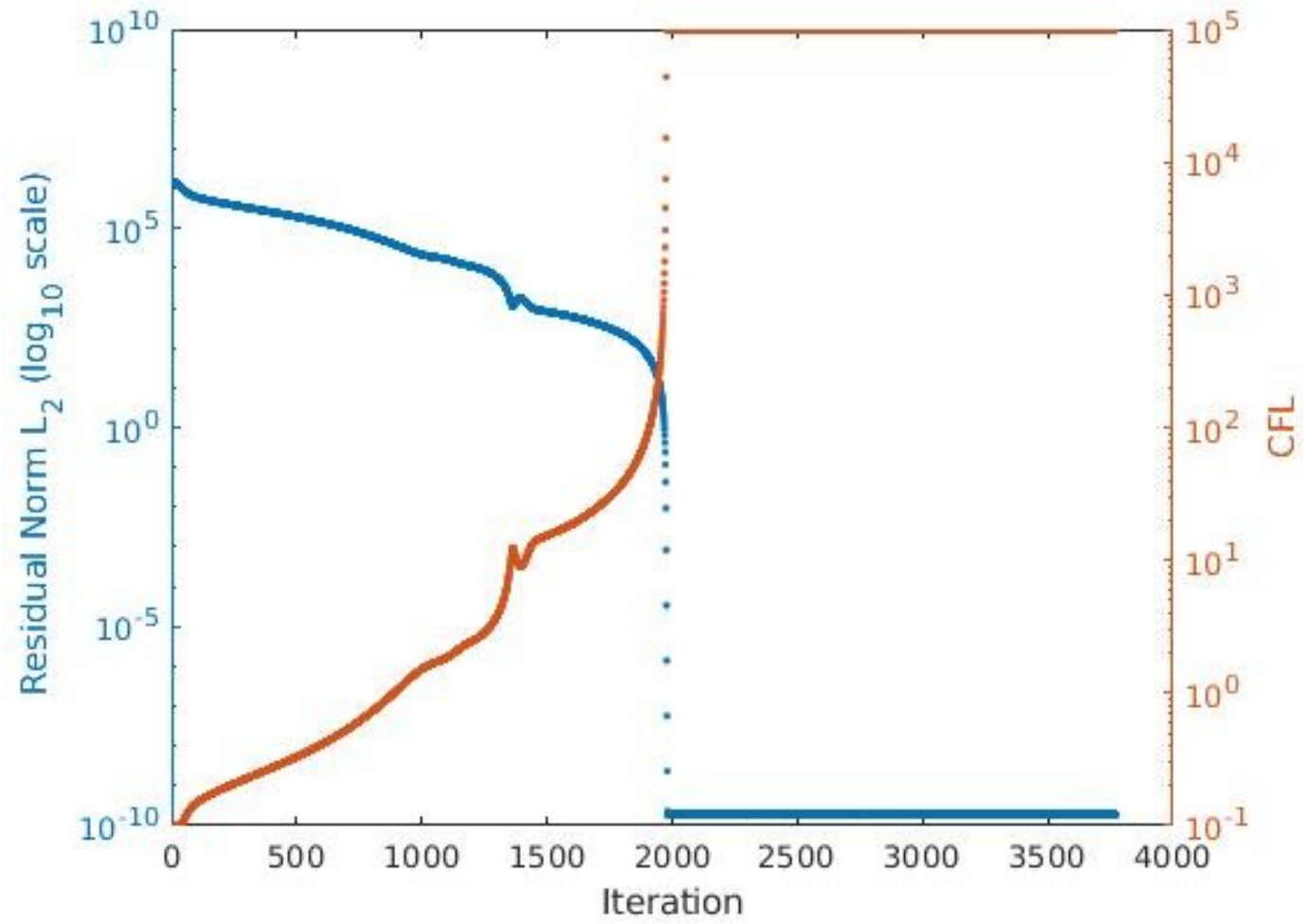
Solution along the wall on Refined 7424 element mesh P0



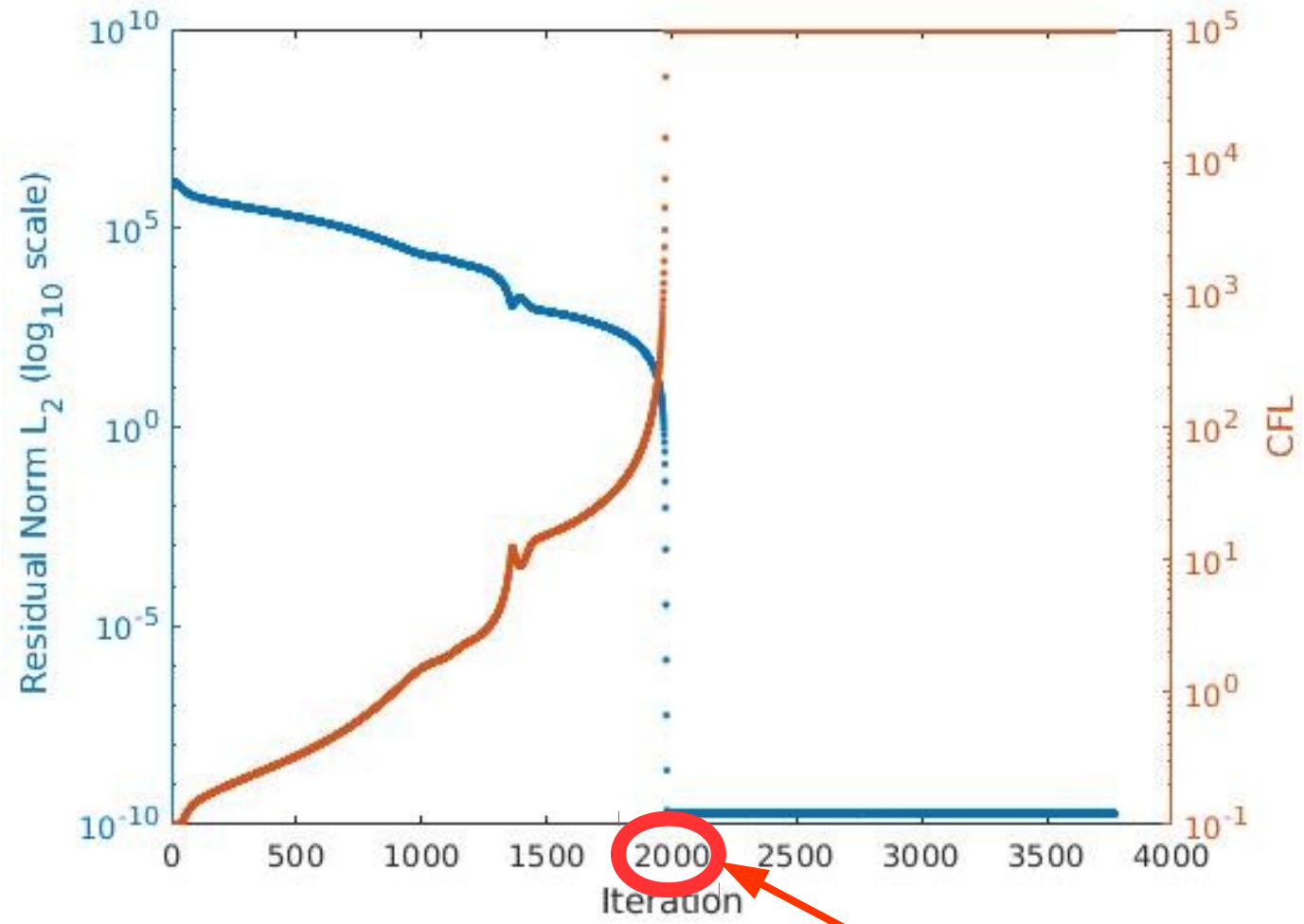




Solution along the wall on Refined 7424 elements mesh P0
try to get more precision… (ie increase the order of the polynomial to degP=1)

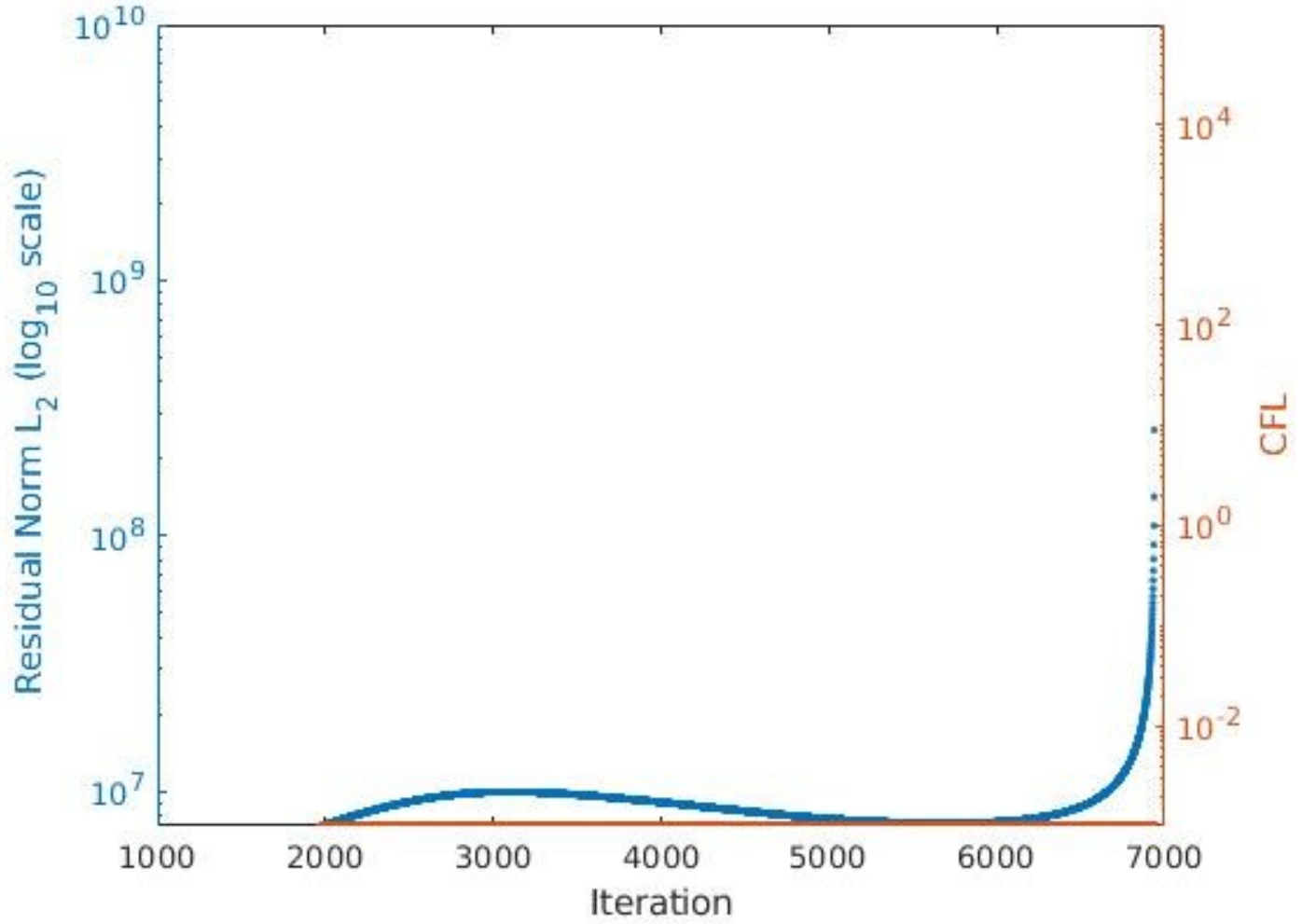


Solution along the wall on Refined 7424 elements mesh P0
try to get more precision… (ie increase the order of the polynomial to degP=1)



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 !