Jet in Cross-Flow Issuing from an Inclined Orifice in the Lower Wall using Imbedded Boundary Approach

By

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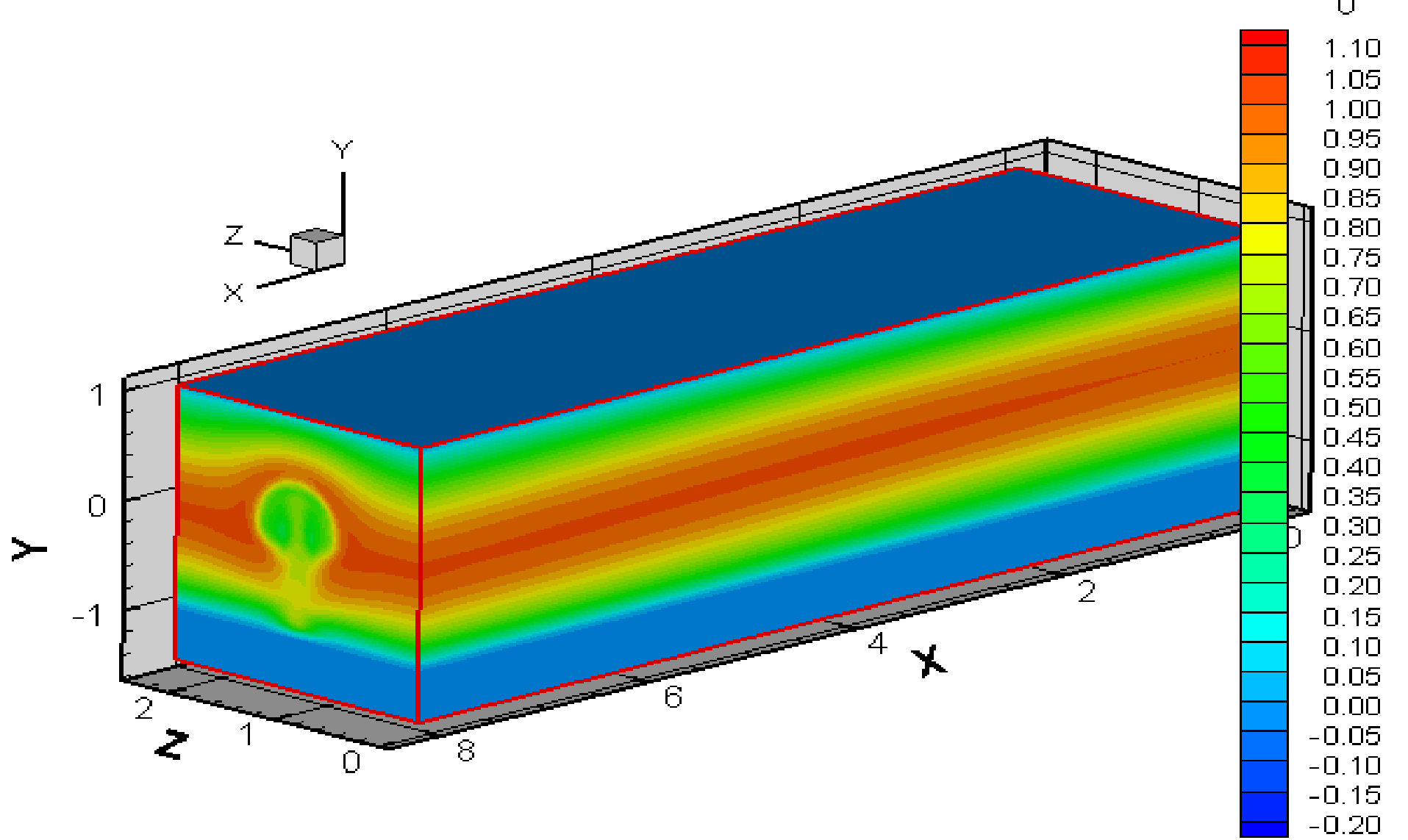
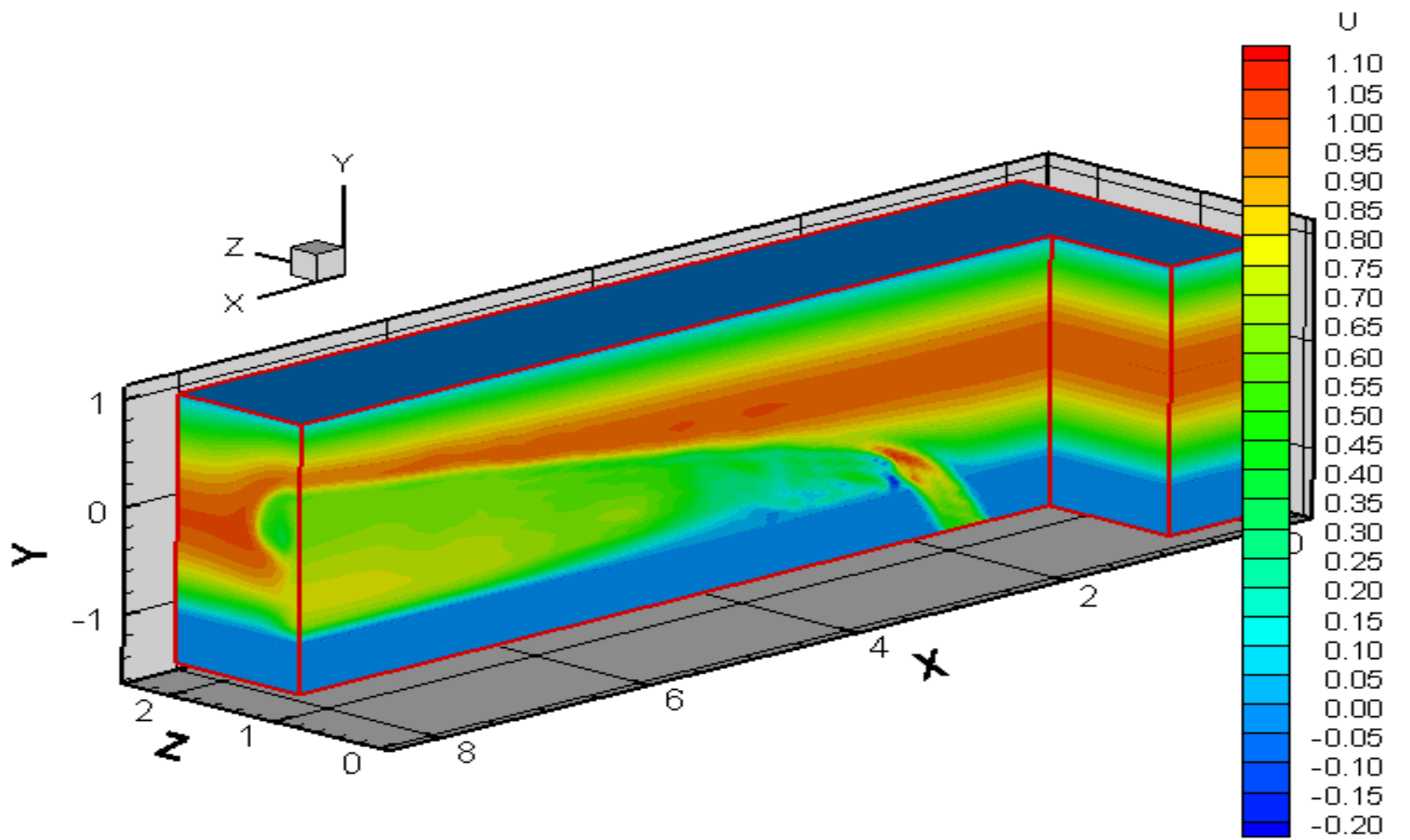
Key Achievements:

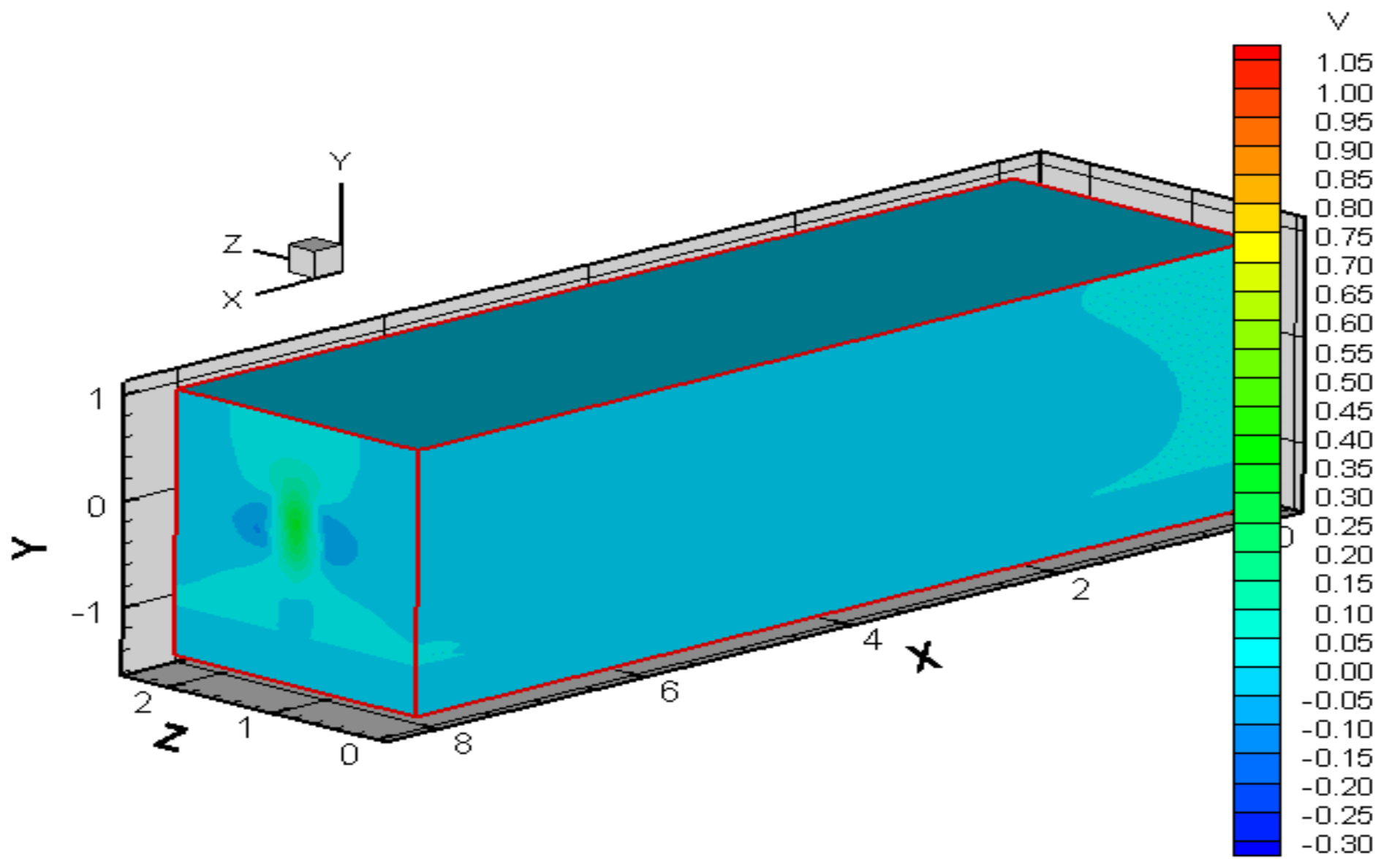
- **A full 3D unsteady Navier-Stokes solver on Cartesian grid has been developed.**
- **A jet has been introduced previously and major flow features for inclined jets in cross flow has been achieved.**
- **Here an imbedded boundary approach has been employed successfully to add an orifice in bottom plate from where the jet is developing and entering in the main flow.**
- **As a next step conjugate heat transfer and sub-grid model will be introduced to tackle turbulence and scalar transport.**



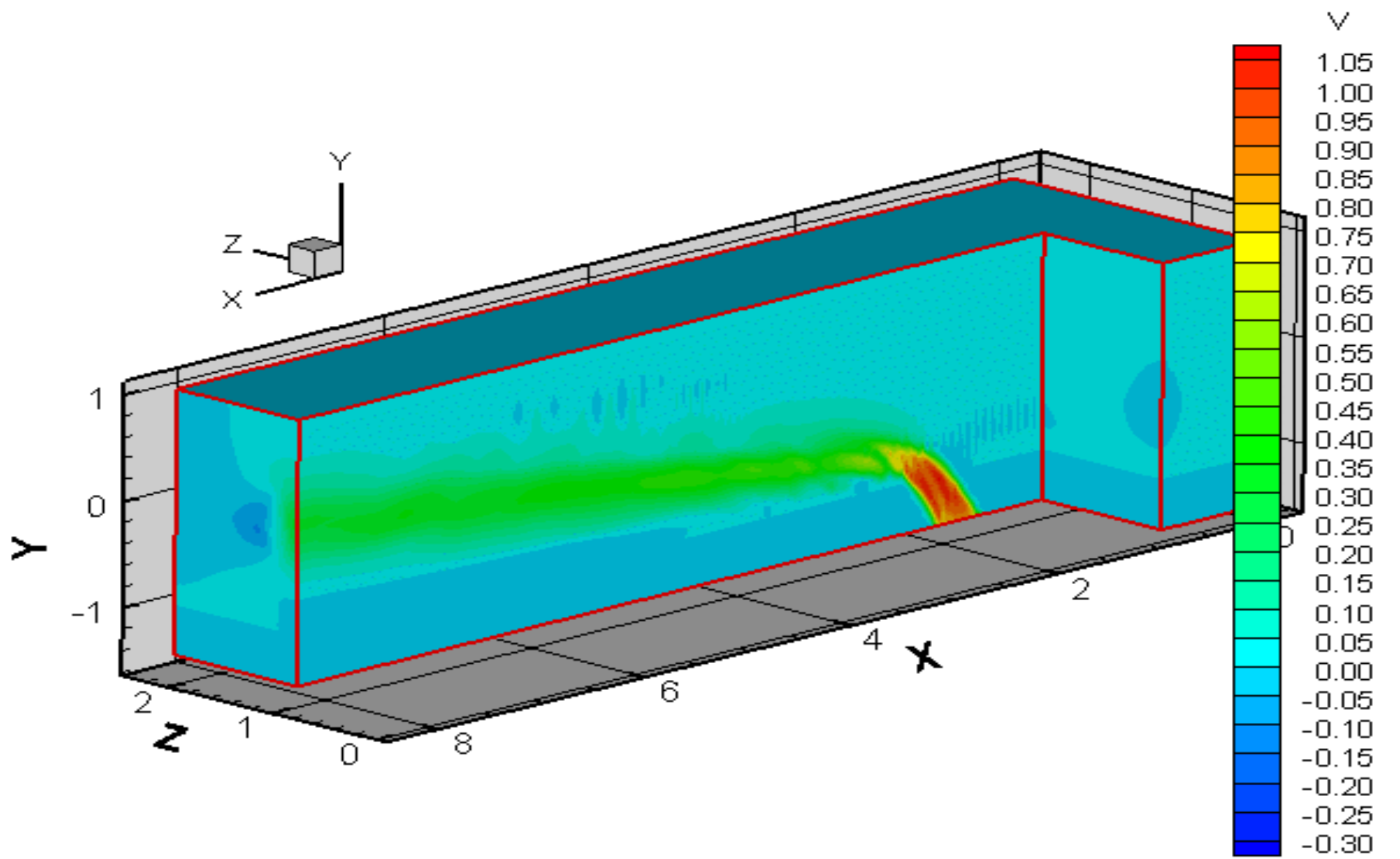
U-Velocity contours showing symmetric behaviour on exit plane.



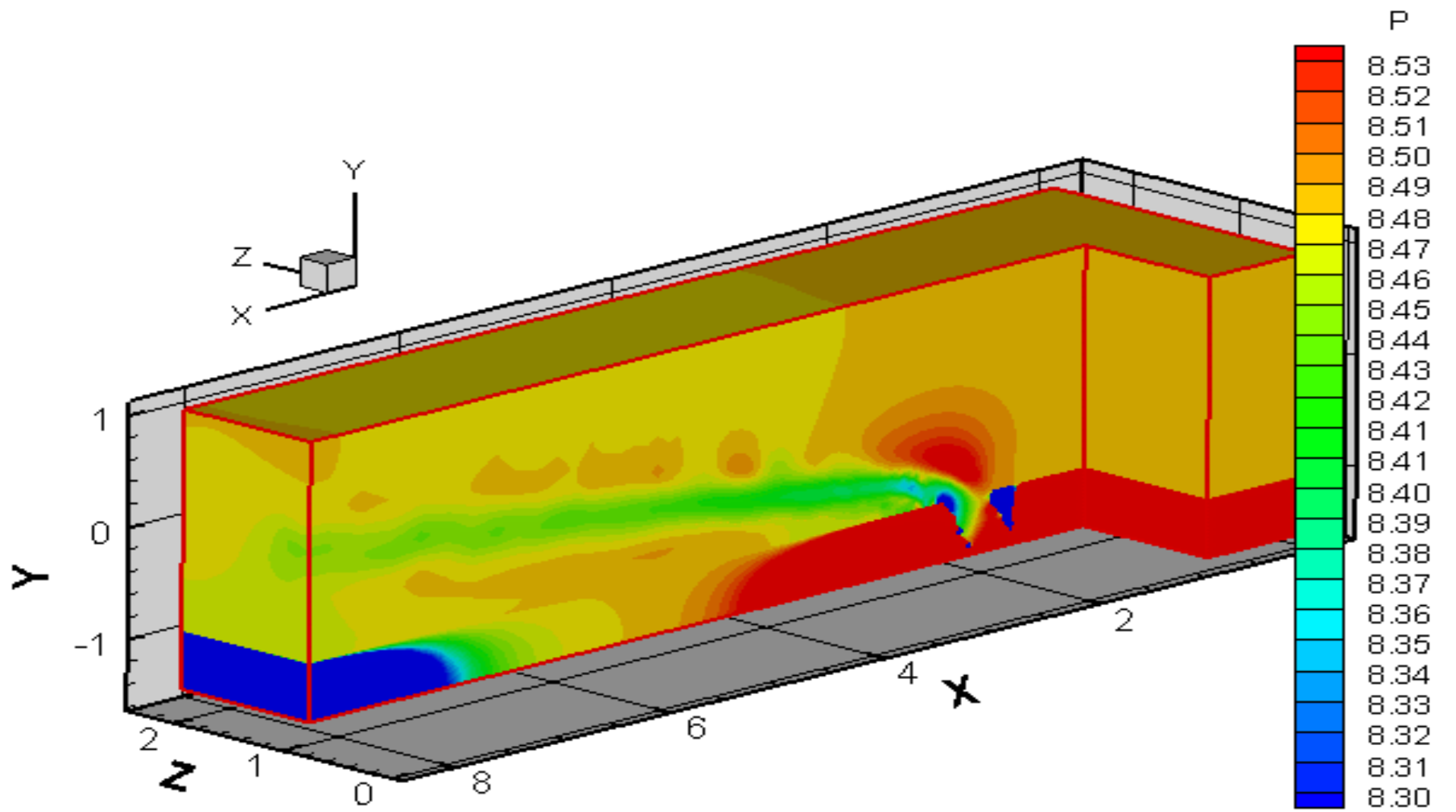
U-Velocity contours inside the domain showing jet issuing from lower wall.



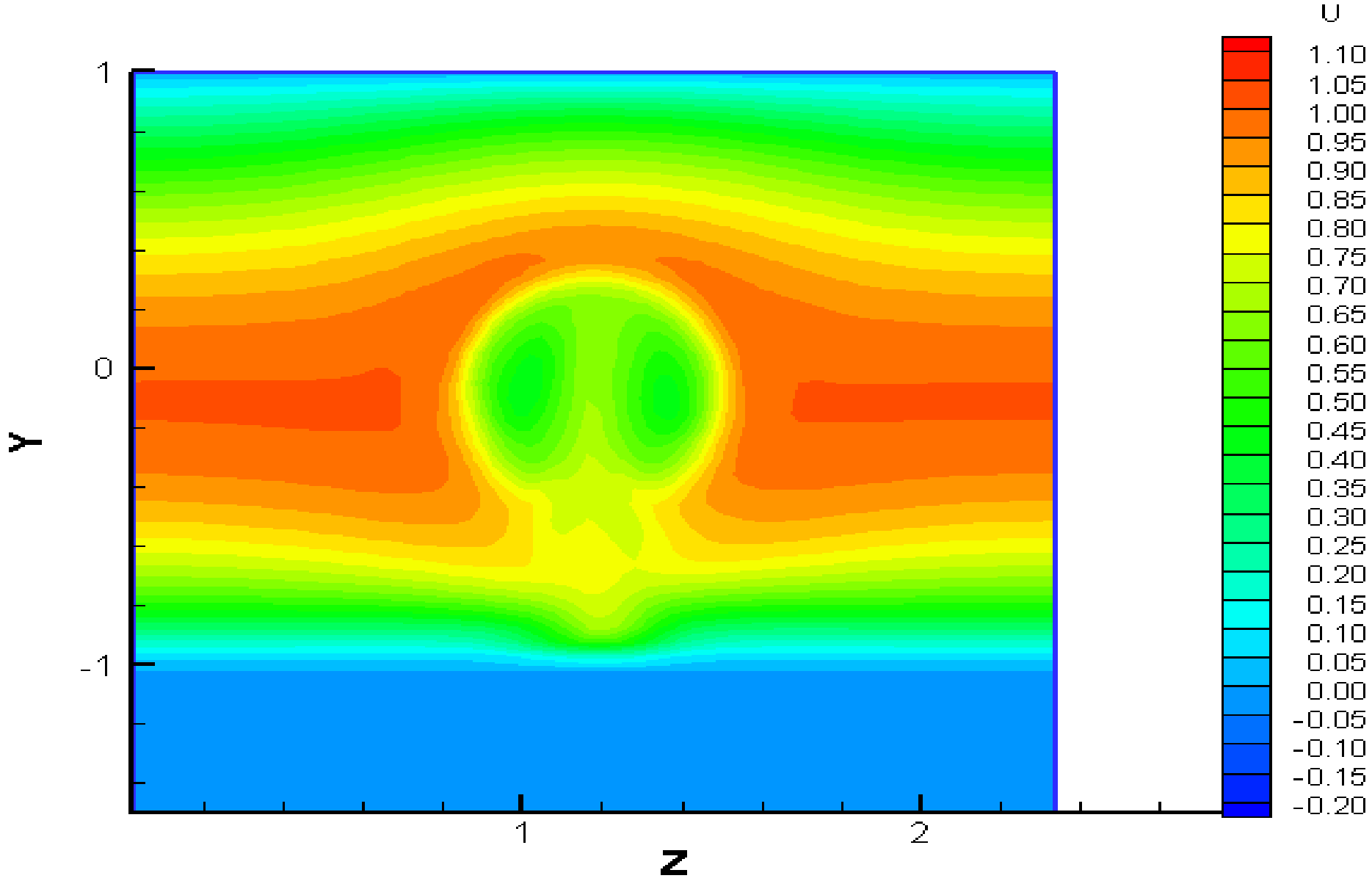
V-Velocity contours showing symmetric behaviour on exit plane.



V-Velocity contours inside the domain showing jet issuing from lower wall.



Pressure contours in the plane of symmetry.



U-velocity contour at x=7.