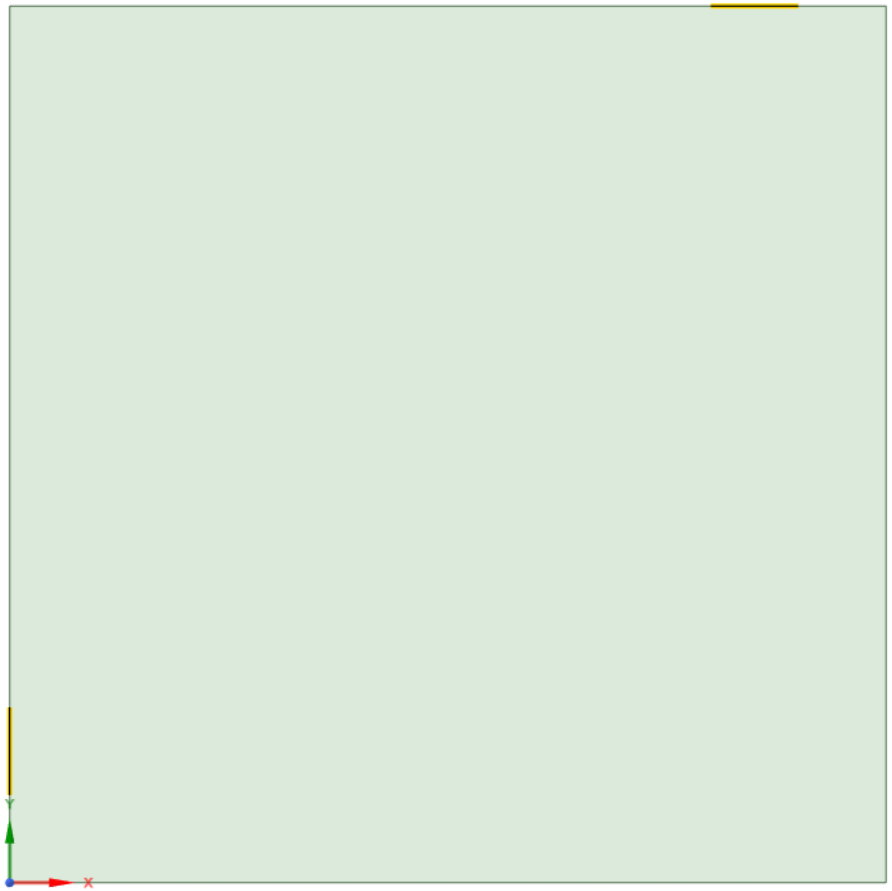
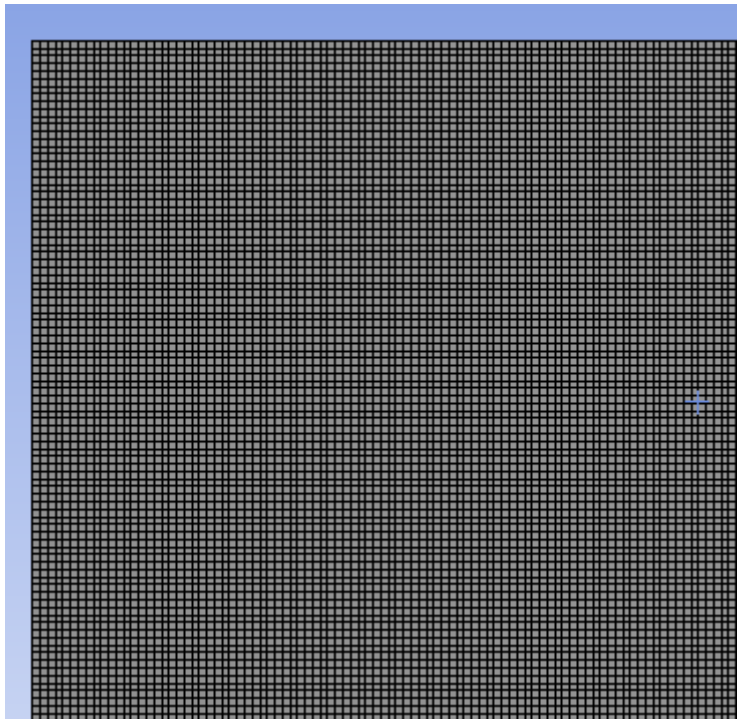
Cern Week 1 Report:

Kostantin Andreas Jacoby

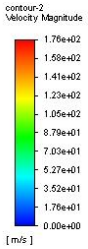
Geomerty / Mesh

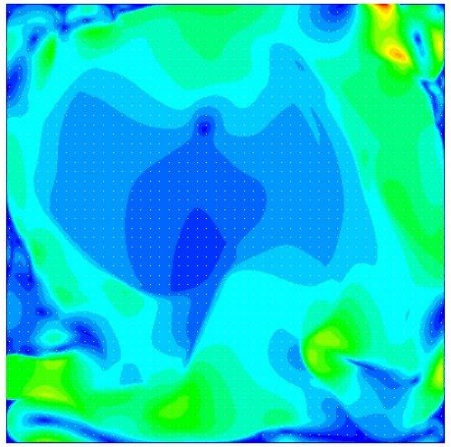


160000 Elements

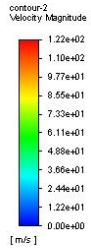


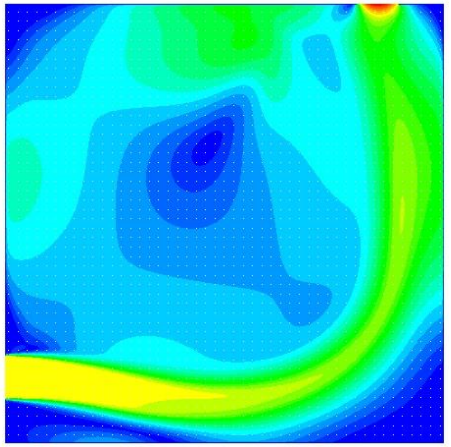
Laminar vs Tubrbulent Simulation





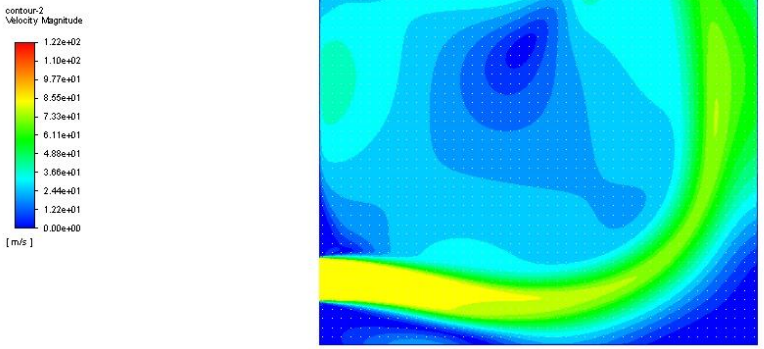
ANSYS
2019 R3
ACADEMIC





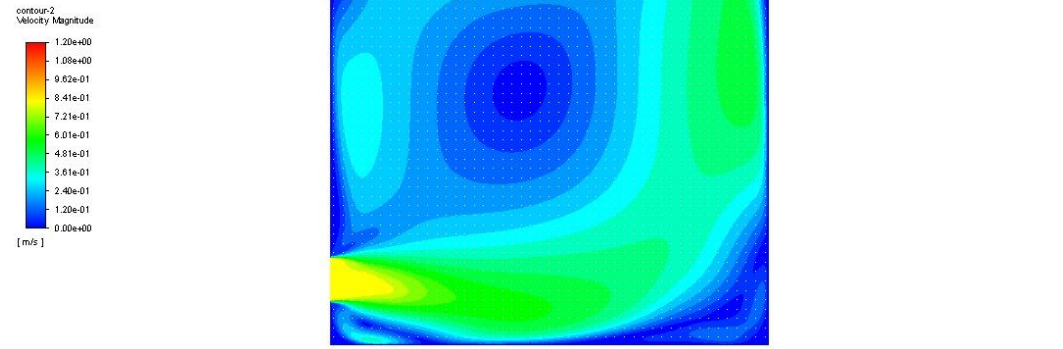
ANSYS
2019 R3
ACADEMIC

Different Turbulence Models



Standard K-epsilon

- Constant Density

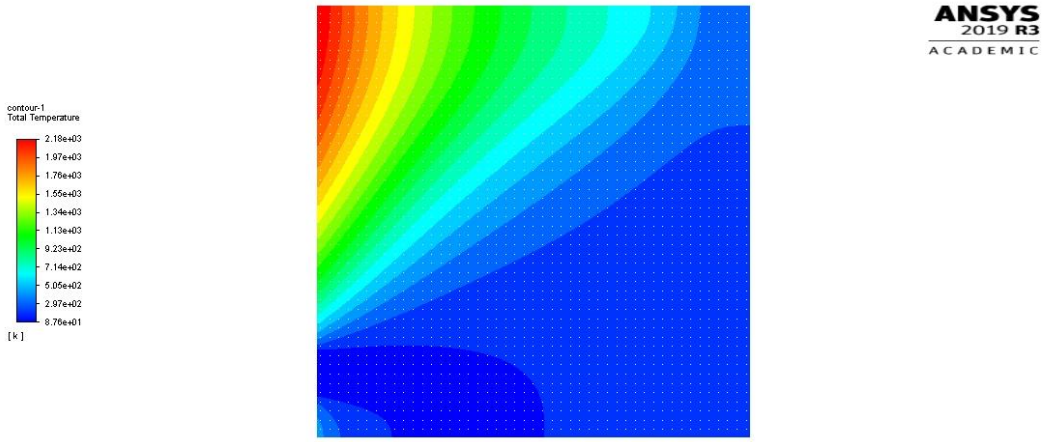


K-epsilon with Enhanced Wall Function:

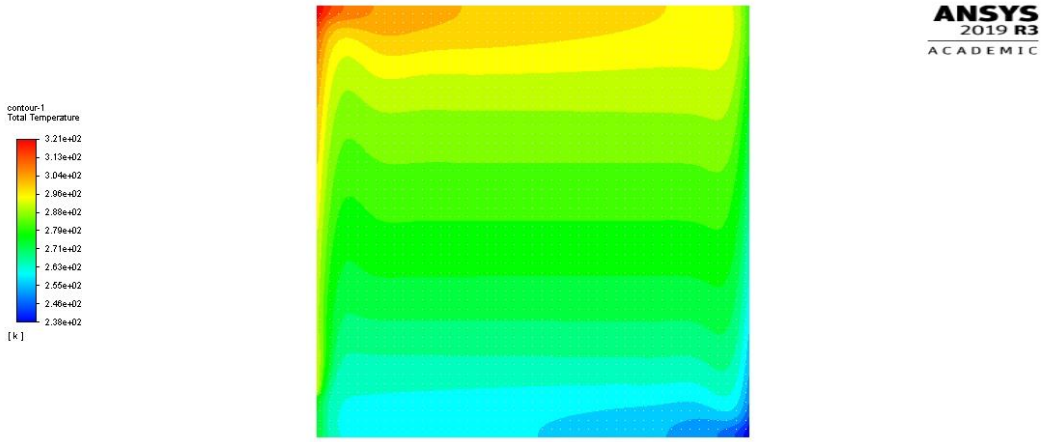
- Gravity taken into account
- Density change, ideal gas

Natural Conduction

- Moderate Flow (0.001 [Kg/s])



- Low Flow (0.0001 [Kg/s])

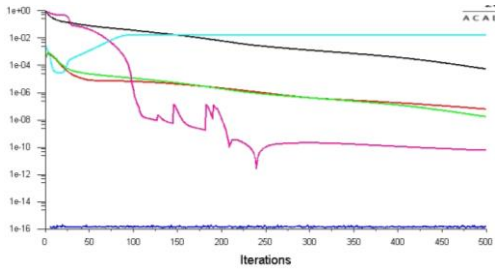


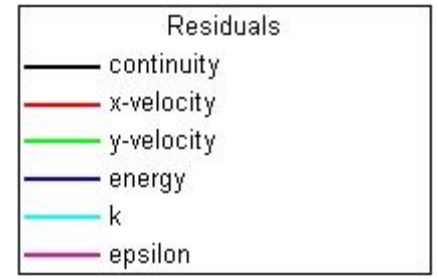
Conversion

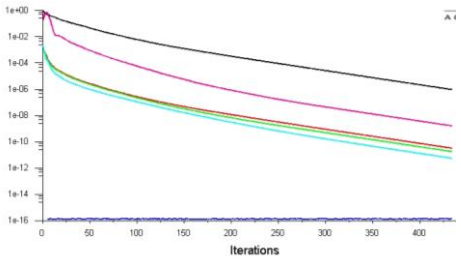
Low Kinetic Energy

High Kinetic Energy

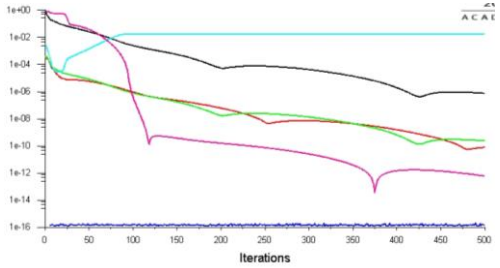
0.2

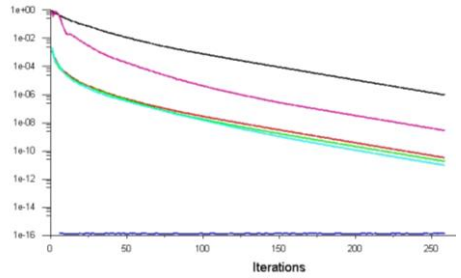




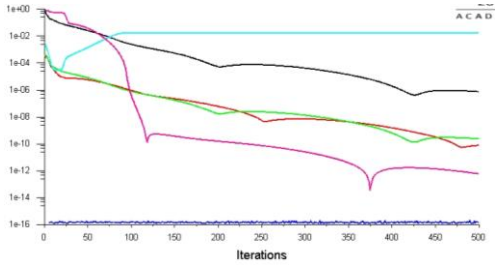


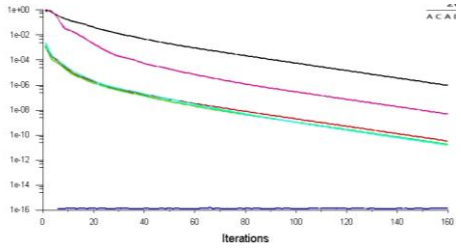
0.5





0.8



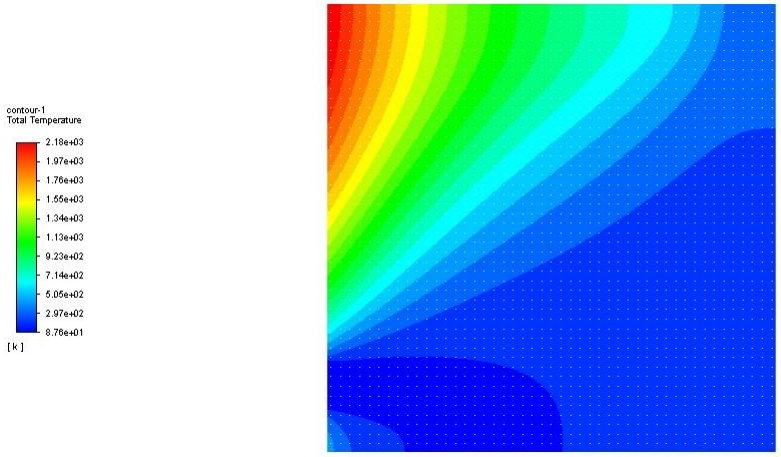
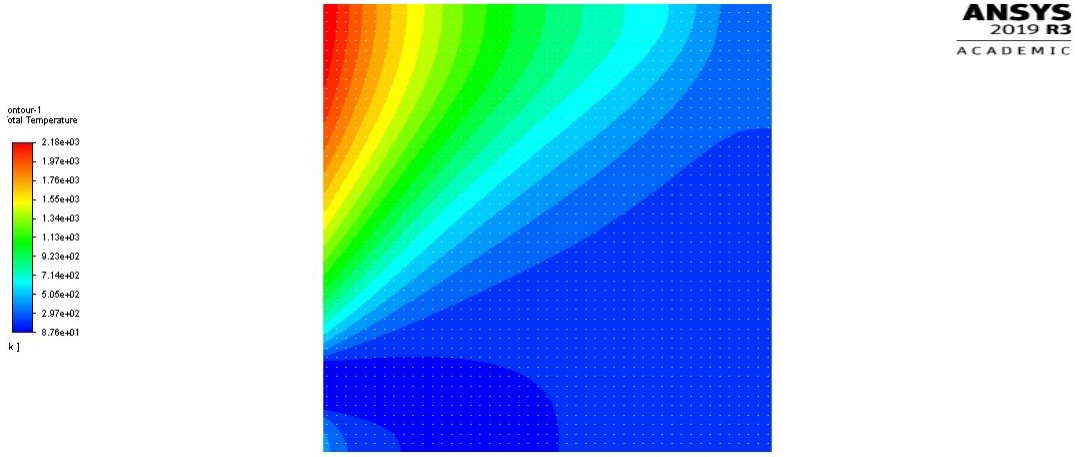


Goals For Comming Week

- Investiagte and Validate K-omega model
- Introducing Viscous Heating and Full Boyancy Effects
- Introduce 3D Model

Full Boyancy Effects

- On



- Off