# SIMULATION UPDATE

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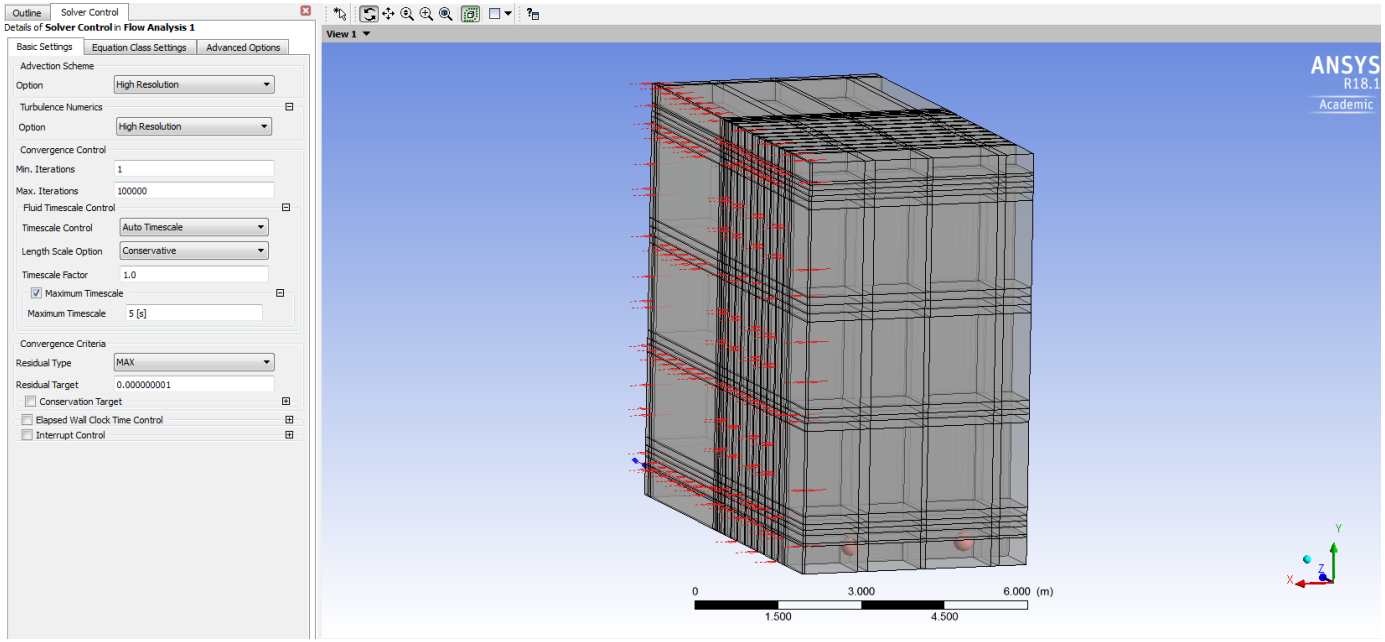
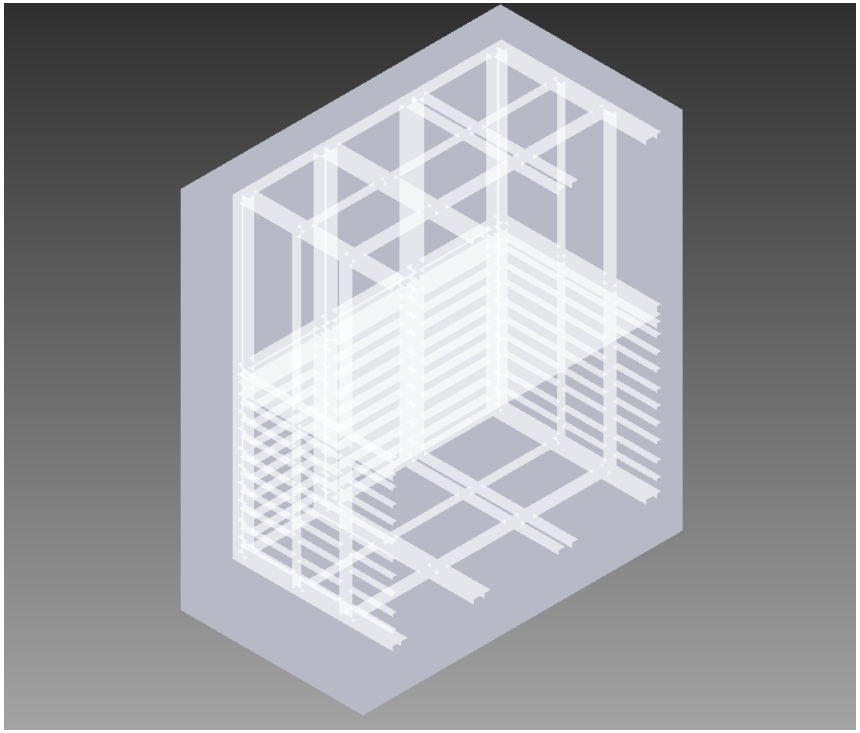
# PROTODUNE FULL SIMULATION

- We got .res file of full ProtoDune full simulation.
- .res file contains results and all the information about how simulation was made.
- It would be useful to understand what they did to use it for our case



# GEOMETRY

- We get the geometry from .res file.
- Got a pretty heavy .stl file, and we'r trying to convert in a 3d CAD file editable.
- In case we fail, we could design a simplified geometry from 0, based on this one.



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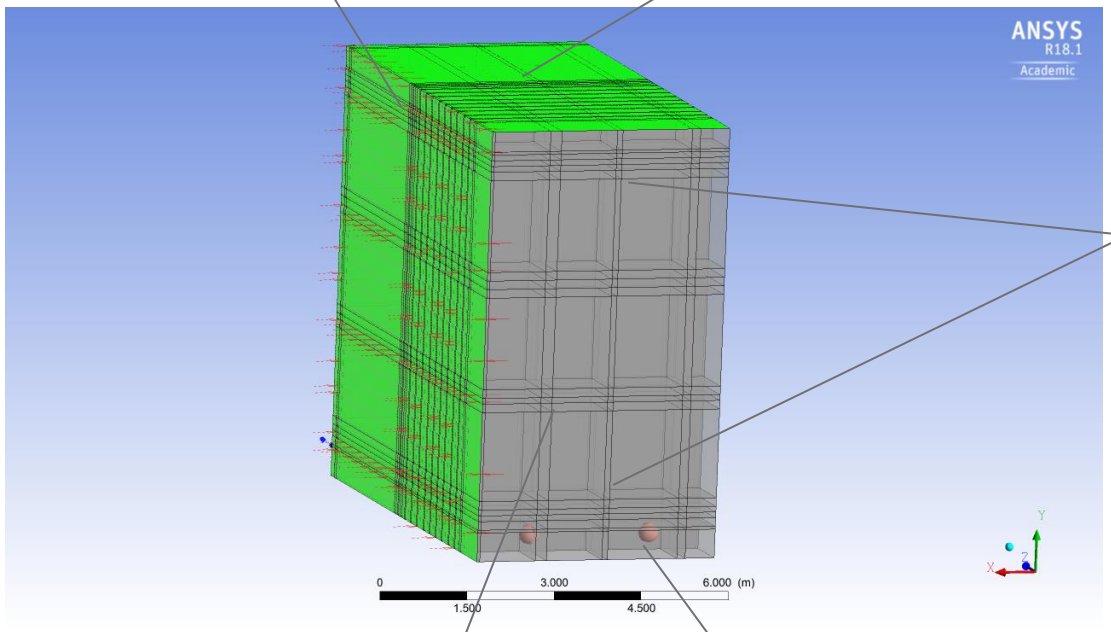
# MODEL

Symmetry plane

Lar surface (there is no LAr-GAr interface modeling)




Porous sheets (ground planes)

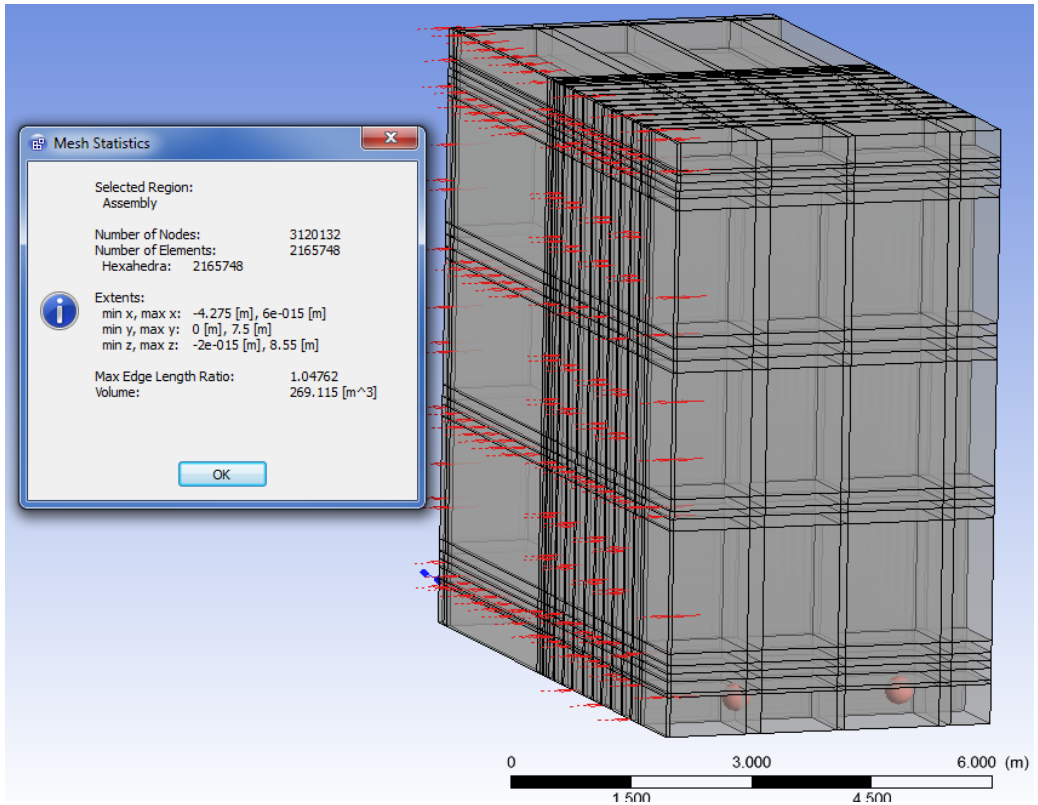
Inner adiabatic planes

Remote points inlets

# MESH

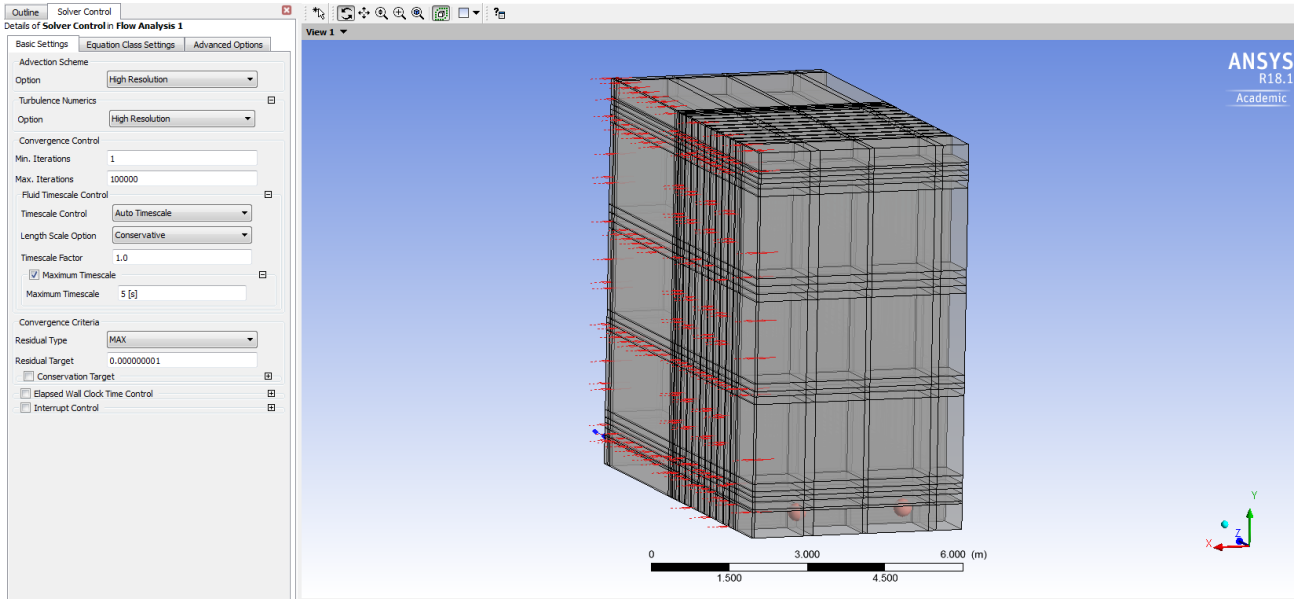
- We don't got the mesh file. The only information we have is number of nodes and elements:

  Nodes: 3120132
  Elements: 2156748



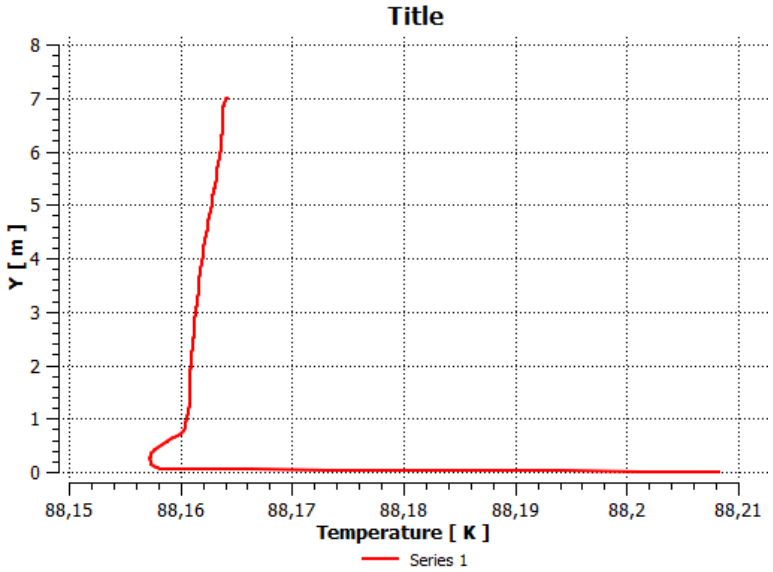
# SETUP

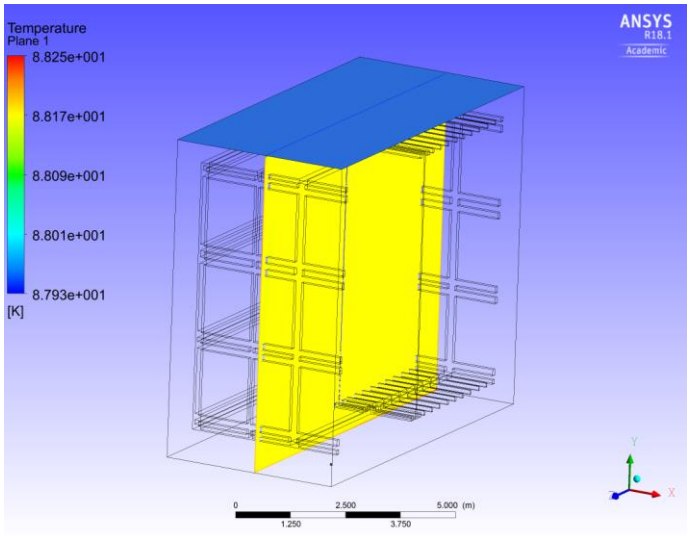
- Full information about simulation setup:
  - Material definitions.
  - Turbulence model.
  - Heat transfer model.
  - Solver configuration.
  - …



# RESULTS

- Full information about simulation results:
  - Temperature profiles.
  - Velocity profiles.



# CONCLUSIONS

- More than validate our results, we could develop a new simulation based on this one.
- Principal uncertainty: will see if our server has enough capacity to run it.
- To discuss:

  Should we develop this simulation, or better wait for Erik results and we'll see?

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