Ansys 2022 R2

Ansys Fluent Simulation Report

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Geometry and Mesh

Mesh Size

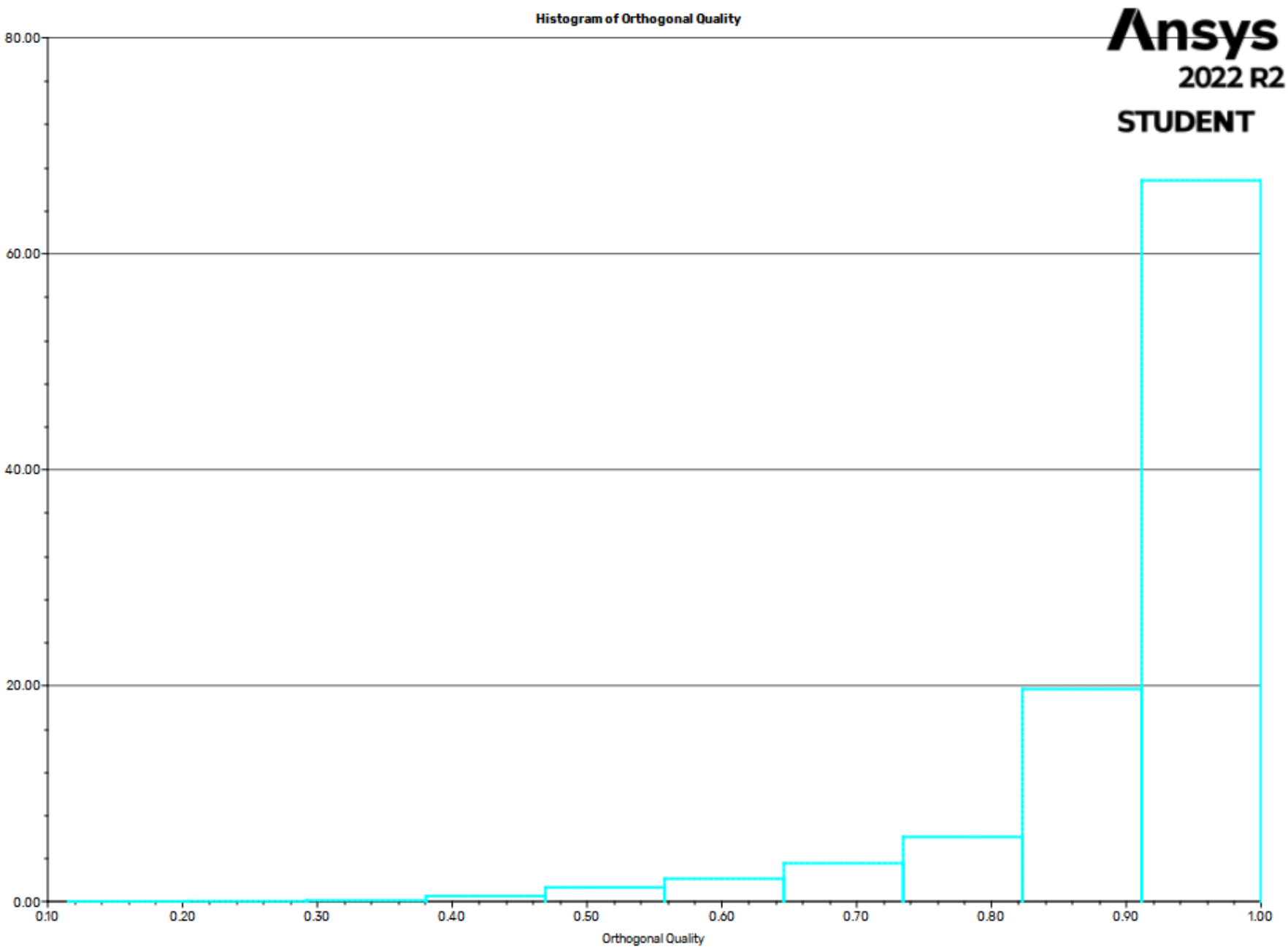
Cells	Faces	Nodes
494488	2775463	2045959

Mesh Quality

Name	Type	Min Orthogonal Quality	Max Aspect Ratio
fluid:3	Poly Cell	0.11522267	44.477283
honeycomb-solid1	Poly Cell	0.33788797	14.498531
honeycomb_af0-solid1	Poly Cell	0.33214441	14.232878
fluid:1	Poly Cell	0.20074656	40.526103
fluid:0	Poly Cell	0.17984859	33.201165
welding_2-solid1	Poly Cell	0.44477874	9.854392
pipe_connetions_cc-71-solid1	Poly Cell	0.48505977	9.585638

Name	Type	Min Orthogonal Quality	Max Aspect Ratio
siderings_af0-solid1	Poly Cell	0.49691729	5.270541
recessed_cushioningmat_af0-solid1	Poly Cell	0.55813052	5.8692446
recessed_cushioningmat-solid1	Poly Cell	0.56496123	6.5032935
siderings-solid1	Poly Cell	0.51412	5.7276462
siderings-72-solid1	Poly Cell	0.49581641	5.1904443
siderings-73-solid1	Poly Cell	0.48565496	5.9465637
welding_2-54-solid1	Poly Cell	0.41289419	11.101957
pipe_connetions_cc-solid1	Poly Cell	0.44279265	9.9782504
sensing_element-65-solid	Poly Cell	0.24923162	6.0548139
socket_for_sensor_solid_1-solid1	Poly Cell	0.59396389	6.0774199
sensor_protectiontube-66-solid1	Poly Cell	0.23234776	7.732894
sensor_innertube-67-solid	Poly Cell	0.190541	34.869518
quadribbed_body_bottom_af0-solid	Poly Cell	0.20092788	23.289122
quadribbed_body_top_af1-solid	Poly Cell	0.203316	46.365222

Orthogonal Quality



Simulation Setup

Physics

Models

Model	Settings
Space	3D
Time	Steady
Viscous	SST k-omega turbulence model
Heat Transfer	Enabled

Material Properties

— Fluid	
— nitrogen	
Density	1.138 kg/m^3
Cp (Specific Heat)	polynomial
Thermal Conductivity	0.0242 W/(m K)
Viscosity	1.663e-05 kg/(m s)
Molecular Weight	28.0134 kg/kmol
— air	
Density	1.225 kg/m^3
Cp (Specific Heat)	1006.43 J/(kg K)
Thermal Conductivity	0.0242 W/(m K)
Viscosity	1.7894e-05 kg/(m s)
Molecular Weight	28.966 kg/kmol
— Solid	
— aluminum	
Density	2719 kg/m^3
Cp (Specific Heat)	871 J/(kg K)
Thermal Conductivity	202.4 W/(m K)

Cell Zone Conditions

— Fluid	
— fluid:3	
Material Name	nitrogen
Specify source terms?	no
Specify fixed values?	no
Frame Motion?	no
Laminar zone?	no
Porous zone?	no
3D Fan Zone?	no
— honeycomb-solid1	
Material Name	nitrogen
Specify source terms?	no
Specify fixed values?	no
Frame Motion?	no
Laminar zone?	yes

Set Turbulent Viscosity to zero within laminar zone?	yes
Porous zone?	yes
Conical porous zone?	no
X-Component of Direction-1 Vector	1000000
Y-Component of Direction-1 Vector	1000000
Z-Component of Direction-1 Vector	1000
X-Component of Direction-2 Vector	1000
Y-Component of Direction-2 Vector	1000
Z-Component of Direction-2 Vector	1000
Relative Velocity Resistance Formulation?	yes
Direction-1 Viscous Resistance [m^-2]	2.111e+08
Direction-2 Viscous Resistance [m^-2]	2.111e+08
Direction-3 Viscous Resistance [m^-2]	2.111e+08
Choose alternative formulation for inertial resistance?	no
Direction-1 Inertial Resistance [m^-1]	0
Direction-2 Inertial Resistance [m^-1]	0
Direction-3 Inertial Resistance [m^-1]	0
C0 Coefficient for Power-Law	0
C1 Coefficient for Power-Law	0
Porosity	1
Relative Viscosity	1
Equilibrium Thermal Model (if no, Non-Equilibrium)?	yes
Solid Material Name	aluminum
3D Fan Zone?	no
━ honeycomb_af0-solid1	
Material Name	nitrogen
Specify source terms?	no
Specify fixed values?	no
Frame Motion?	no
Laminar zone?	yes
Set Turbulent Viscosity to zero within laminar zone?	yes
Porous zone?	yes
Conical porous zone?	no
X-Component of Direction-1 Vector	1000000
Y-Component of Direction-1 Vector	1000000
Z-Component of Direction-1 Vector	1000
X-Component of Direction-2 Vector	1000
Y-Component of Direction-2 Vector	1000
Z-Component of Direction-2 Vector	1000
Relative Velocity Resistance Formulation?	yes
Direction-1 Viscous Resistance [m^-2]	2.111e+08
Direction-2 Viscous Resistance [m^-2]	2.111e+08
Direction-3 Viscous Resistance [m^-2]	2.111e+08
Choose alternative formulation for inertial resistance?	no
Direction-1 Inertial Resistance [m^-1]	0

Direction-2 Inertial Resistance [m^-1]	0
Direction-3 Inertial Resistance [m^-1]	0
C0 Coefficient for Power-Law	0
C1 Coefficient for Power-Law	0
Porosity	1
Relative Viscosity	1
Equilibrium Thermal Model (if no, Non-Equilibrium)?	yes
Solid Material Name	aluminum
3D Fan Zone?	no
− fluid:1	
Material Name	nitrogen
Specify source terms?	no
Specify fixed values?	no
Frame Motion?	no
Laminar zone?	no
Porous zone?	no
3D Fan Zone?	no
− fluid:0	
Material Name	nitrogen
Specify source terms?	no
Specify fixed values?	no
Frame Motion?	no
Laminar zone?	no
Porous zone?	no
3D Fan Zone?	no
− Solid	
− welding_2-solid1	
Material Name	aluminum
Specify source terms?	no
Specify fixed values?	no
Frame Motion?	no
Solid Motion?	no
− pipe_connetions_cc-71-solid1	
Material Name	aluminum
Specify source terms?	no
Specify fixed values?	no
Frame Motion?	no
Solid Motion?	no
− siderings_af0-solid1	
Material Name	aluminum
Specify source terms?	no
Specify fixed values?	no
Frame Motion?	no
Solid Motion?	no
− recessed_cushioningmat_af0-solid1	

Material Name	aluminum
Specify source terms?	no
Specify fixed values?	no
Frame Motion?	no
Solid Motion?	no
− recessed_cushioningmat-solid1	
Material Name	aluminum
Specify source terms?	no
Specify fixed values?	no
Frame Motion?	no
Solid Motion?	no
− siderings-solid1	
Material Name	aluminum
Specify source terms?	no
Specify fixed values?	no
Frame Motion?	no
Solid Motion?	no
− siderings-72-solid1	
Material Name	aluminum
Specify source terms?	no
Specify fixed values?	no
Frame Motion?	no
Solid Motion?	no
− siderings-73-solid1	
Material Name	aluminum
Specify source terms?	no
Specify fixed values?	no
Frame Motion?	no
Solid Motion?	no
− welding_2-54-solid1	
Material Name	aluminum
Specify source terms?	no
Specify fixed values?	no
Frame Motion?	no
Solid Motion?	no
− pipe_connetions_cc-solid1	
Material Name	aluminum
Specify source terms?	no
Specify fixed values?	no
Frame Motion?	no
Solid Motion?	no
− sensing_element-65-solid	
Material Name	aluminum
Specify source terms?	no
Specify fixed values?	no

Frame Motion?	no
Solid Motion?	no
− socket_for_sensor_solid_1-solid1	
Material Name	aluminum
Specify source terms?	no
Specify fixed values?	no
Frame Motion?	no
Solid Motion?	no
− sensor_protectiontube-66-solid1	
Material Name	aluminum
Specify source terms?	no
Specify fixed values?	no
Frame Motion?	no
Solid Motion?	no
− sensor_innertube-67-solid	
Material Name	aluminum
Specify source terms?	no
Specify fixed values?	no
Frame Motion?	no
Solid Motion?	no
− quadribbed_body_bottom_af0-solid	
Material Name	aluminum
Specify source terms?	no
Specify fixed values?	no
Frame Motion?	no
Solid Motion?	no
− quadribbed_body_top_af1-solid	
Material Name	aluminum
Specify source terms?	no
Specify fixed values?	no
Frame Motion?	no
Solid Motion?	no

Boundary Conditions

− Inlet	
− velo-inlet_1	
Velocity Specification Method	Magnitude, Normal to Boundary
Reference Frame	Absolute
Velocity Magnitude [m/s]	125
Supersonic/Initial Gauge Pressure [Pa]	0
Temperature [K]	800
Turbulent Specification Method	Intensity and Hydraulic Diameter
Turbulent Intensity [%]	5
Hydraulic Diameter [m]	0.5
− Outlet	

▬ pres_outlet_1	
Backflow Reference Frame	Absolute
Gauge Pressure [Pa]	0
Pressure Profile Multiplier	1
Backflow Total Temperature [K]	800
Backflow Direction Specification Method	Normal to Boundary
Turbulent Specification Method	Intensity and Hydraulic Diameter
Backflow Turbulent Intensity [%]	5
Backflow Hydraulic Diameter [m]	0.5
Backflow Pressure Specification	Total Pressure
Build artificial walls to prevent reverse flow?	no
Radial Equilibrium Pressure Distribution	no
Average Pressure Specification?	no
Specify targeted mass flow rate	no
▬ Wall	
▬ sensing_element-65-solid:1	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Heat Flux
Heat Flux [W/m^2]	0
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ sensing_element-65-solid-socket_for_sensor_solid_1-solid1	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ sensing_element-65-solid-sensor_protectiontube-66-solid1	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ sensing_element-65-solid-sensor_innertube-67-solid	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ socket_for_sensor_solid_1-solid1:1	

Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Heat Flux
Heat Flux [W/m^2]	0
Enable shell conduction?	no
Convective Augmentation Factor	1
━ quadribbed_body_top_af1-solid-socket_for_sensor_solid_1-solid1	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
━ pipe_connetions_cc-solid1:1	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Heat Flux
Heat Flux [W/m^2]	0
Enable shell conduction?	no
Convective Augmentation Factor	1
━ pipe_connetions_cc-solid1-quadribbed_body_top_af1-solid	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
━ pipe_connetions_cc-solid1-quadribbed_body_bottom_af0-solid	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
━ pipe_connetions_cc-71-solid1:1	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Heat Flux
Heat Flux [W/m^2]	0
Enable shell conduction?	no
Convective Augmentation Factor	1
━ pipe_connetions_cc-71-solid1-quadribbed_body_top_af1-solid	

Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
− pipe_connetions_cc-71-solid1-quadribbed_body_bottom_af0-solid	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
− quadribbed_body_top_af1-solid:1	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Wall Motion	Stationary Wall
Shear Boundary Condition	No Slip
Wall Surface Roughness	0
Wall Roughness Height [m]	0
Wall Roughness Constant	0.5
Convective Augmentation Factor	1
− quadribbed_body_top_af1-solid-siderings_af0-solid1	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
− quadribbed_body_top_af1-solid-siderings-solid1	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
− quadribbed_body_top_af1-solid-siderings-72-solid1	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no

Convective Augmentation Factor	1
▬ quadribbed_body_top_af1-solid-siderings-73-solid1	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ quadribbed_body_top_af1-solid-recessed_cushioningmat_af0-solid1	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ quadribbed_body_top_af1-solid-recessed_cushioningmat-solid1	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ quadribbed_body_bottom_af0-solid-quadribbed_body_top_af1-solid	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ welding_2-solid1:1	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Heat Flux
Heat Flux [W/m^2]	0
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ sensor_protectiontube-66-solid1:1	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Heat Flux
Heat Flux [W/m^2]	0
Enable shell conduction?	no
Convective Augmentation Factor	1

▬ quadribbed_body_top_af1-solid-sensor_protectiontube-66-solid1	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ sensor_innertube-67-solid-sensor_protectiontube-66-solid1	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ pipe_connetions_cc-71-solid1-welding_2-solid1	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ quadribbed_body_top_af1-solid-welding_2-solid1	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ quadribbed_body_bottom_af0-solid-welding_2-solid1	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ siderings_af0-solid1:1	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Wall Motion	Stationary Wall
Shear Boundary Condition	No Slip
Wall Surface Roughness	0
Wall Roughness Height [m]	0

Wall Roughness Constant	0.5
Convective Augmentation Factor	1
━ honeycomb_af0-solid1-siderings_af0-solid1	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Wall Motion	Stationary Wall
Shear Boundary Condition	No Slip
Wall Surface Roughness	0
Wall Roughness Height [m]	0
Wall Roughness Constant	0.5
Convective Augmentation Factor	1
━ recessed_cushioningmat_af0-solid1-siderings_af0-solid1	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
━ quadribbed_body_bottom_af0-solid-siderings_af0-solid1	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
━ siderings-solid1:1	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Wall Motion	Stationary Wall
Shear Boundary Condition	No Slip
Wall Surface Roughness	0
Wall Roughness Height [m]	0
Wall Roughness Constant	0.5
Convective Augmentation Factor	1
━ honeycomb_af0-solid1-siderings-solid1	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled

Enable shell conduction?	no
Wall Motion	Stationary Wall
Shear Boundary Condition	No Slip
Wall Surface Roughness	0
Wall Roughness Height [m]	0
Wall Roughness Constant	0.5
Convective Augmentation Factor	1
━ recessed_cushioningmat_af0-solid1-siderings-solid1	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
━ quadribbed_body_bottom_af0-solid-siderings-solid1	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
━ siderings-72-solid1:1	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Wall Motion	Stationary Wall
Shear Boundary Condition	No Slip
Wall Surface Roughness	0
Wall Roughness Height [m]	0
Wall Roughness Constant	0.5
Convective Augmentation Factor	1
━ honeycomb-solid1-siderings-72-solid1	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Wall Motion	Stationary Wall
Shear Boundary Condition	No Slip
Wall Surface Roughness	0
Wall Roughness Height [m]	0
Wall Roughness Constant	0.5
Convective Augmentation Factor	1

▬ recessed_cushioningmat-solid1-siderings-72-solid1	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ quadribbed_body_bottom_af0-solid-siderings-72-solid1	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ siderings-73-solid1:1	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Wall Motion	Stationary Wall
Shear Boundary Condition	No Slip
Wall Surface Roughness	0
Wall Roughness Height [m]	0
Wall Roughness Constant	0.5
Convective Augmentation Factor	1
▬ honeycomb-solid1-siderings-73-solid1	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Wall Motion	Stationary Wall
Shear Boundary Condition	No Slip
Wall Surface Roughness	0
Wall Roughness Height [m]	0
Wall Roughness Constant	0.5
Convective Augmentation Factor	1
▬ recessed_cushioningmat-solid1-siderings-73-solid1	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1

▬ quadribbed_body_bottom_af0-solid-siderings-73-solid1	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ honeycomb_af0-solid1-recessed_cushioningmat_af0-solid1	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Wall Motion	Stationary Wall
Shear Boundary Condition	No Slip
Wall Surface Roughness	0
Wall Roughness Height [m]	0
Wall Roughness Constant	0.5
Convective Augmentation Factor	1
▬ quadribbed_body_bottom_af0-solid-recessed_cushioningmat_af0-solid1	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ honeycomb-solid1-recessed_cushioningmat-solid1	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Wall Motion	Stationary Wall
Shear Boundary Condition	No Slip
Wall Surface Roughness	0
Wall Roughness Height [m]	0
Wall Roughness Constant	0.5
Convective Augmentation Factor	1
▬ quadribbed_body_bottom_af0-solid-recessed_cushioningmat-solid1	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1

▬ quadribbed_body_bottom_af0-solid:1	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Wall Motion	Stationary Wall
Shear Boundary Condition	No Slip
Wall Surface Roughness	0
Wall Roughness Height [m]	0
Wall Roughness Constant	0.5
Convective Augmentation Factor	1
▬ sensor_innertube-67-solid:1	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Wall Motion	Stationary Wall
Shear Boundary Condition	No Slip
Wall Surface Roughness	0
Wall Roughness Height [m]	0
Wall Roughness Constant	0.5
Convective Augmentation Factor	1
▬ welding_2-54-solid1:1	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Heat Flux
Heat Flux [W/m^2]	0
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ pipe_connetions_cc-solid1-welding_2-54-solid1	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ quadribbed_body_top_af1-solid-welding_2-54-solid1	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no

Convective Augmentation Factor	1
▬ quadribbed_body_bottom_af0-solid-welding_2-54-solid1	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ in1	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Heat Flux
Heat Flux [W/m^2]	0
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ out1	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Heat Flux
Heat Flux [W/m^2]	0
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ sensing_element-65-solid:257	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Wall Motion	Stationary Wall
Shear Boundary Condition	No Slip
Wall Surface Roughness	0
Wall Roughness Height [m]	0
Wall Roughness Constant	0.5
Convective Augmentation Factor	1
▬ socket_for_sensor_solid_1-solid1:258	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Heat Flux
Heat Flux [W/m^2]	0
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ quadribbed_body_top_af1-solid:259	

Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Wall Motion	Stationary Wall
Shear Boundary Condition	No Slip
Wall Surface Roughness	0
Wall Roughness Height [m]	0
Wall Roughness Constant	0.5
Convective Augmentation Factor	1
━ quadribbed_body_top_af1-solid:260	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Heat Flux
Heat Flux [W/m^2]	0
Enable shell conduction?	no
Convective Augmentation Factor	1
━ sensor_protectiontube-66-solid1:261	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Heat Flux
Heat Flux [W/m^2]	0
Enable shell conduction?	no
Convective Augmentation Factor	1
━ sensor_protectiontube-66-solid1:262	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Wall Motion	Stationary Wall
Shear Boundary Condition	No Slip
Wall Surface Roughness	0
Wall Roughness Height [m]	0
Wall Roughness Constant	0.5
Convective Augmentation Factor	1
━ quadribbed_body_bottom_af0-solid:265	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no

Wall Motion	Stationary Wall
Shear Boundary Condition	No Slip
Wall Surface Roughness	0
Wall Roughness Height [m]	0
Wall Roughness Constant	0.5
Convective Augmentation Factor	1
▬ sensor_innertube-67-solid:266	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Heat Flux
Heat Flux [W/m^2]	0
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ pipe_connetions_cc-solid1:1:5877	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Wall Motion	Stationary Wall
Shear Boundary Condition	No Slip
Wall Surface Roughness	0
Wall Roughness Height [m]	0
Wall Roughness Constant	0.5
Convective Augmentation Factor	1
▬ pipe_connetions_cc-71-solid1:1:5878	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Wall Motion	Stationary Wall
Shear Boundary Condition	No Slip
Wall Surface Roughness	0
Wall Roughness Height [m]	0
Wall Roughness Constant	0.5
Convective Augmentation Factor	1
▬ quadribbed_body_top_af1-solid:1:5879	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Wall Motion	Stationary Wall

Shear Boundary Condition	No Slip
Wall Surface Roughness	0
Wall Roughness Height [m]	0
Wall Roughness Constant	0.5
Convective Augmentation Factor	1
━ quadribbed_body_top_af1-solid:1:5880	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Heat Flux
Heat Flux [W/m^2]	0
Enable shell conduction?	no
Convective Augmentation Factor	1
━ quadribbed_body_bottom_af0-solid:1:5881	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Heat Flux
Heat Flux [W/m^2]	0
Enable shell conduction?	no
Convective Augmentation Factor	1
━ quadribbed_body_bottom_af0-solid:1:5882	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Wall Motion	Stationary Wall
Shear Boundary Condition	No Slip
Wall Surface Roughness	0
Wall Roughness Height [m]	0
Wall Roughness Constant	0.5
Convective Augmentation Factor	1
━ sensing_element-65-solid:257:5883	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Heat Flux
Heat Flux [W/m^2]	0
Enable shell conduction?	no
Convective Augmentation Factor	1
━ sensing_element-65-solid-socket_for_sensor_solid_1-solid1-shadow	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum

Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ sensing_element-65-solid-sensor_protectiontube-66-solid1-shadow	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ sensing_element-65-solid-sensor_innertube-67-solid-shadow	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ quadribbed_body_top_af1-solid-socket_for_sensor_solid_1-solid1-shadow	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ pipe_connetions_cc-solid1-quadribbed_body_top_af1-solid-shadow	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ pipe_connetions_cc-solid1-quadribbed_body_bottom_af0-solid-shadow	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ pipe_connetions_cc-71-solid1-quadribbed_body_top_af1-solid-shadow	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1

▬ pipe_connetions_cc-71-solid1-quadribbed_body_bottom_af0-solid-shadow	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ quadribbed_body_top_af1-solid:1-shadow	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ quadribbed_body_top_af1-solid-siderings_af0-solid1-shadow	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ quadribbed_body_top_af1-solid-siderings-solid1-shadow	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ quadribbed_body_top_af1-solid-siderings-72-solid1-shadow	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ quadribbed_body_top_af1-solid-siderings-73-solid1-shadow	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ quadribbed_body_top_af1-solid-recessed_cushioningmat_af0-solid1-shadow	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0

Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ quadribbed_body_top_af1-solid-recessed_cushioningmat-solid1-shadow	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ quadribbed_body_bottom_af0-solid-quadribbed_body_top_af1-solid-shadow	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ quadribbed_body_top_af1-solid-sensor_protectiontube-66-solid1-shadow	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ sensor_innertube-67-solid-sensor_protectiontube-66-solid1-shadow	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ pipe_connetions_cc-71-solid1-welding_2-solid1-shadow	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ quadribbed_body_top_af1-solid-welding_2-solid1-shadow	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no

Convective Augmentation Factor	1
▬ quadribbed_body_bottom_af0-solid-welding_2-solid1-shadow	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ siderings_af0-solid1:1-shadow	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ honeycomb_af0-solid1-siderings_af0-solid1-shadow	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ recessed_cushioningmat_af0-solid1-siderings_af0-solid1-shadow	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ quadribbed_body_bottom_af0-solid-siderings_af0-solid1-shadow	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ siderings-solid1:1-shadow	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ honeycomb_af0-solid1-siderings-solid1-shadow	
Wall Thickness [m]	0

Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ recessed_cushioningmat_af0-solid1-siderings-solid1-shadow	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ quadribbed_body_bottom_af0-solid-siderings-solid1-shadow	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ siderings-72-solid1:1-shadow	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ honeycomb-solid1-siderings-72-solid1-shadow	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ recessed_cushioningmat-solid1-siderings-72-solid1-shadow	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ quadribbed_body_bottom_af0-solid-siderings-72-solid1-shadow	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled

Enable shell conduction?	no
Convective Augmentation Factor	1
━ siderings-73-solid1:1-shadow	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
━ honeycomb-solid1-siderings-73-solid1-shadow	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
━ recessed_cushioningmat-solid1-siderings-73-solid1-shadow	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
━ quadribbed_body_bottom_af0-solid-siderings-73-solid1-shadow	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
━ honeycomb_af0-solid1-recessed_cushioningmat_af0-solid1-shadow	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
━ quadribbed_body_bottom_af0-solid-recessed_cushioningmat_af0-solid1-shadow	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
━ honeycomb-solid1-recessed_cushioningmat-solid1-shadow	

Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
− quadribbed_body_bottom_af0-solid-recessed_cushioningmat-solid1-shadow	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
− quadribbed_body_bottom_af0-solid:1-shadow	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
− sensor_innertube-67-solid:1-shadow	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
− pipe_connetions_cc-solid1-welding_2-54-solid1-shadow	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
− quadribbed_body_top_af1-solid-welding_2-54-solid1-shadow	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
− quadribbed_body_bottom_af0-solid-welding_2-54-solid1-shadow	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum

Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ sensing_element-65-solid:257-shadow	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ quadribbed_body_top_af1-solid:259-shadow	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ sensor_protectiontube-66-solid1:262-shadow	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ quadribbed_body_bottom_af0-solid:265-shadow	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ pipe_connetions_cc-solid1:1:5877-shadow	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
▬ pipe_connetions_cc-71-solid1:1:5878-shadow	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1

− quadribbed_body_top_af1-solid:1:5879-shadow	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1
− quadribbed_body_bottom_af0-solid:1:5882-shadow	
Wall Thickness [m]	0
Heat Generation Rate [W/m^3]	0
Material Name	aluminum
Thermal BC Type	Coupled
Enable shell conduction?	no
Convective Augmentation Factor	1

Reference Values

Area	1 m^2
Density	1.225 kg/m^3
Enthalpy	0 J/kg
Length	1 m
Pressure	0 Pa
Temperature	288.16 K
Velocity	1 m/s
Viscosity	1.7894e-05 kg/(m s)
Ratio of Specific Heats	1.4
Yplus for Heat Tran. Coef.	300
Reference Zone	fluid:0

Solver Settings

− Equations	
Flow	True
Turbulence	True
Energy	True
− Numerics	
Absolute Velocity Formulation	True
− Pseudo Time Explicit Relaxation Factors	
Density	1
Body Forces	1
Turbulent Kinetic Energy	0.75
Specific Dissipation Rate	0.75
Turbulent Viscosity	1
Energy	0.75
Explicit Momentum	0.5

Explicit Pressure	0.5
— Pressure-Velocity Coupling	
Type	Coupled
Pseudo Time Method (Global Time Step)	True
— Discretization Scheme	
Pressure	Second Order
Momentum	Second Order Upwind
Turbulent Kinetic Energy	Second Order Upwind
Specific Dissipation Rate	Second Order Upwind
Energy	Second Order Upwind
— Solution Limits	
Minimum Absolute Pressure [Pa]	1
Maximum Absolute Pressure [Pa]	5e+10
Minimum Temperature [K]	1
Maximum Temperature [K]	5000
Minimum Turb. Kinetic Energy [m^2/s^2]	1e-14
Minimum Spec. Dissipation Rate [s^-1]	1e-20
Maximum Turb. Viscosity Ratio	100000

Run Information

Number of Machines	1
Number of Cores	2
Case Read	18.298 seconds
Iteration	603.371 seconds
AMG	410.979 seconds
Virtual Current Memory	3.1021 GB
Virtual Peak Memory	3.78194 GB
Memory Per M Cell	5.61134

Solution Status

Iterations: 154

	Value	Absolute Criteria	Convergence Status
continuity	7.659446e-05	0.001	Converged
x-velocity	6.97617e-06	0.001	Converged
y-velocity	1.049581e-05	0.001	Converged
z-velocity	1.576649e-05	0.001	Converged
energy	3.456881e-06	1e-06	Not Converged
k	0.0003051152	0.001	Converged

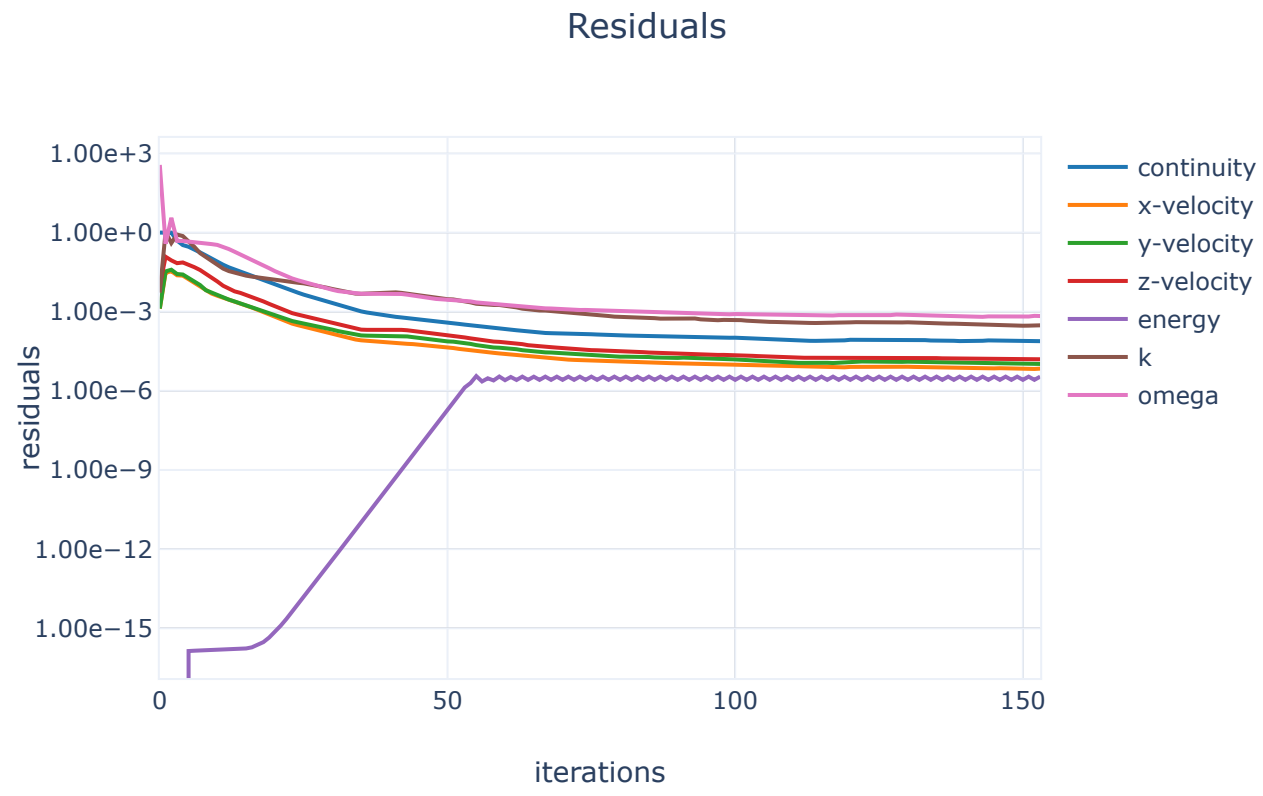
	Value	Absolute Criteria	Convergence Status
omega	0.0006880004	0.001	Converged

Report Definitions

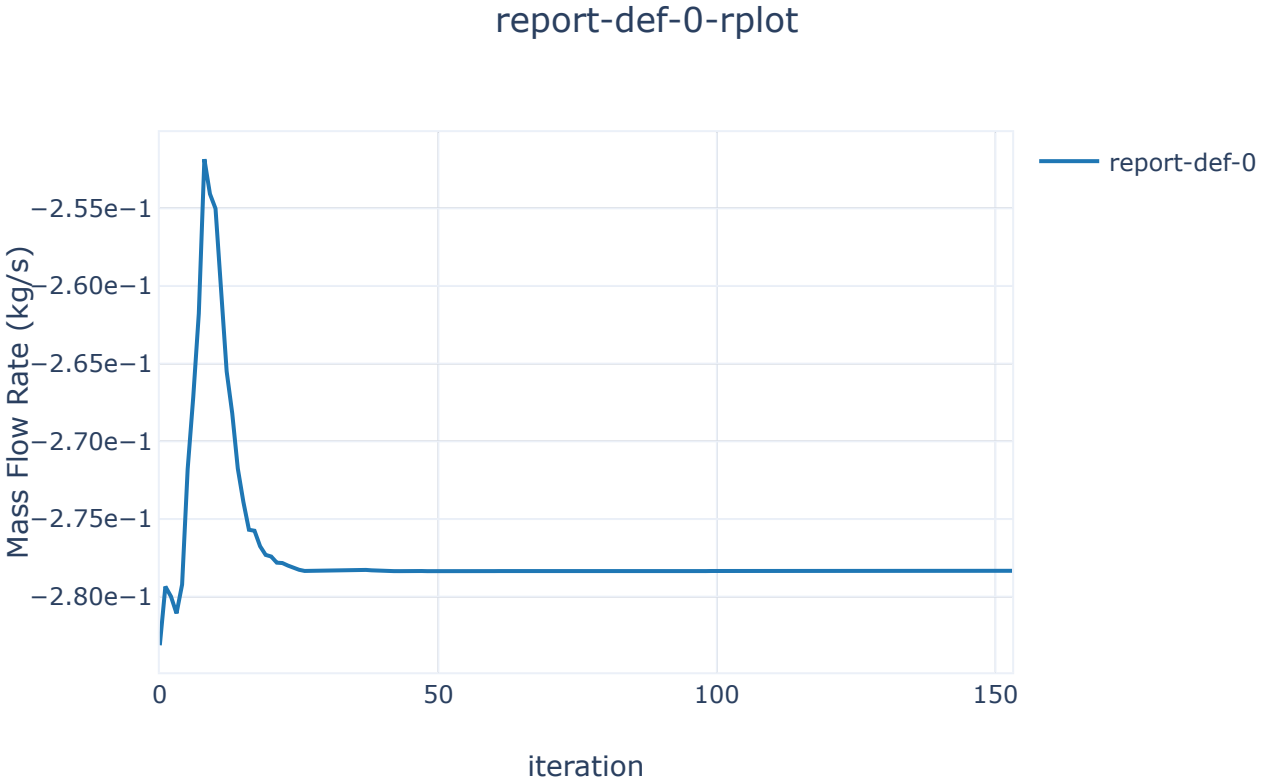
report-def-0	-0.2783344	kg/s

Plots

Residuals

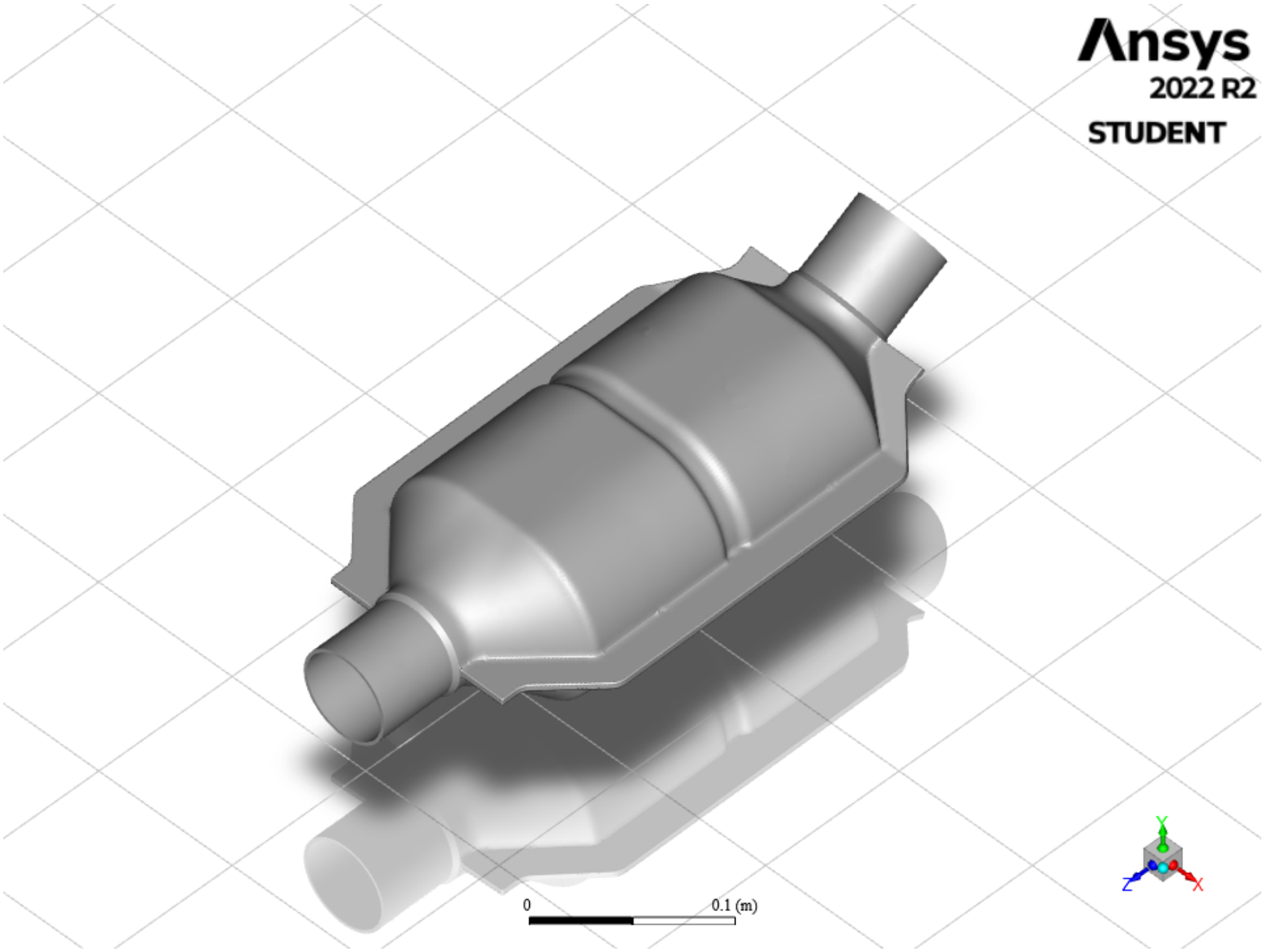


report-def-0-rplot



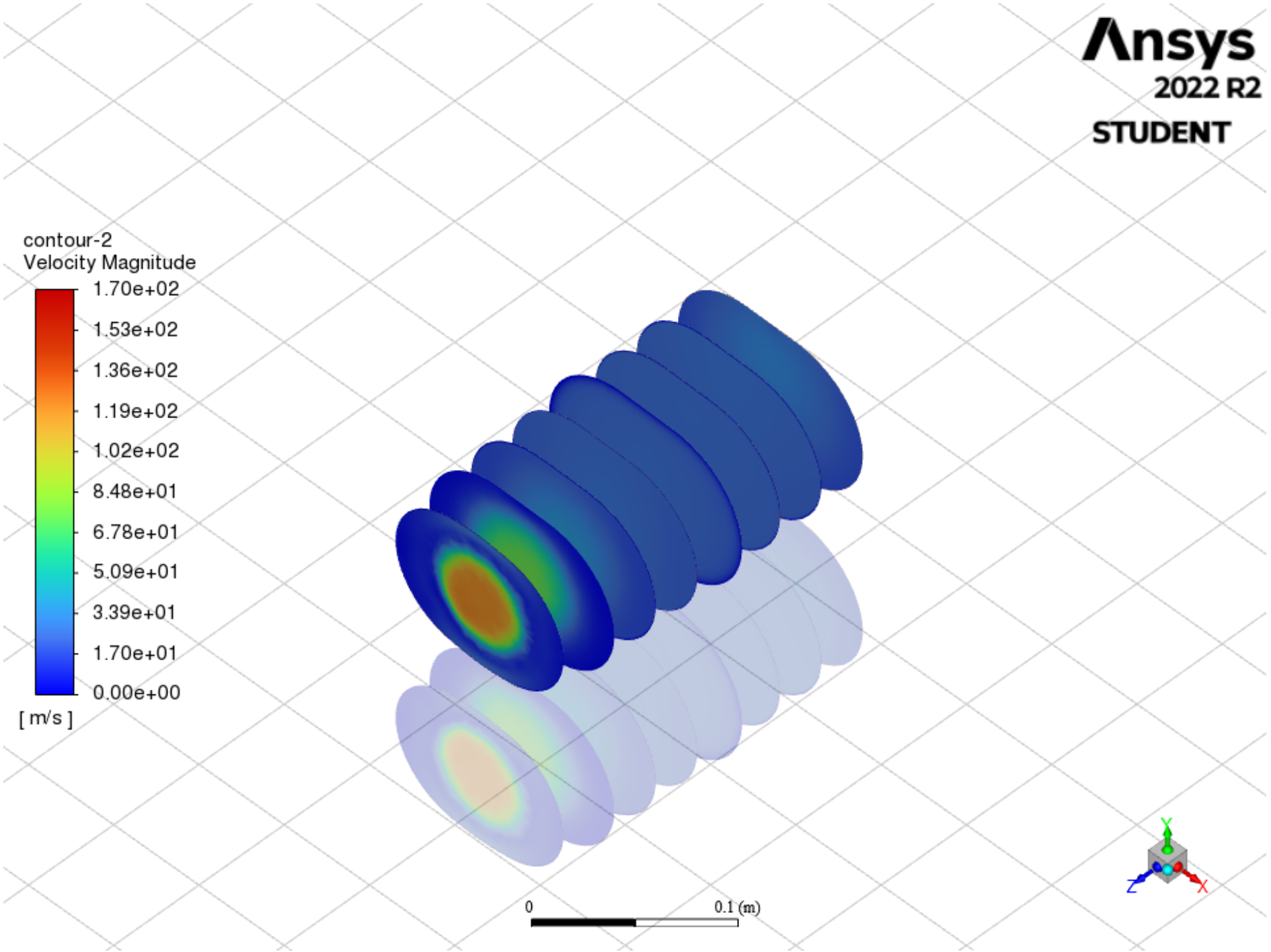
Mesh

mesh-1

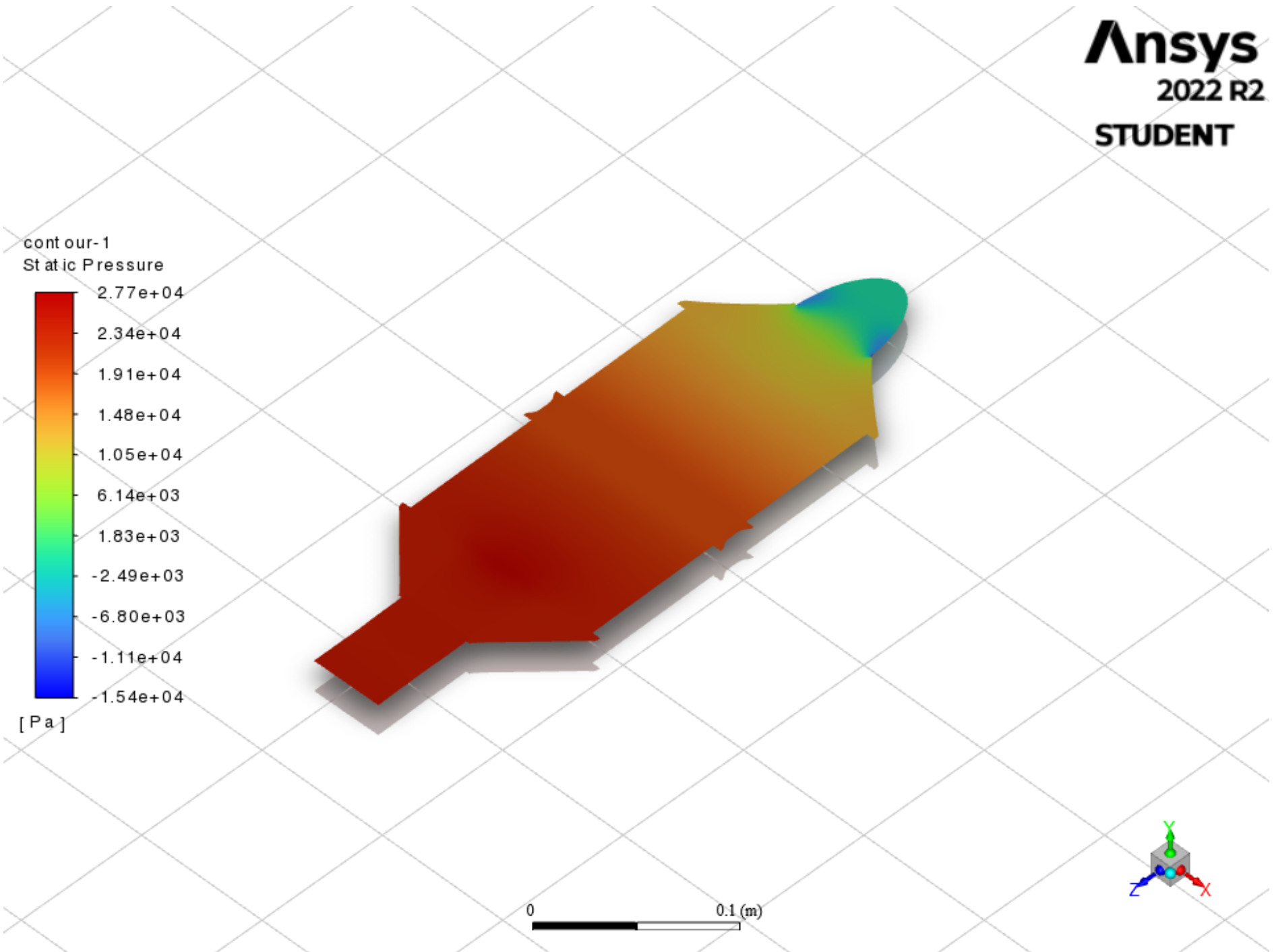


Contours

contour-2

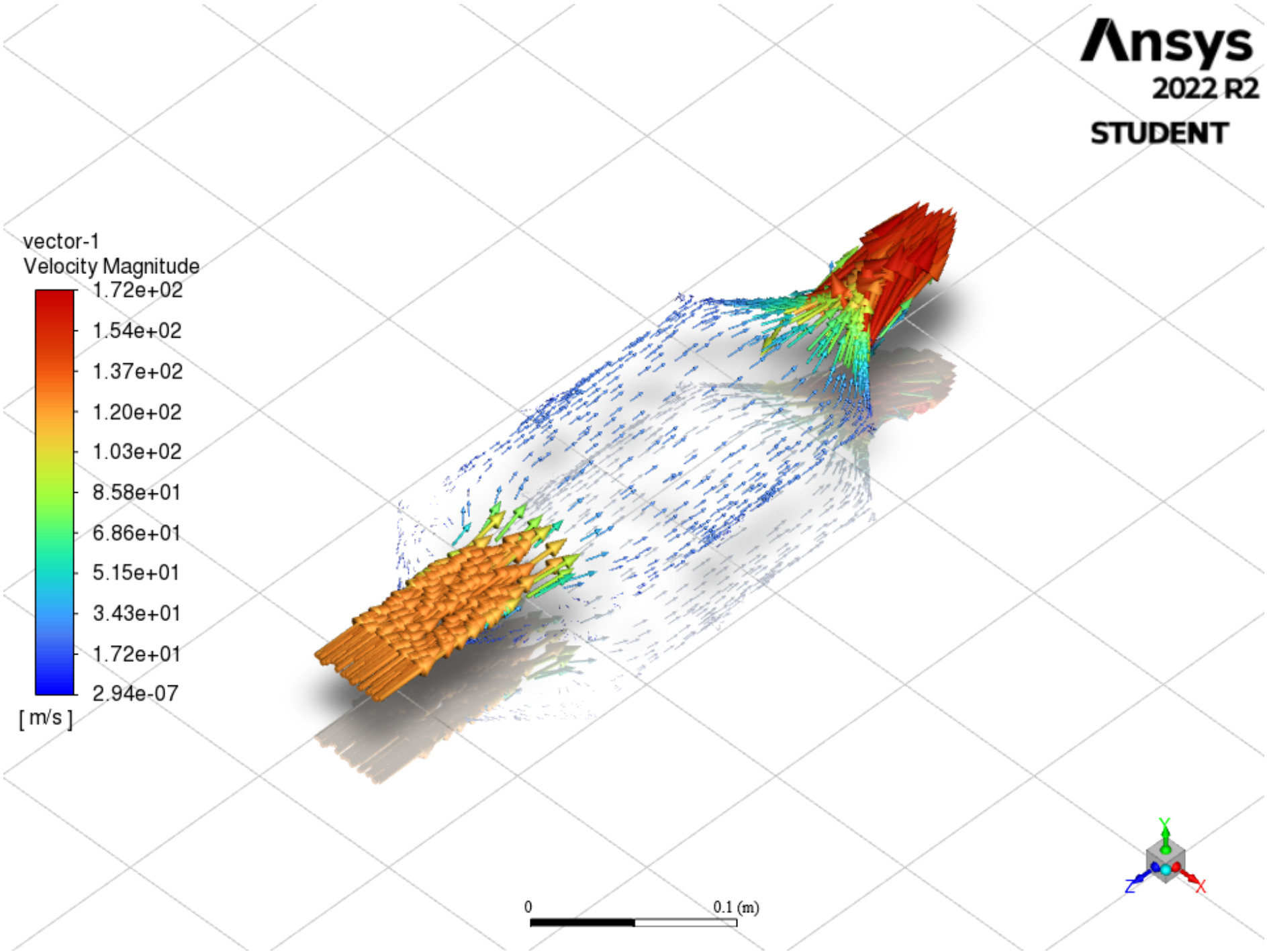

Ansys
2022 R2
STUDENT
contour-2
Velocity Magnitude
1.70e+02
1.53e+02
1.36e+02
1.19e+02
1.02e+02
8.48e+01
6.78e+01
5.09e+01
3.39e+01
1.70e+01
0.00e+00
[m/s]
0
0.1 (m)
X
Y
Z

contour-1


Ansys
2022 R2
STUDENT
contour-1
Static Pressure
2.77e+04
2.34e+04
1.91e+04
1.48e+04
1.05e+04
6.14e+03
1.83e+03
-2.49e+03
-6.80e+03
-1.11e+04
-1.54e+04
[Pa]
0
0.1 (m)
X
Y
Z

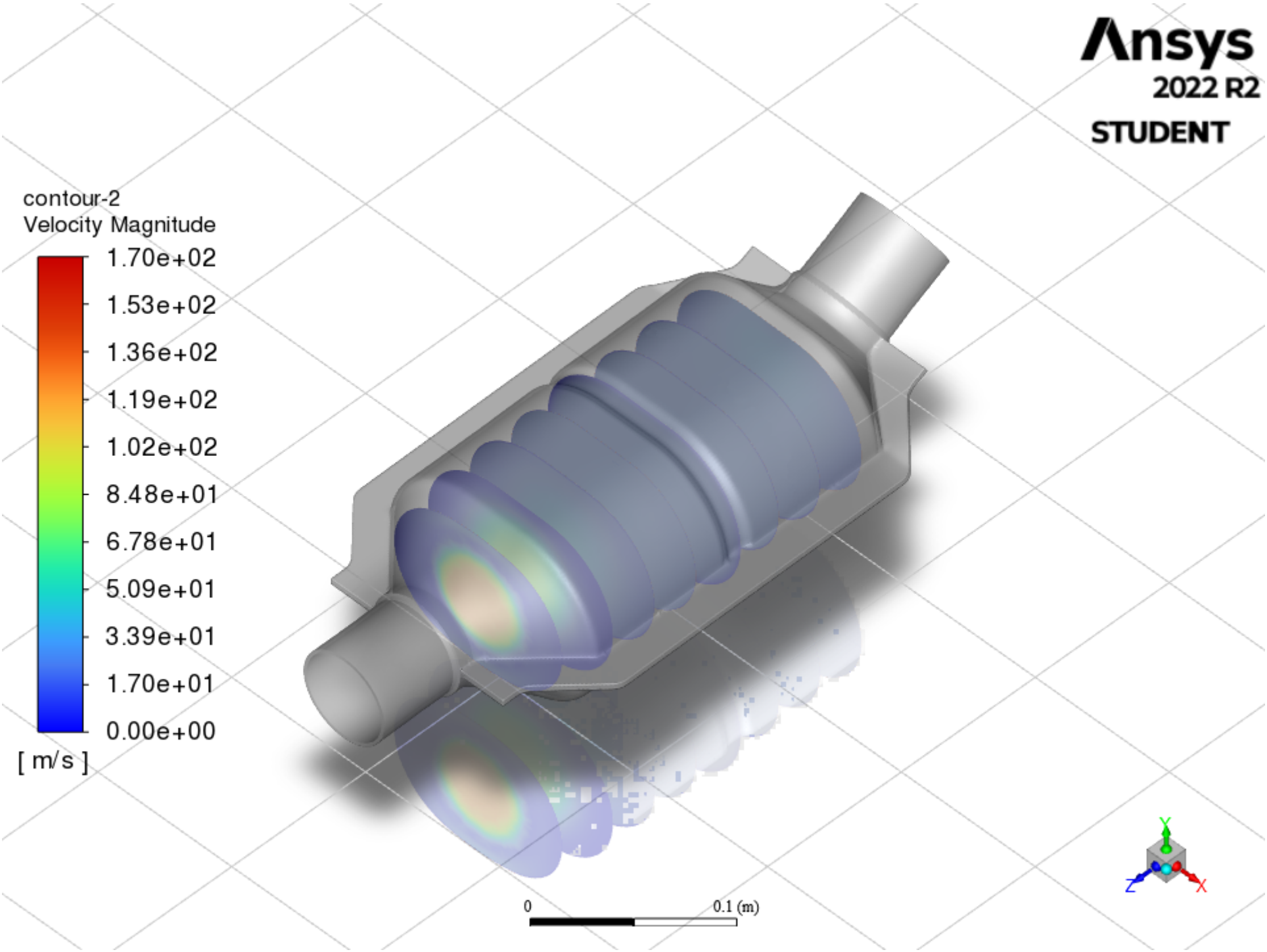
Vectors

vector-1

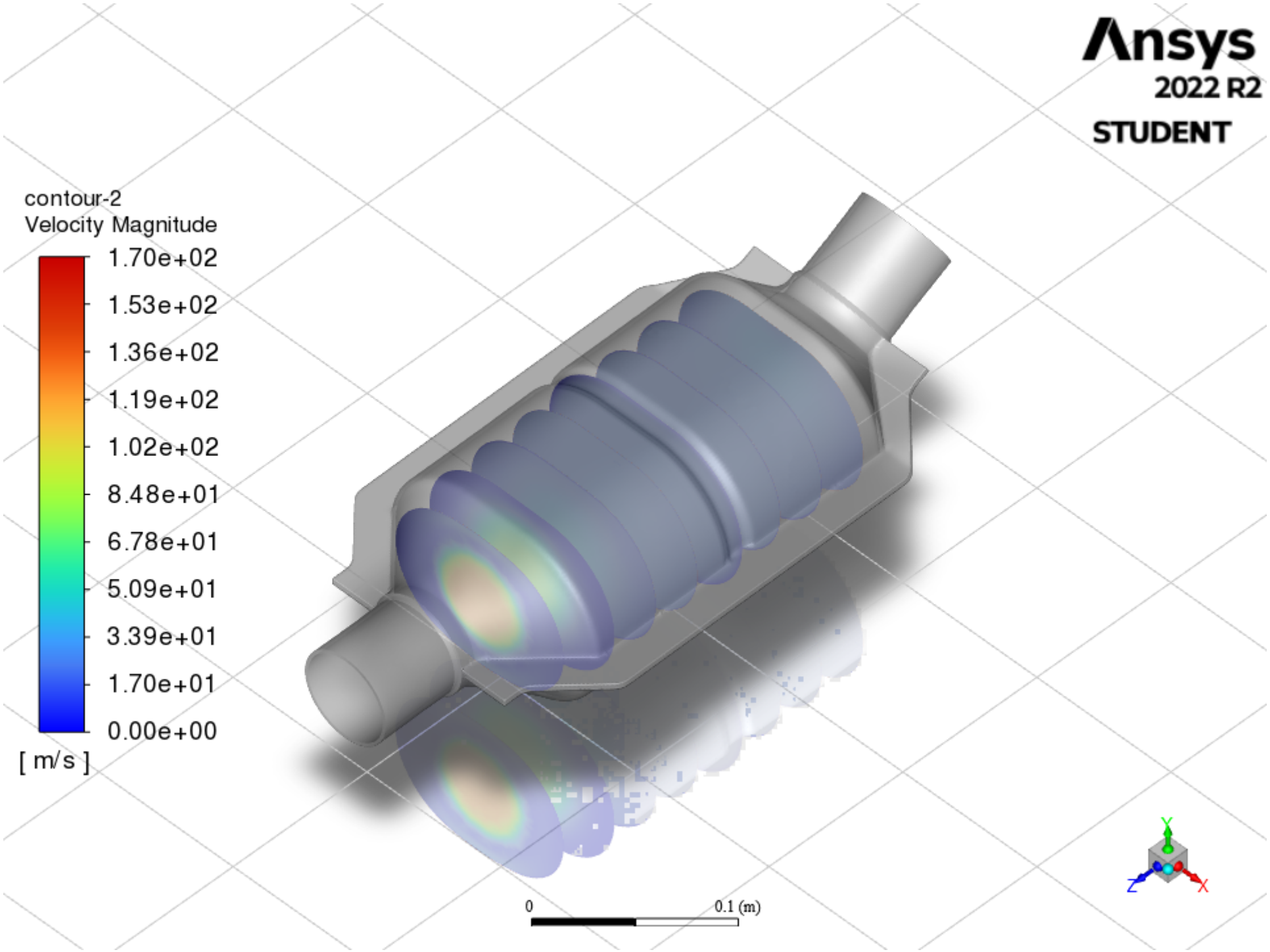


Scenes

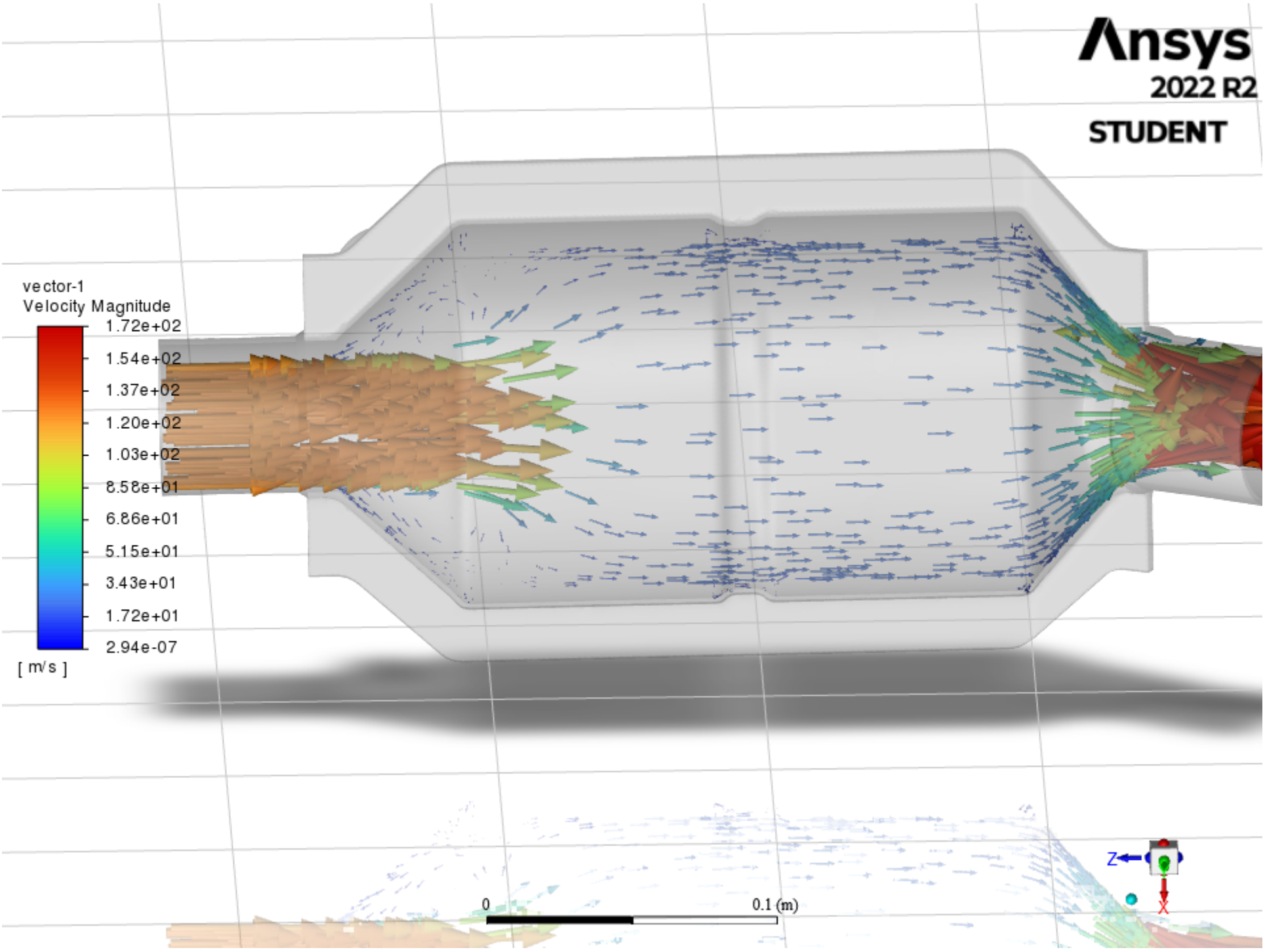
scene-3


Ansys
2022 R2
STUDENT
contour-2
Velocity Magnitude
1.70e+02
1.53e+02
1.36e+02
1.19e+02
1.02e+02
8.48e+01
6.78e+01
5.09e+01
3.39e+01
1.70e+01
0.00e+00
[m/s]
0
0.1 (m)
Y
Z
X

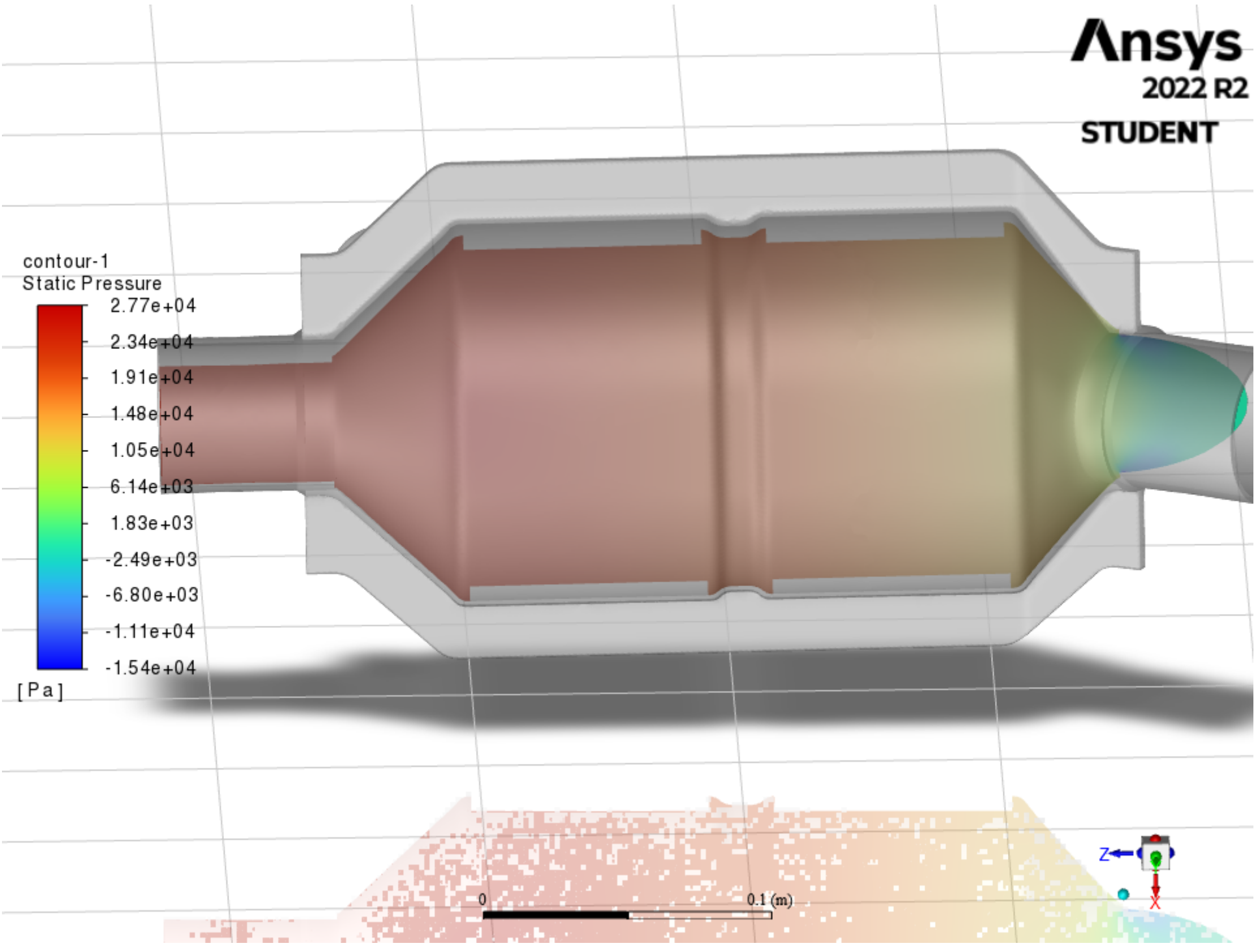
scene-3


Ansys
2022 R2
STUDENT
contour-2
Velocity Magnitude
1.70e+02
1.53e+02
1.36e+02
1.19e+02
1.02e+02
8.48e+01
6.78e+01
5.09e+01
3.39e+01
1.70e+01
0.00e+00
[m/s]
0
0.1 (m)
Y
Z
X

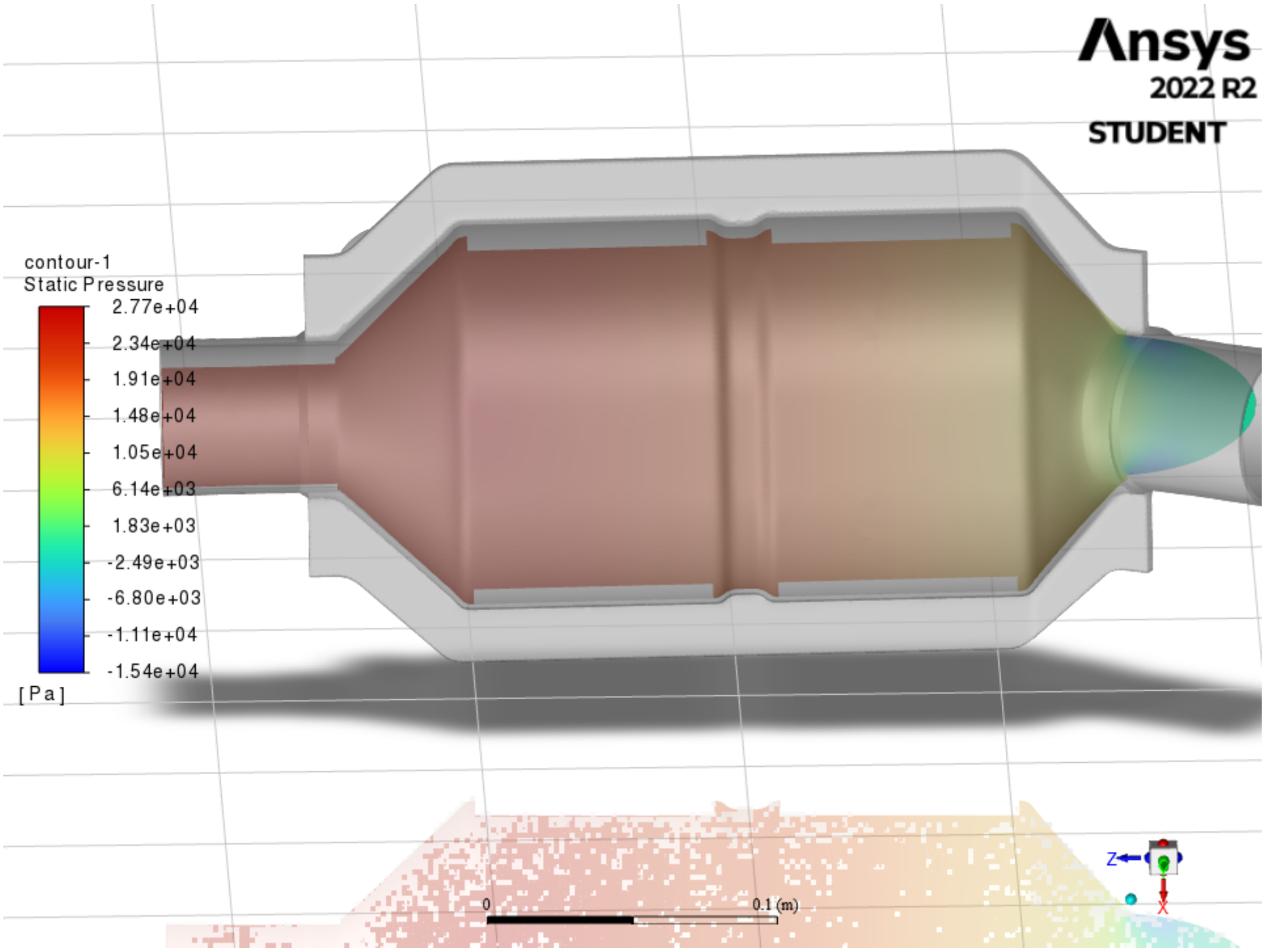
scene-2


Ansys
2022 R2
STUDENT
vector-1
Velocity Magnitude
1.72e+02
1.54e+02
1.37e+02
1.20e+02
1.03e+02
8.58e+01
6.86e+01
5.15e+01
3.43e+01
1.72e+01
2.94e-07
[m/s]
0
0.1 (m)
Z
X

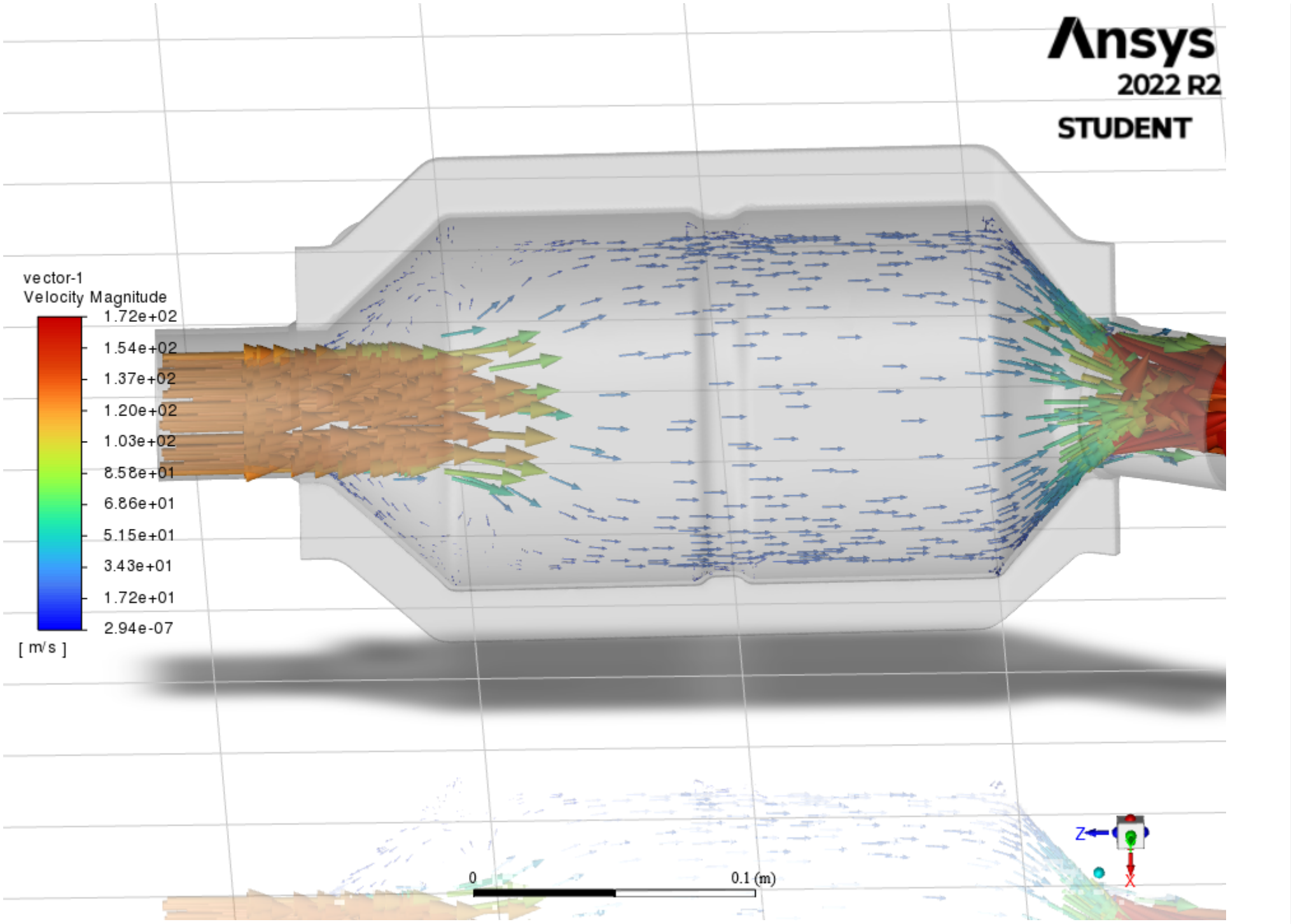
scene-1


Ansys
2022 R2
STUDENT
contour-1
Static Pressure
2.77e+04
2.34e+04
1.91e+04
1.48e+04
1.05e+04
6.14e+03
1.83e+03
-2.49e+03
-6.80e+03
-1.11e+04
-1.54e+04
[Pa]
0
0.1 (m)
Z
X

scene-1



scene-2


Ansys
2022 R2
STUDENT
vector-1
Velocity Magnitude
1.72e+02
1.54e+02
1.37e+02
1.20e+02
1.03e+02
8.58e+01
6.86e+01
5.15e+01
3.43e+01
1.72e+01
2.94e-07
[m/s]
0
0.1 (m)
Z
X