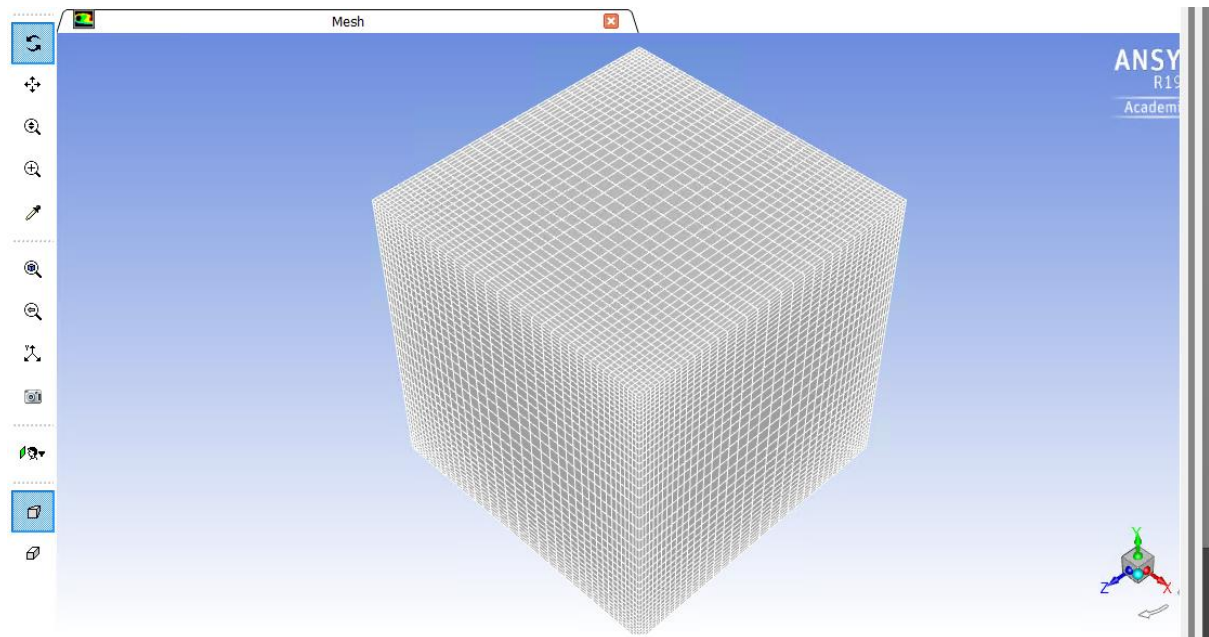


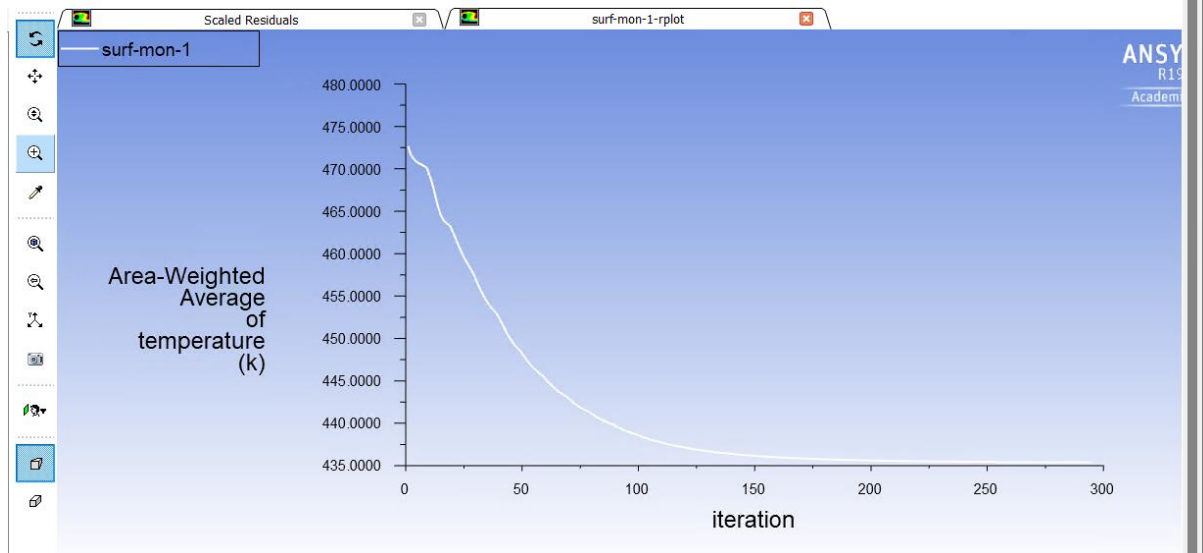
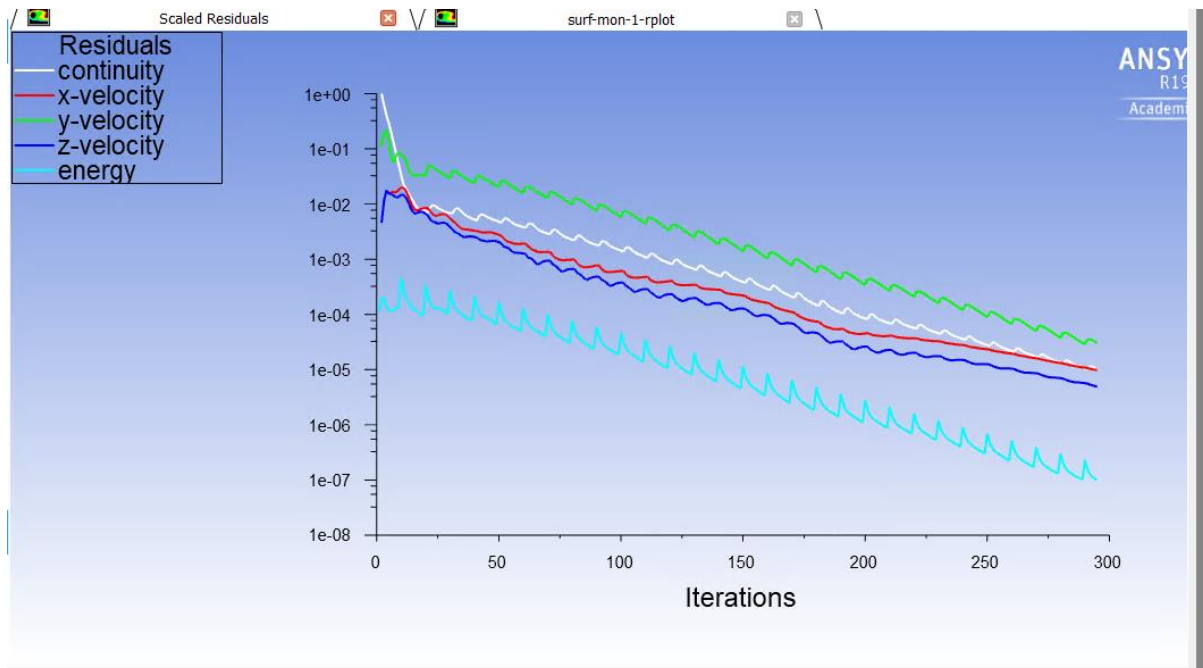
1901ME39

MANOJ KUMAR MADUGULA

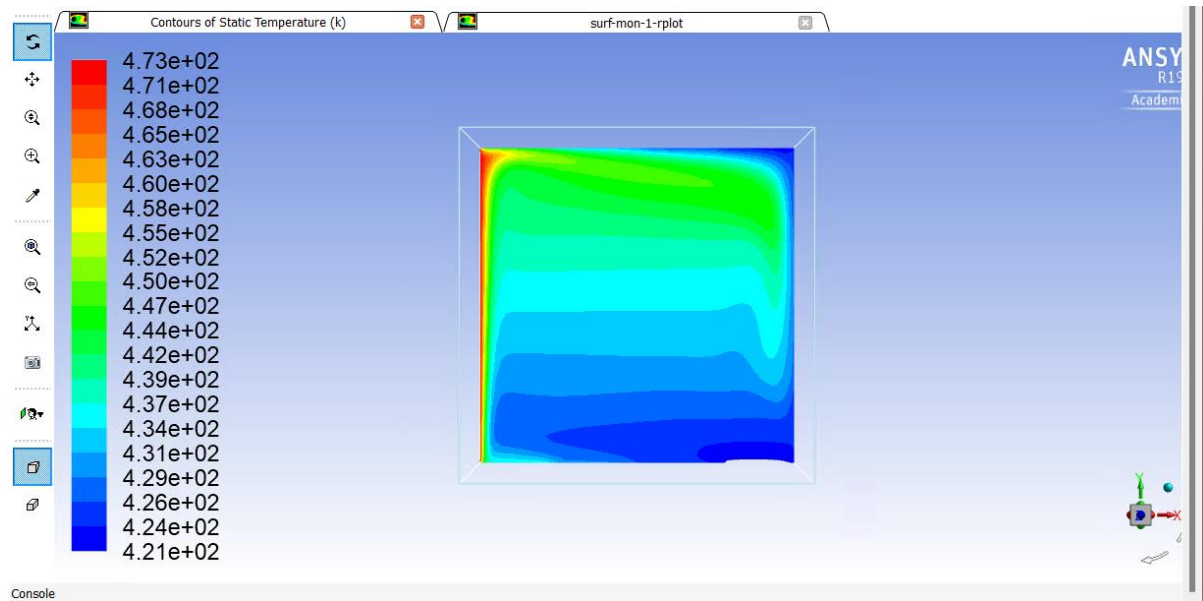
ANSYS FLUENT (CFD) LAB 05

MESH LOADED FROM THE FILE

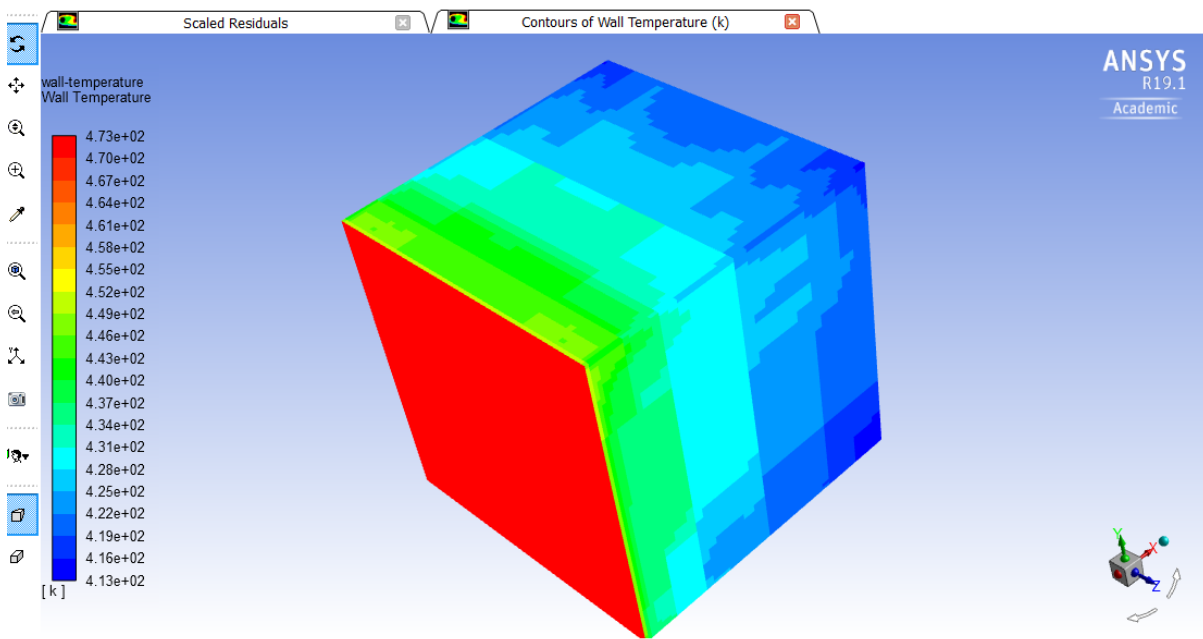




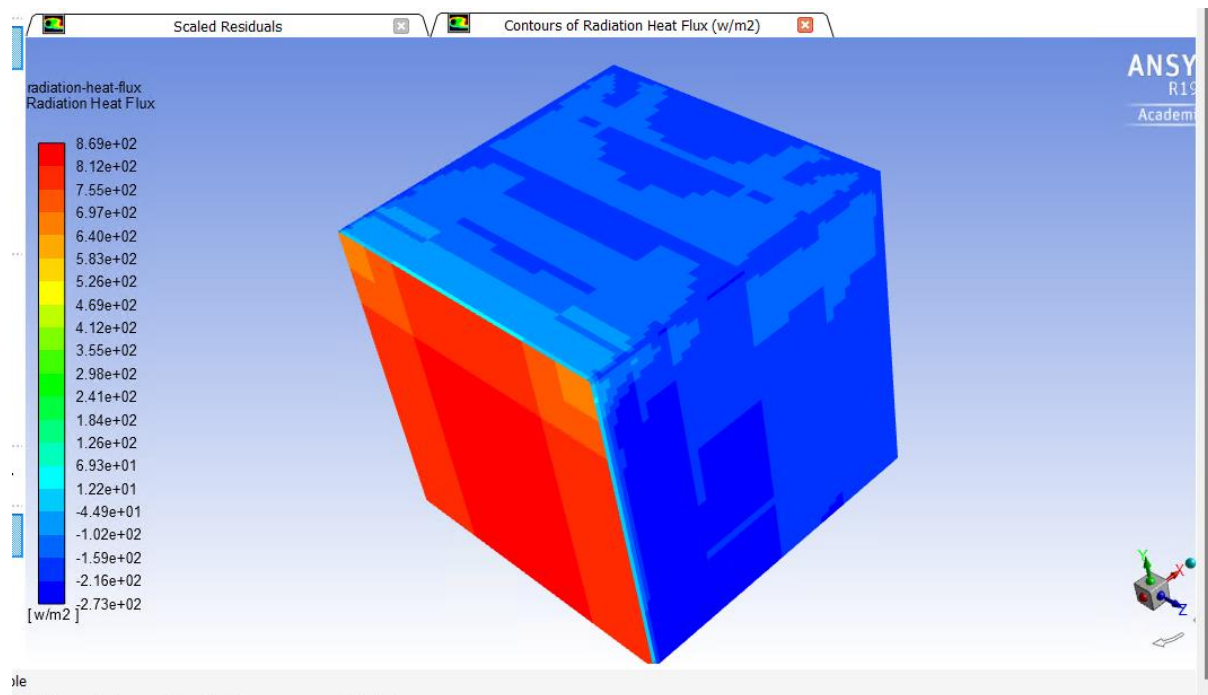
## CONTOUR OF STATIC TEMPERATURE



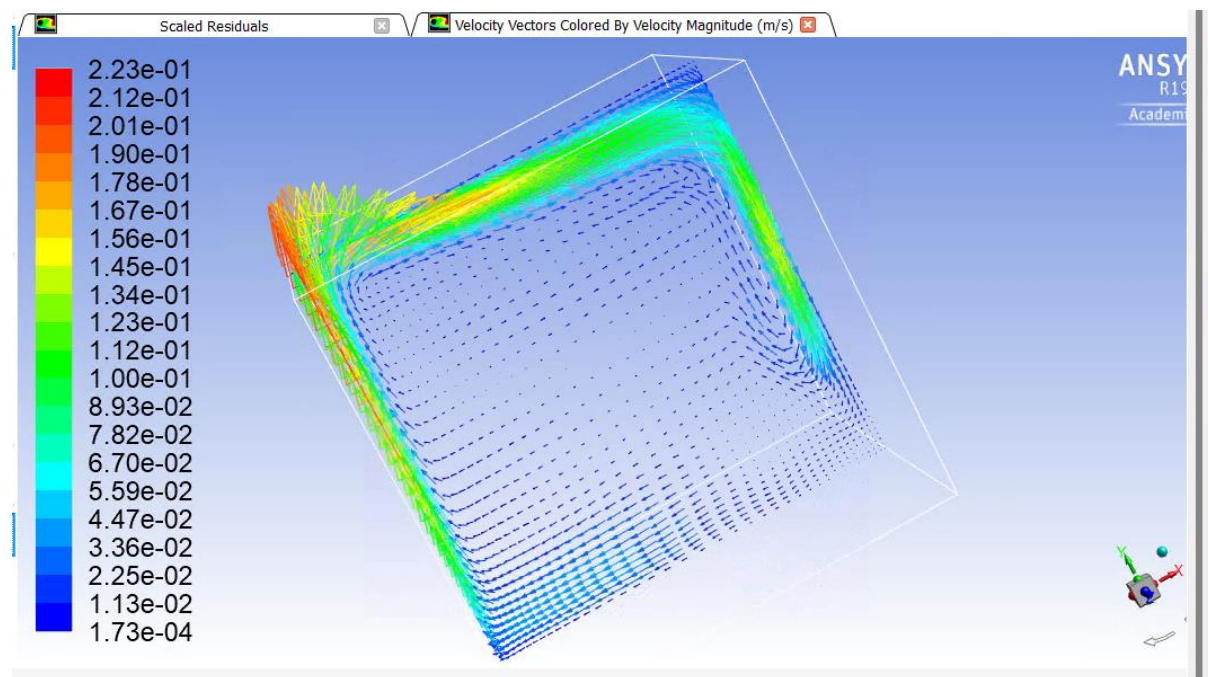
## CONTOUR OF WALL TEMPERATURE




## CONTOUR OF RADIATION HEAT FLUX



## VECTORS OF VELOCITY MAGNITUDE



 Flux Reports

Options

☐ Mass Flow Rate

☒ Total Heat Transfer Rate

☐ Radiation Heat Transfer Rate

Boundaries

Filter Text

default-interior

w-high-x

w-high-y

w-high-z

w-low-x

w-low-y

w-low-z

Results

-12.64754295349121

-12.67336177825928

-12.85548496246338

63.21778869628906

-12.20852375030518

-12.85564708709717

Save Output Parameter...

Net Results (w)

-0.02277184


Compute

Write...

Close

Help

TOTAL HEAT TRANSFER RATE FOR W-LOW-X

 Flux Reports

Options

☐ Mass Flow Rate

☒ Total Heat Transfer Rate

☐ Radiation Heat Transfer Rate

Boundaries

Filter Text

default-interior

w-high-x

w-high-y

w-high-z

w-low-x

w-low-y

w-low-z

Results

63.21778869628906

Save Output Parameter...

Net Results (w)

63.21779

Compute

Write...

Close

Help

## RADIATION HEAT TRANSFER RATE

The Flux Reports dialog box is shown with the 'Radiation Heat Transfer Rate' option selected. The 'Boundaries' list includes 'default-interior', 'w-high-x', 'w-high-y', 'w-high-z', 'w-low-x', 'w-low-y', and 'w-low-z'. The 'Results' column displays the following values:

Boundary	Value
default-interior	-10.80924606323242
w-high-x	-7.105926513671875
w-high-y	-10.55491638183594
w-high-z	51.49603652954102
w-low-x	-12.48902797698975
w-low-y	-10.55545520782471

The 'Net Results (w)' field shows -0.01853561. The 'Save Output Parameter...' button is visible, along with 'Compute', 'Write...', 'Close', and 'Help' buttons.

## RADIATION HEAT TRANSFER RATE FOR W-LOW-X

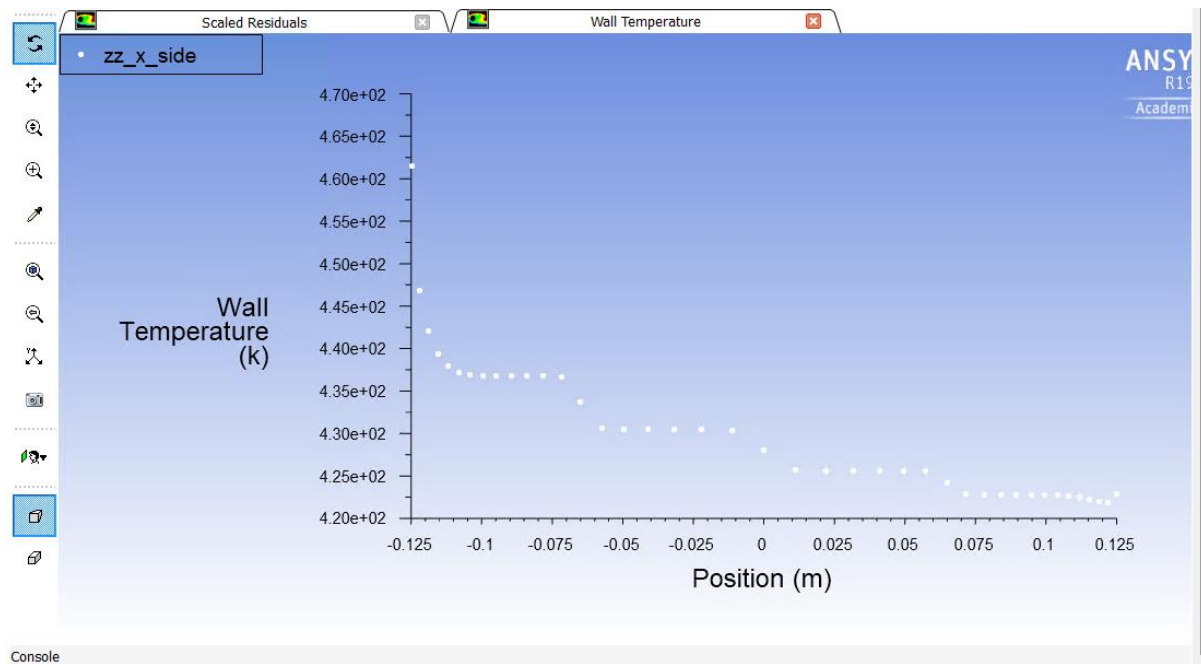
The Flux Reports dialog box is shown with the 'Radiation Heat Transfer Rate' option selected. The 'Boundaries' list includes 'default-interior', 'w-high-x', 'w-high-y', 'w-high-z', 'w-low-x', 'w-low-y', and 'w-low-z'. The 'Results' column displays the following value:

Boundary	Value
w-low-x	51.49603652954102

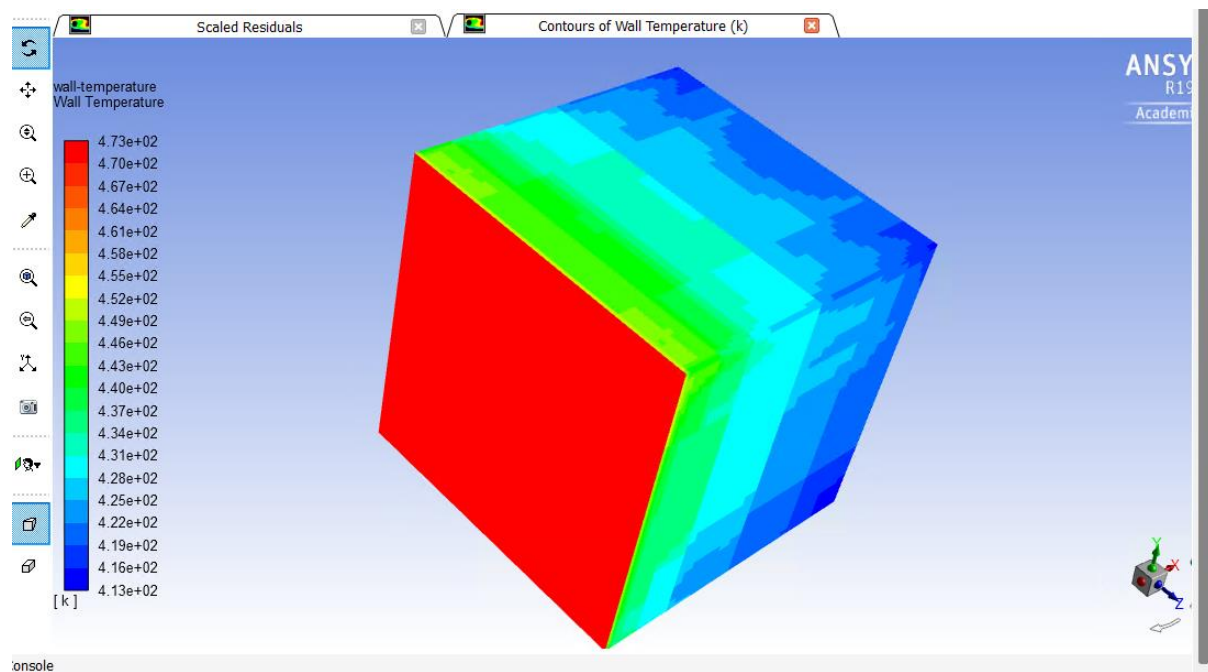
The 'Net Results (w)' field shows 51.49604. The 'Save Output Parameter...' button is visible, along with 'Compute', 'Write...', 'Close', and 'Help' buttons. A page indicator '[1/7]' is shown below the boundaries list.

TEMPERATURE PROFILE ALONG THE OUTER SURFACE OF THE BOX for 100 faces

Tp\_100.xy



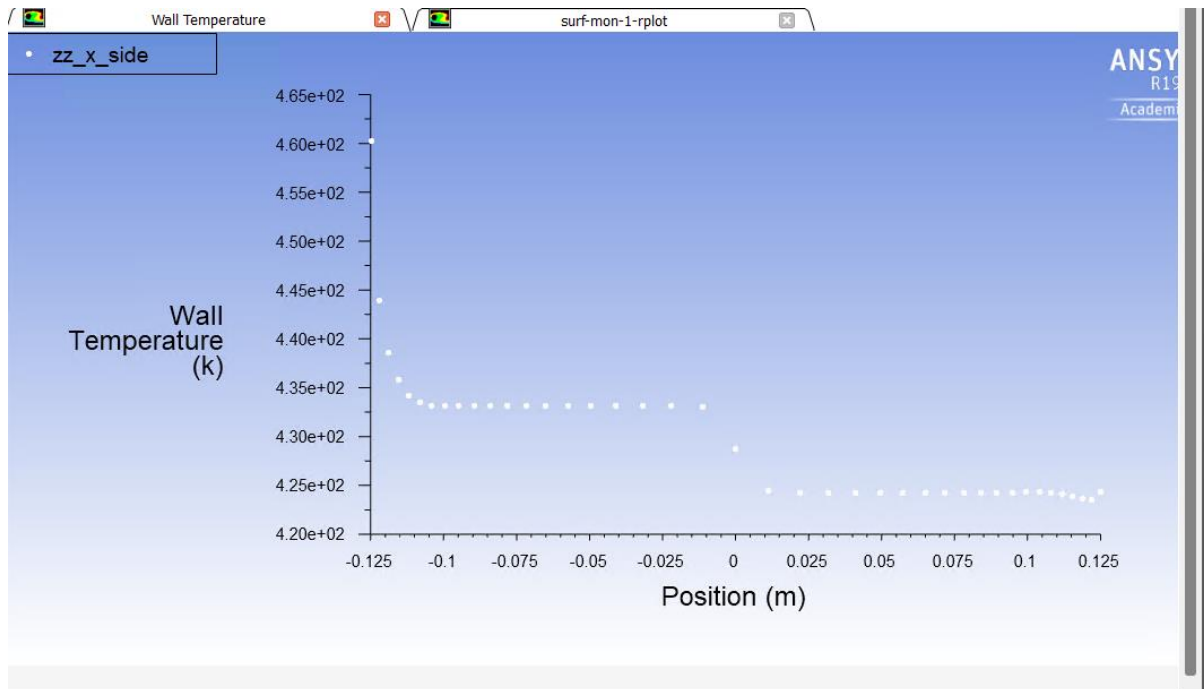
Contour of wall temperature for 100 faces per surface cluster



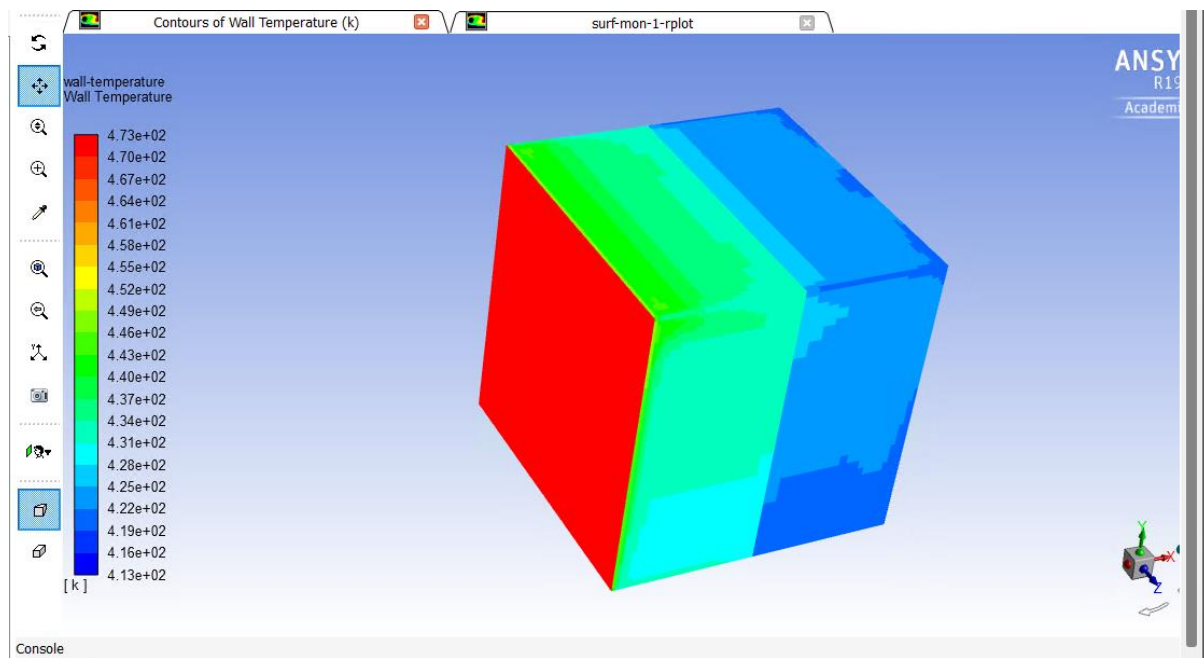


TEMPERATURE PROFILE ALONG THE OUTER SURFACE OF THE BOX for 800 faces

Tp\_800.xy



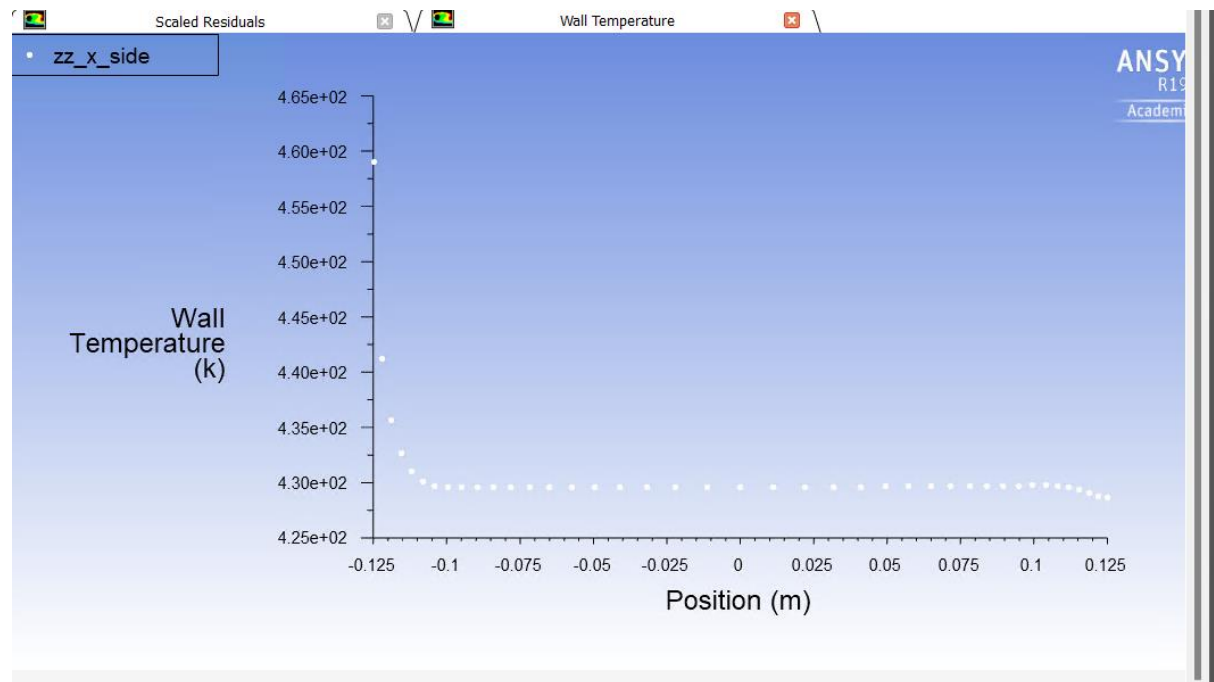
Contour of wall temperature for 800 faces per surface cluster



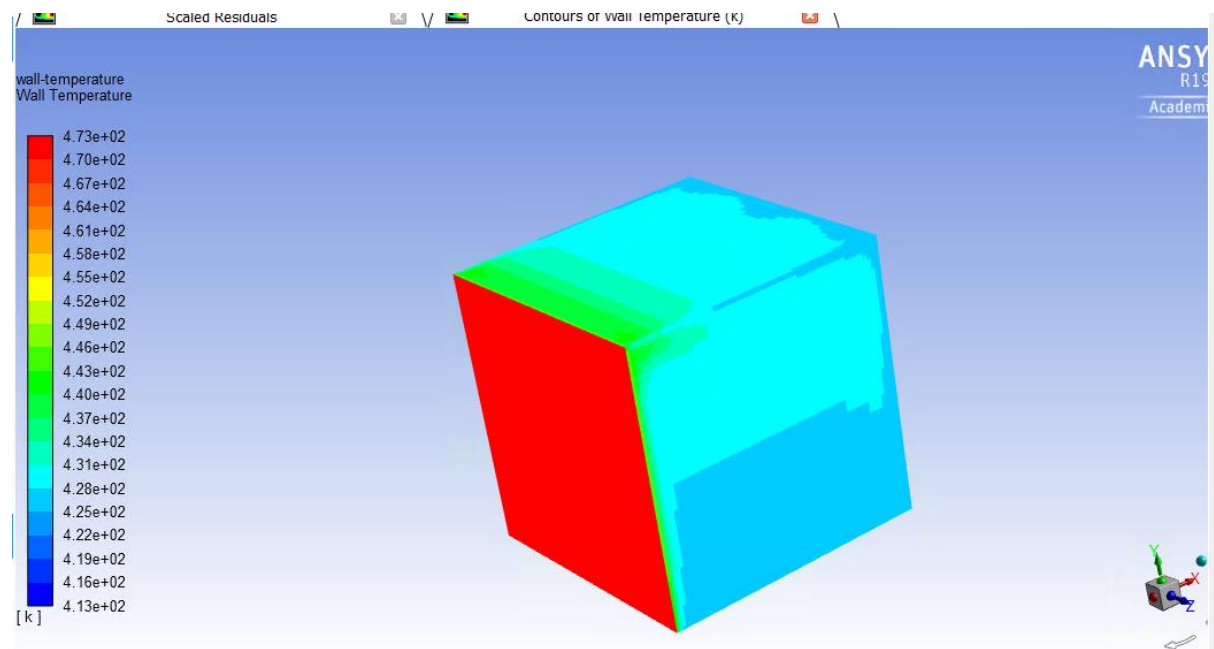


TEMPERATURE PROFILE ALONG THE OUTER SURFACE OF THE BOX for 1600 faces

Tp\_1600.xy



Contour of wall temperature for 1600 faces per surface cluster



## Wall temperature profile comparison

