Problem info

Problem type: Steady-State Heat Transfer
Geometry model class: Axisymmetric
Problem database file names:

- Problem: *resistive_limiter_thermal.pbm*
- Geometry: *Resistive_limiter.mod*
- Material Data: *Resistive_limiter_thermal.dht*
- Material Data 2 (library): *none*
- Electric circuit: *none*

Results taken from other problems:

- *Generated Heat: Resistive_limiter.pbm*

Geometry model

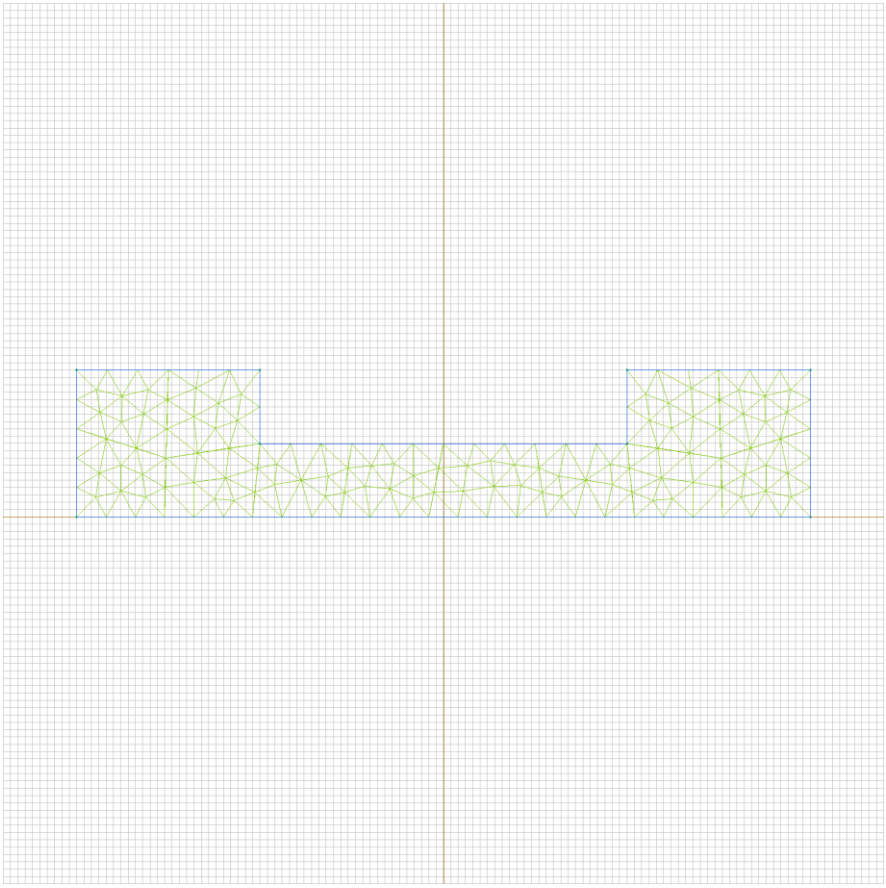


Table 1. Geometry model statistics

	With Label	Total
Blocks	1	1
Edges	3	8
Vertices	0	8

Number of nodes: 155.

Labelled objects

There are following labelled objects in the geometry model (Material Data file could contain more labels, but only those labels that assigned to geometric objects are listed)

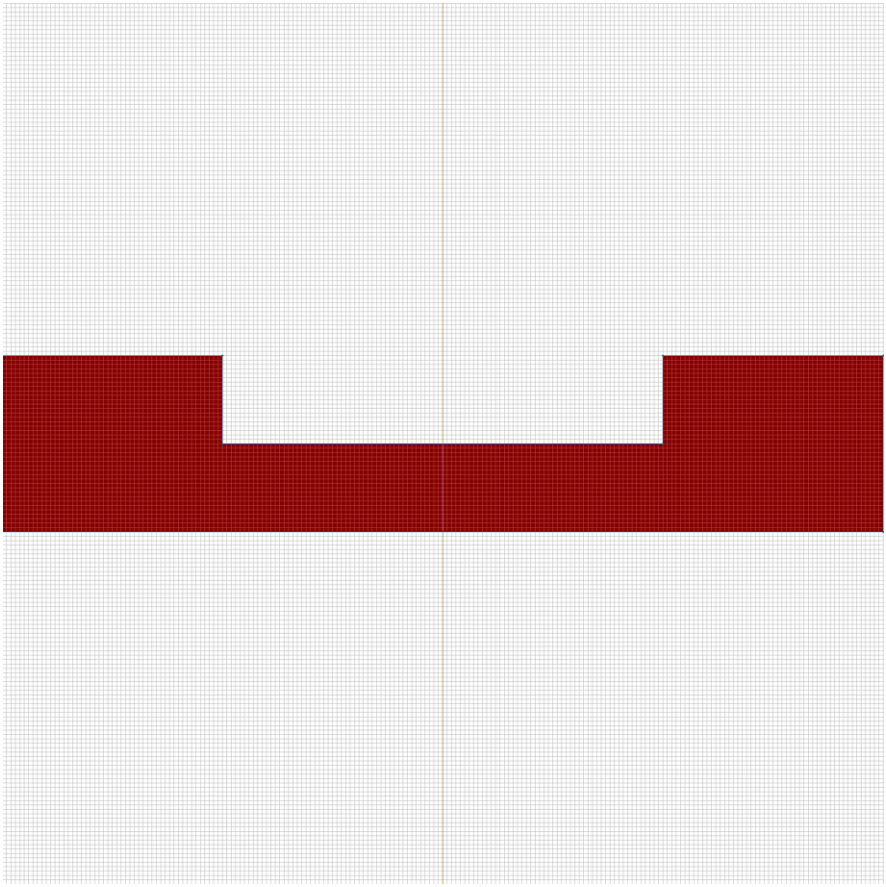
Blocks:	Edges:	Vertices:
• bscco •	• zero_Jn • v_minus • v_plus •	

Detailed information about each label is listed below.

Labelled objects: block "bscco"

There are (1) objects with this label

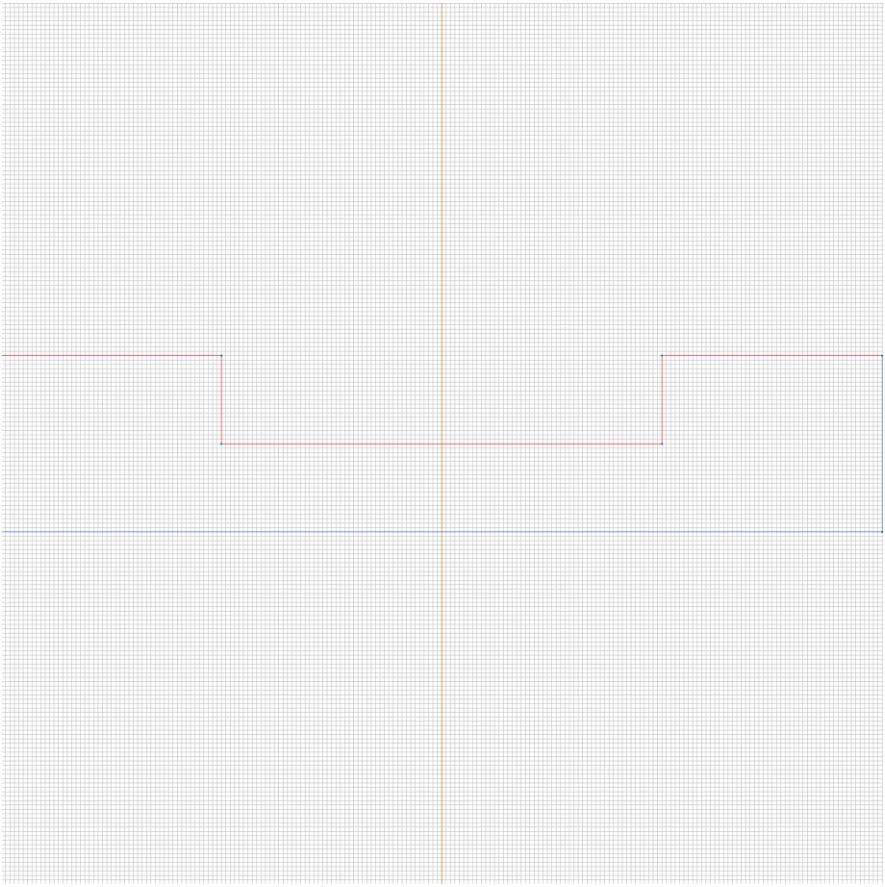
Thermal conductivity: lambda_x=10 [W/(K*m)], lambda_y=10 [W/(K*m)]



Labelled objects: edge "zero_Jn"

There are (5) objects with this label

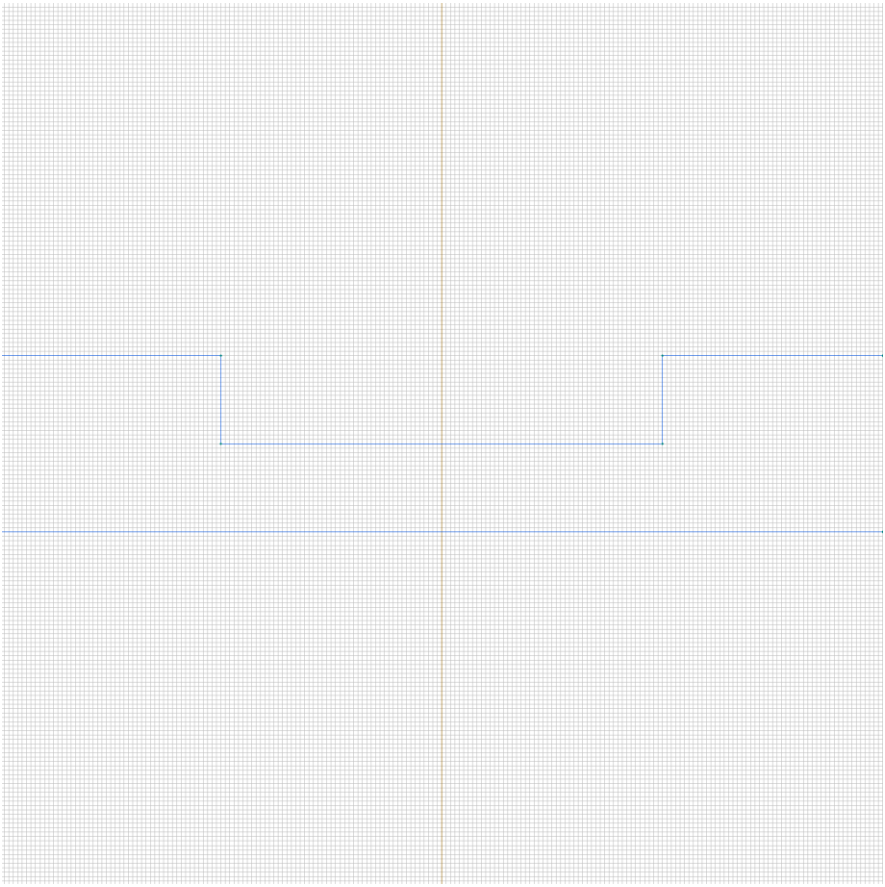
Convection: alpha=10 [W/(K*m2)], temperature T0=-196.15 [K]
Radiation: beta=1, temperature T0=-196.15 [K]



Labelled objects: edge "v_minus"

There are (1) objects with this label

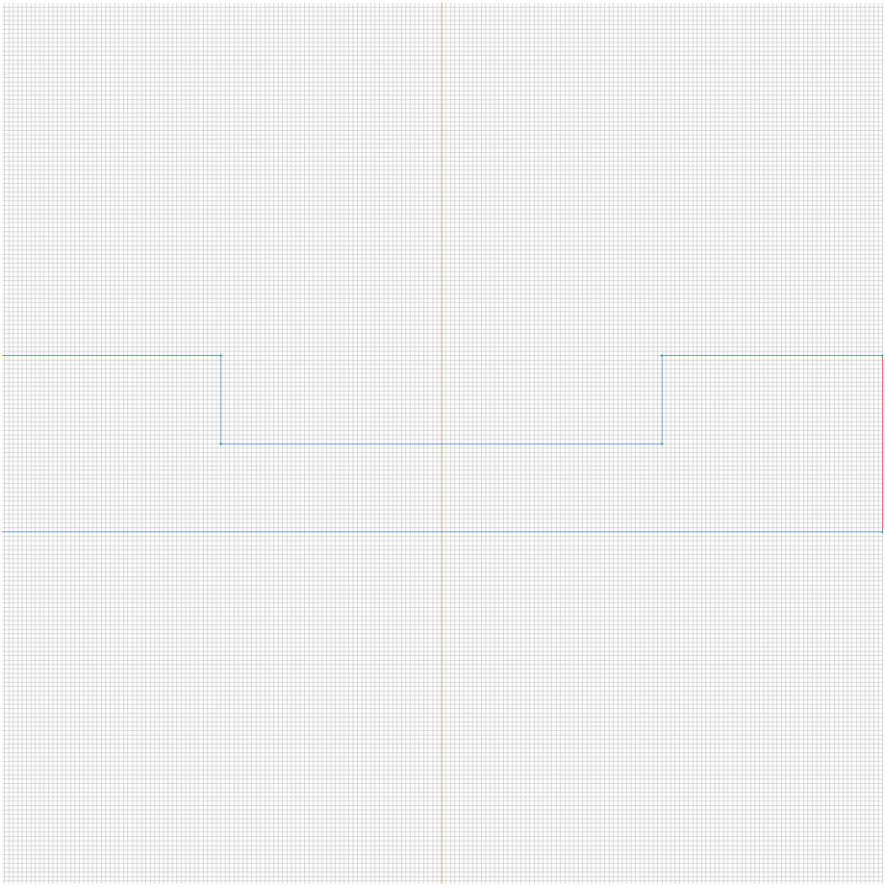
Convection: alpha=10 [W/(K*m2)], temperature T0=-196.15 [K]
Radiation: beta=1, temperature T0=-196.15 [K]



Labelled objects: edge "v_plus"

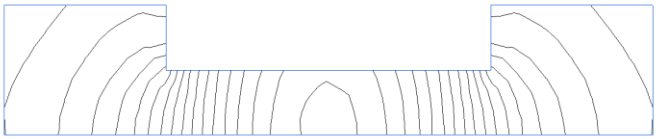
There are (1) objects with this label

Convection: alpha=10 [W/(K*m2)], temperature T0=-196.15 [K]
Radiation: beta=1, temperature T0=-196.15 [K]



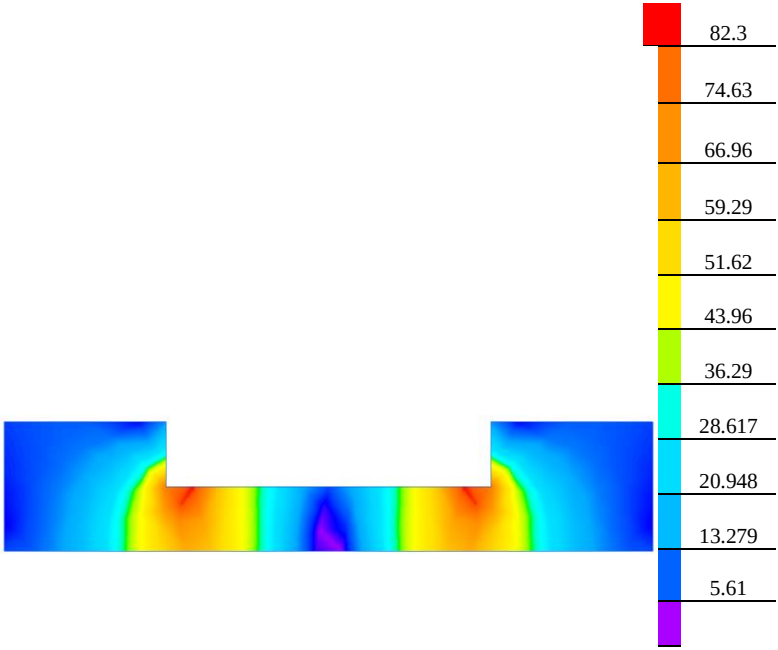
Results

Field lines



Results

Color map of Heat flux |F| [W/m2]



Nonlinear dependencies

No non-linear dependencies are used in this problem data