Problem info

Problem type: Magnetostatics
Geometry model class: Axisymmetric
Problem database file names:

- Problem: *LEVI1B.PBM*
- Geometry: *Levi1b.mod*
- Material Data: *Levi1b.dms*
- Material Data 2 (library): *none*
- Electric circuit: *none*

Results taken from other problems:

- *none*

Geometry model

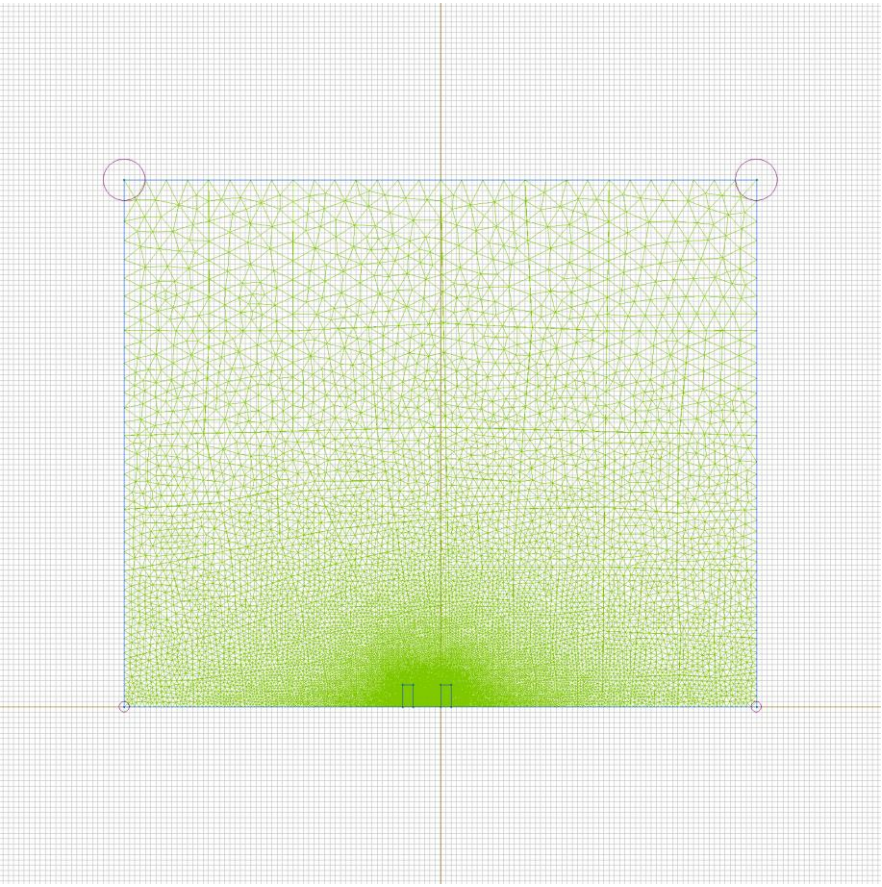


Table 1. Geometry model statistics

	With Label	Total
Blocks	3	3
Edges	2	14
Vertices	0	12

Number of nodes: 19196.

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)

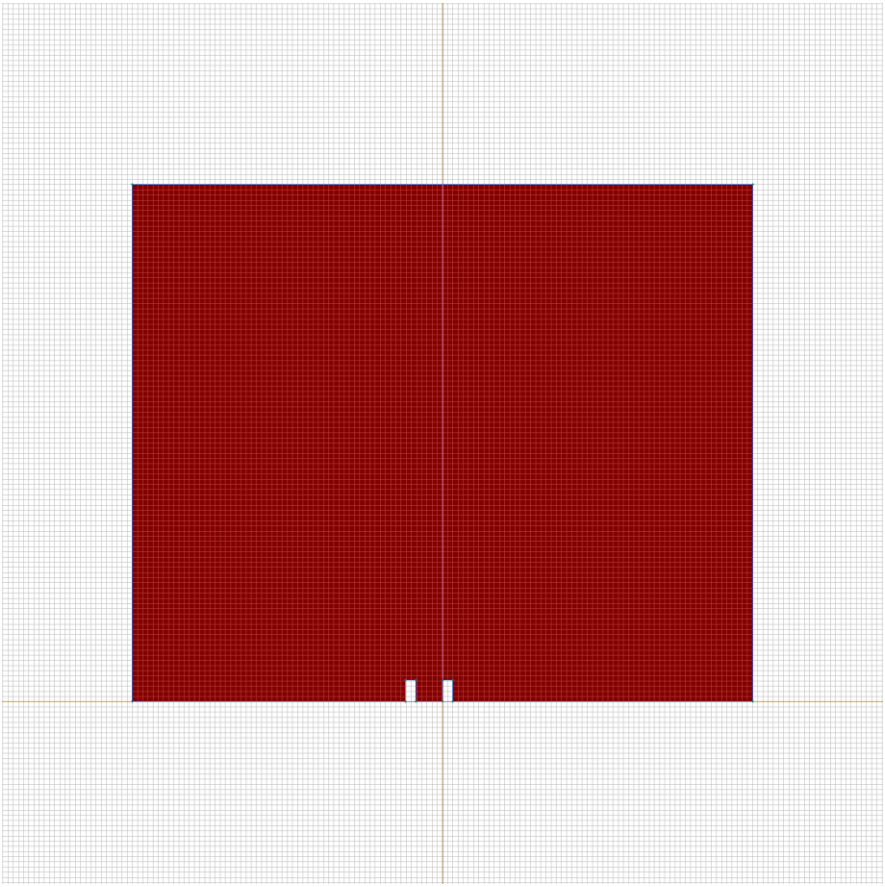
Blocks:	Edges:	Vertices:
• air • magnet • superconductor •	• A=0 • gap •	

Detailed information about each label is listed below.

Labelled objects: block "air"

There are (1) objects with this label

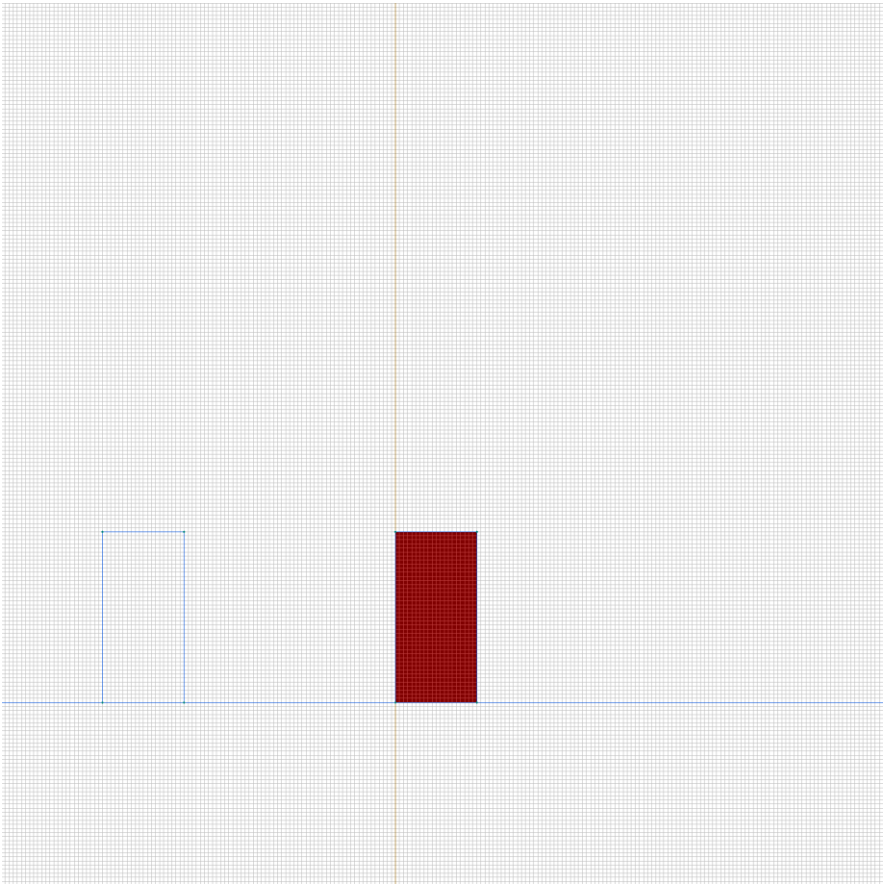
Relative magnetic permeability: mu_x=1, mu_y=1
Current density: j=0 [A/m2]
Conductor's connection: in parallel



Labelled objects: block "magnet"

There are (1) objects with this label

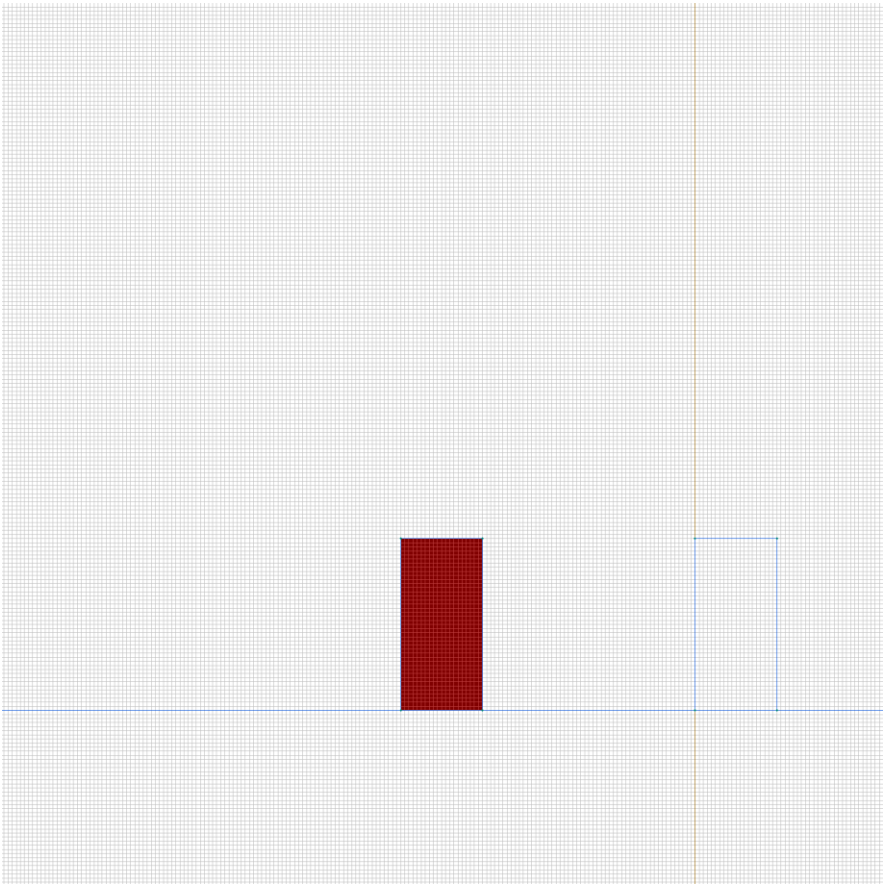
Relative magnetic permeability: mu_x=1, mu_y=1
Coercive force: Hc=575000 [A], direction: 0 [deg]
Current density: j=0 [A/m2]
Conductor's connection: in parallel



Labelled objects: block "superconductor"

There are (1) objects with this label

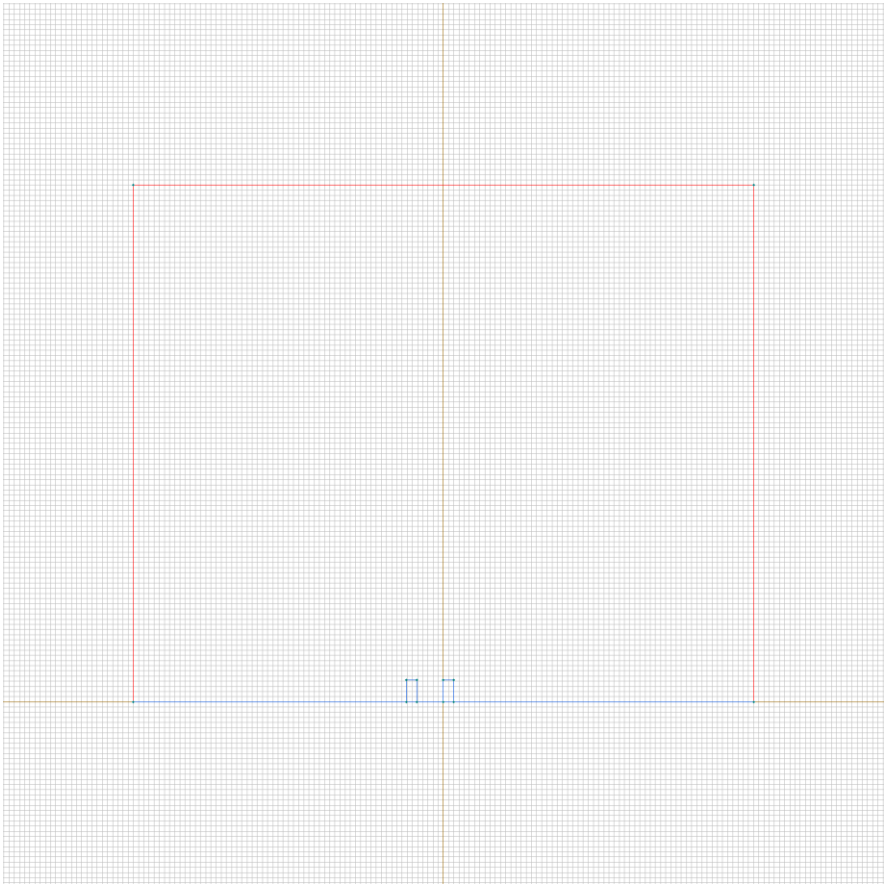
Relative magnetic permeability: mu=nonlinear (see Table 2 in the "Nonlinear dependencies" section)
Current density: j=0 [A/m2]
Conductor's connection: in parallel



Labelled objects: edge "A=0"

There are (3) objects with this label

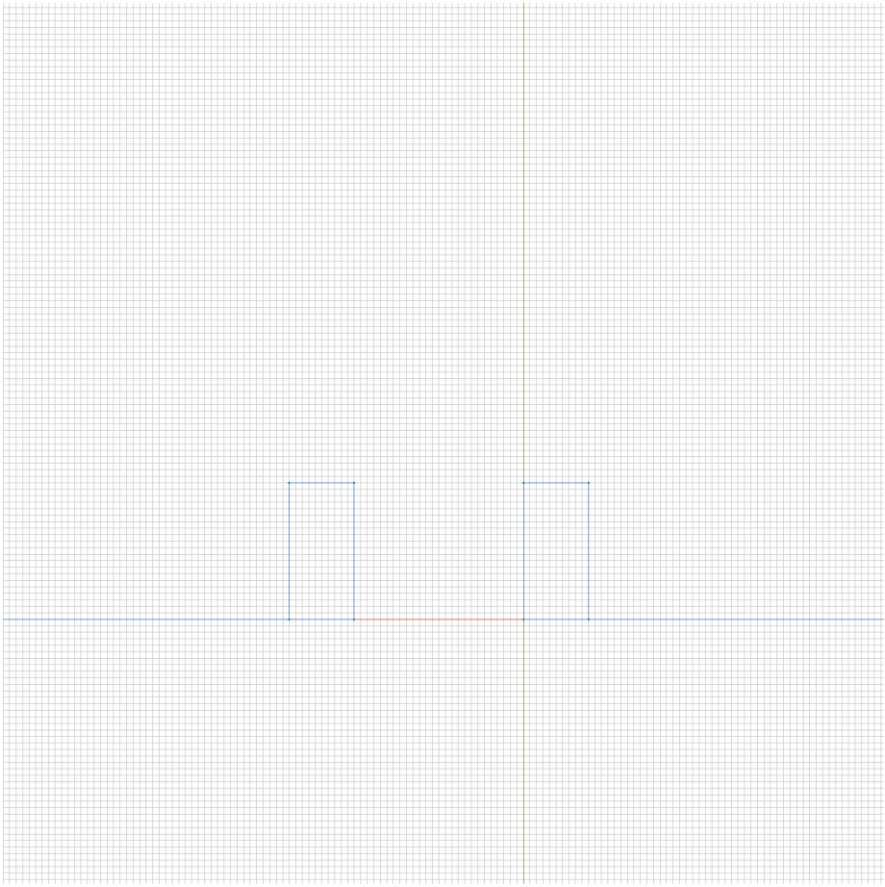
Magnetic potential: A=0 [Wb/m]



Labelled objects: edge "gap"

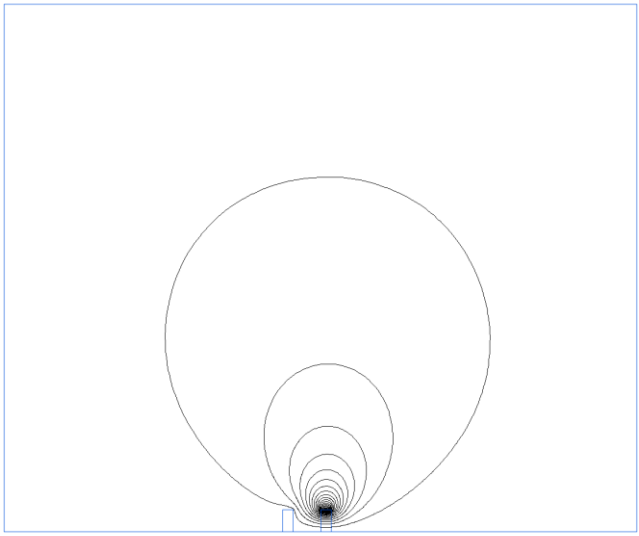
There are (1) objects with this label

No material data (boundary conditions) are specified



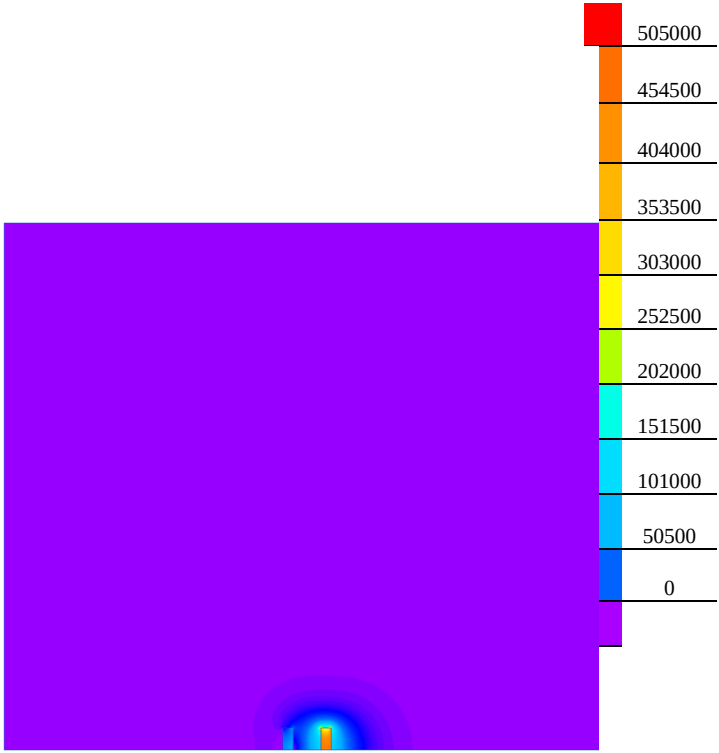
Results

Field lines



Results

Color map of Strength |H| [A/m]



Nonlinear dependencies

Table 2. BH-curve

B [T]	H [A/m]
0	0
0.01	300000
0.5	500000