

Problem info

Problem type: Electrostatics

Geometry model class: Plane-Parallel

Problem database file names:

- Problem: *transmission_line_capacitance.pbm*
- Geometry: *Transmission_line_capacitance.mod*
- Material Data: *Transmission_line_capacitance.des*
- Material Data 2 (library): *none*
- Electric circuit: *none*

Results taken from other problems:

- *none*

Geometry model

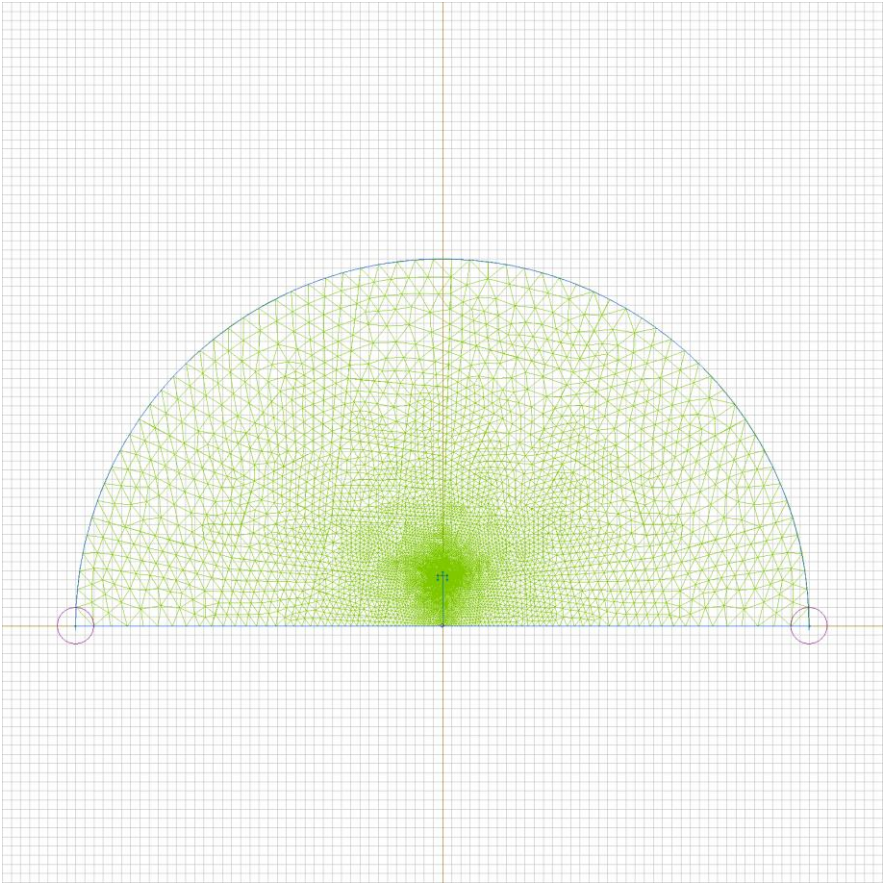


Table 1. Geometry model statistics

	With Label	Total
Blocks	1	1
Edges	1	9
Vertices	3	9

Number of nodes: 13369.

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:

- [air](#)
-

Edges:

- [ground](#)
-

Vertices:

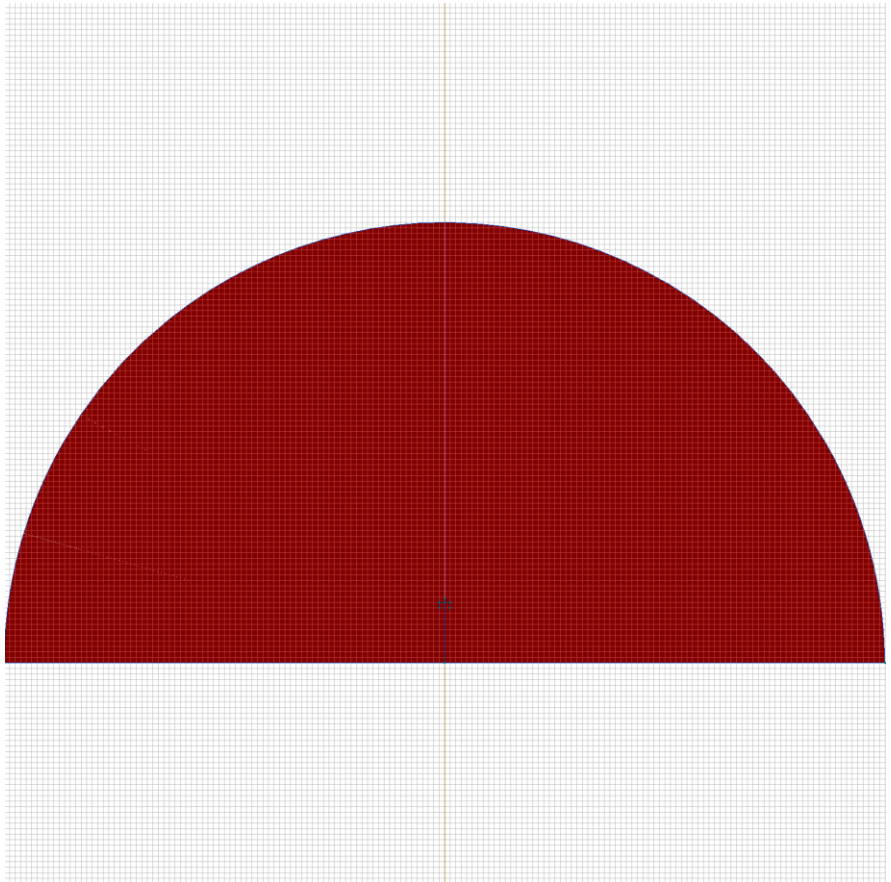
- [c](#)
- [a](#)
- [b](#)
-

Detailed information about each label is listed below.

Labelled objects: block "air"

There are (1) objects with this label

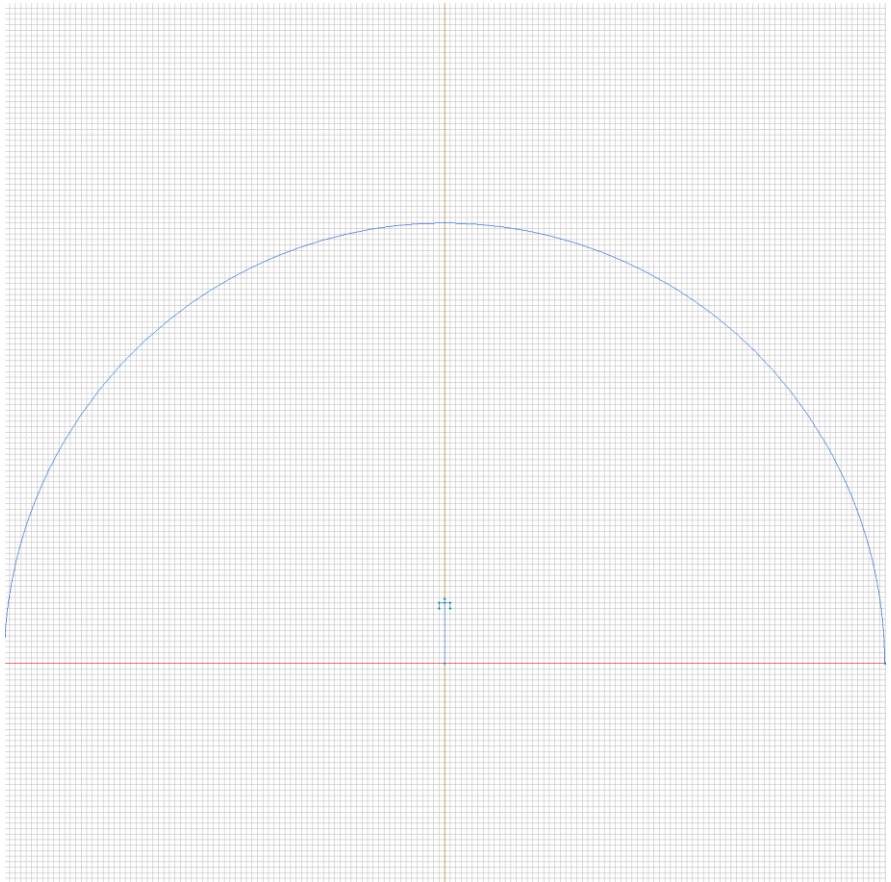
Relative electric permittivity $\epsilon_x=1$, $\epsilon_y=1$



Labelled objects: edge "ground"

There are (2) objects with this label

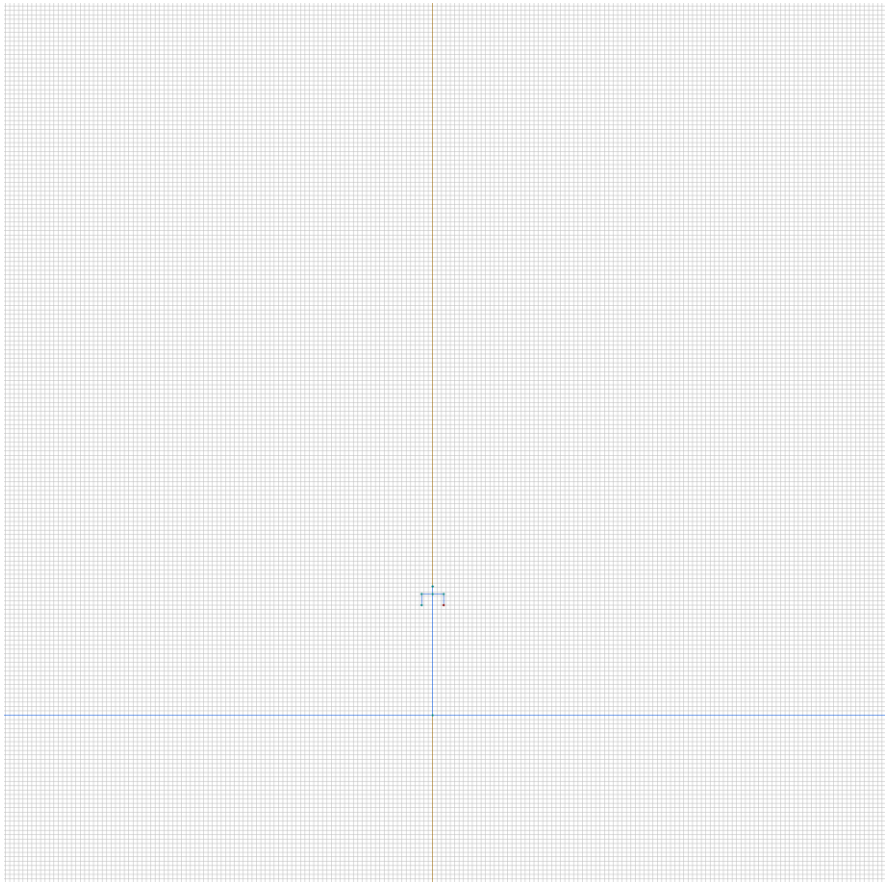
Voltage $U=0$ [V]



Labelled objects: vertex "c"

There are (1) objects with this label

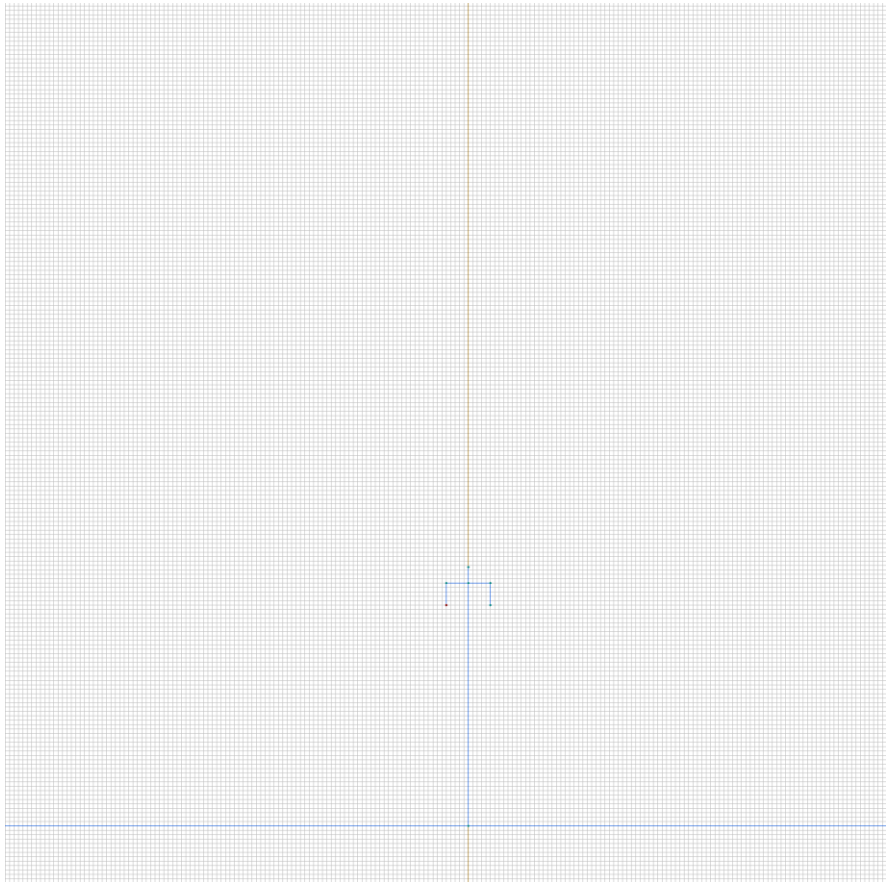
Voltage $U = -155.5$ [V]



Labelled objects: vertex "a"

There are (1) objects with this label

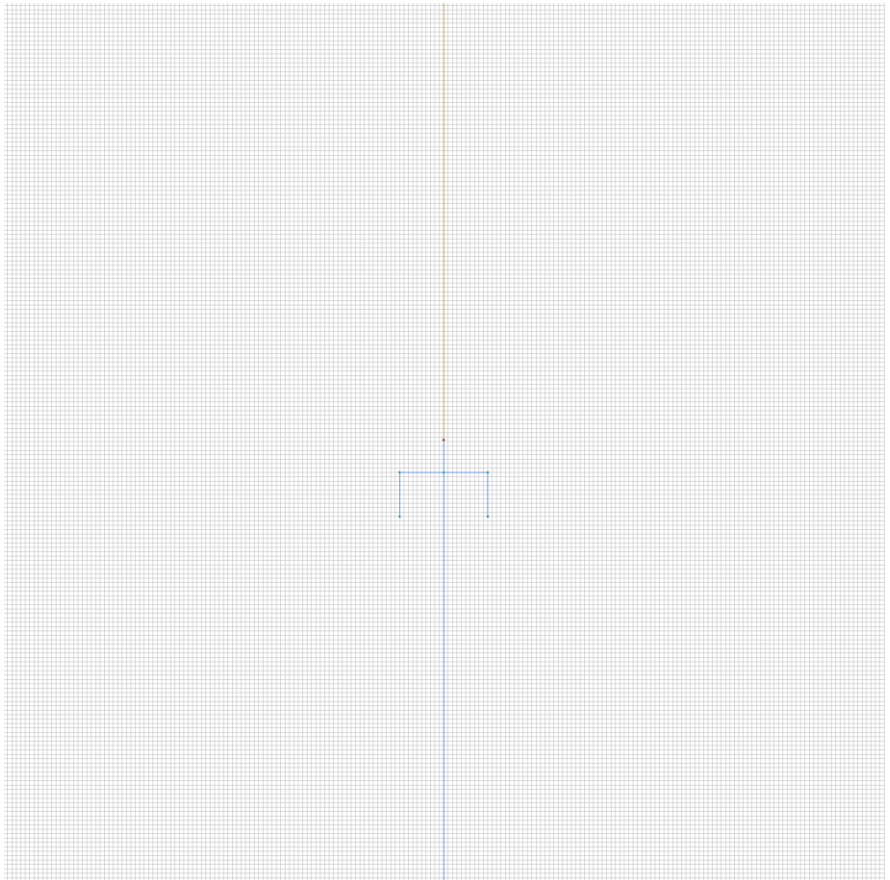
Voltage $U=311$ [V]



Labelled objects: vertex "b"

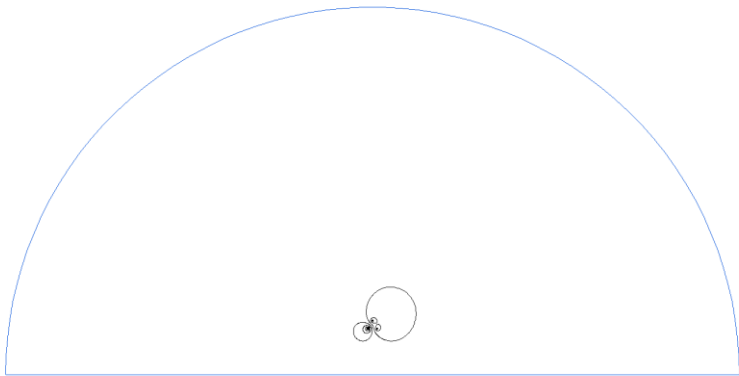
There are (1) objects with this label

Voltage $U = -155.5$ [V]



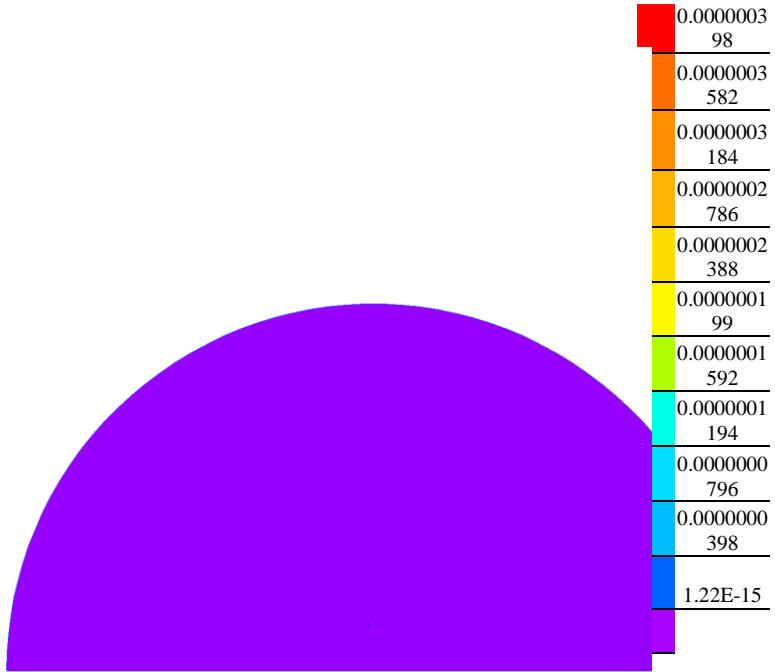
Results

Field lines



Results

Color map of Electric induction $|D|$ [C/m²]



Nonlinear dependencies

No non-linear dependencies are used in this problem data