

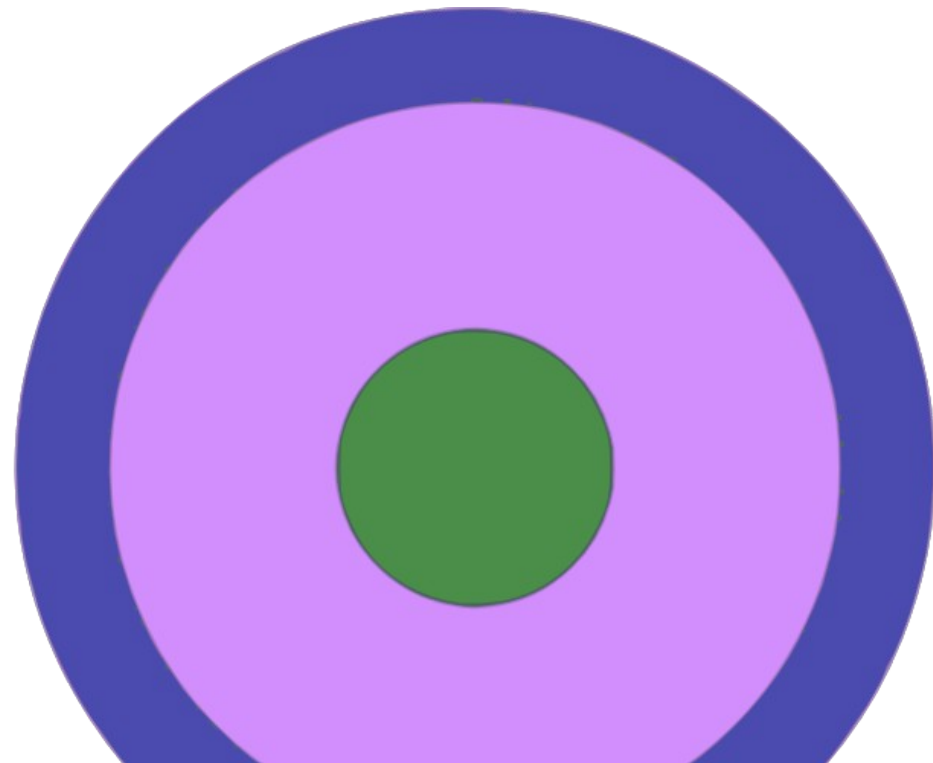
Magnetostatics 2D (I)

El proyecto CloudPYME (id: 0682_CLOUDPYME2_1_E) está cofinanciado por la Comisión Europea a través de el Fondo Europeo de Desarrollo Regional (FEDER), dentro de la tercera convocatoria de proyectos del Programa Operativo de Cooperación Transfronteriza España-Portugal 2007-2013 (POCTEP).

Magnetostatics 2D (I): Geometry

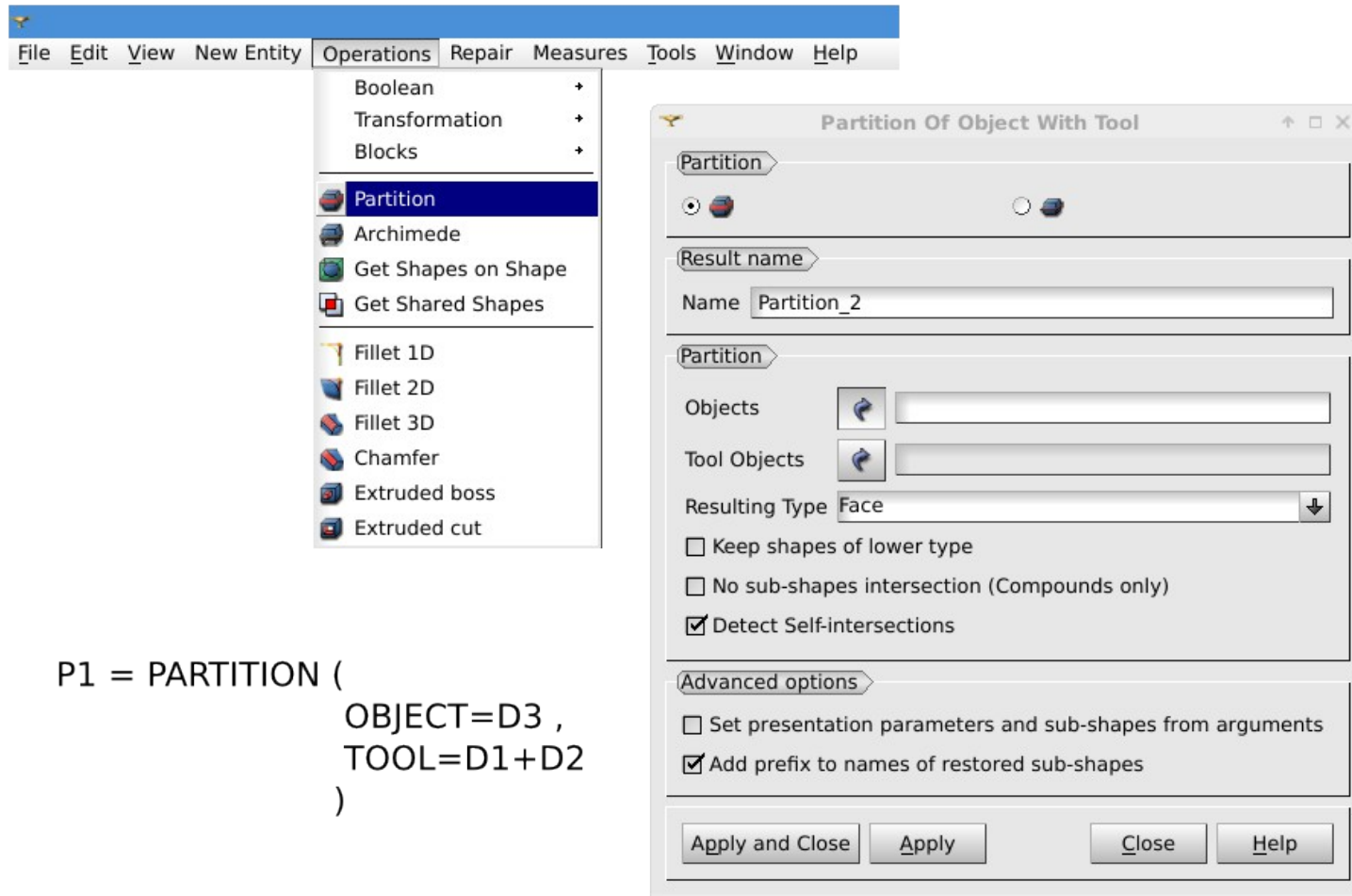


- D1 = DISK(R=0.5 , OXY)
- D2 = DISK(R=1.0 , OXY)
- D3 = DISK(R=1.25 , OXY)



Material	Relative magnetic permeability
Silicon	1
Mat3	10000

Magnetostatics 2D (I): Geometry

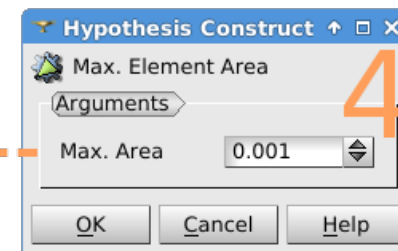
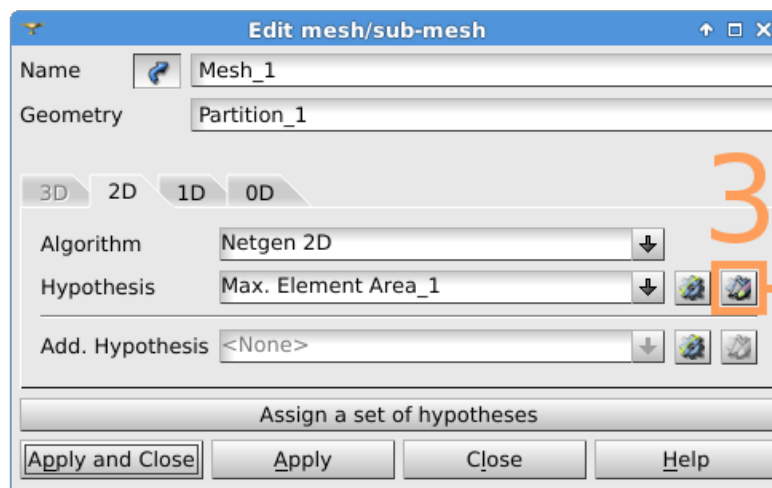
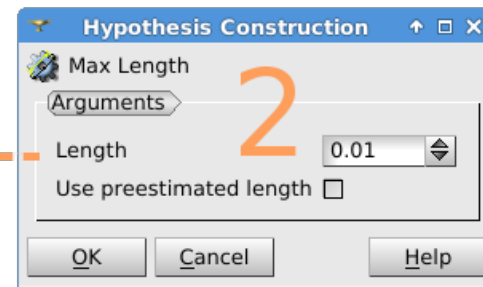
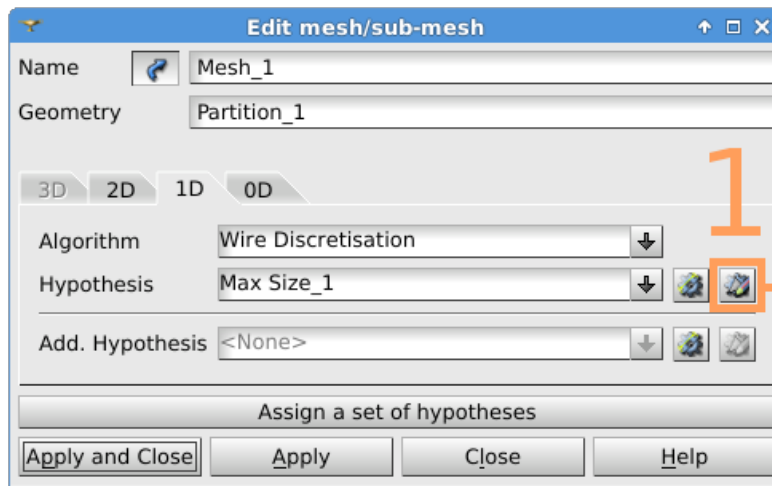


The image shows a CAD software interface. On the left, the 'Operations' menu is open, highlighting the 'Partition' option. On the right, the 'Partition Of Object With Tool' dialog box is displayed. The dialog box has the following fields and options:

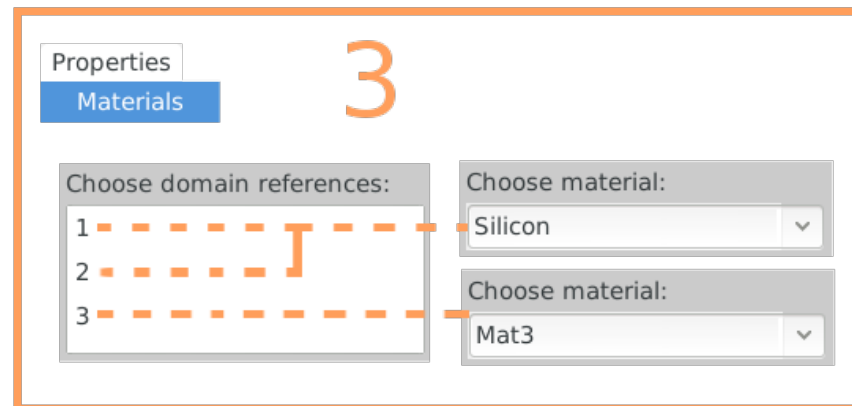
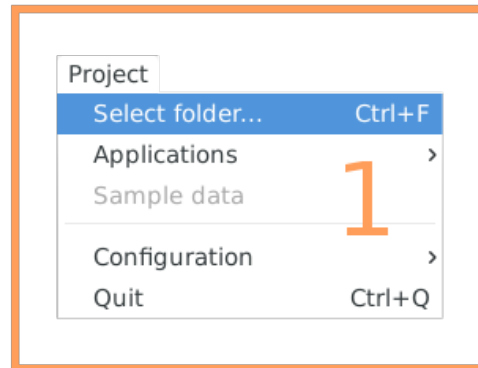
- Partition**: A section with a circular icon and a square icon.
- Result name**: A text field containing 'Partition_2'.
- Partition**: A section with 'Objects' and 'Tool Objects' fields, each with a selection icon.
- Resulting Type**: A dropdown menu set to 'Face'.
- Keep shapes of lower type
- No sub-shapes intersection (Compounds only)
- Detect Self-intersections
- Advanced options**:
 - Set presentation parameters and sub-shapes from arguments
 - Add prefix to names of restored sub-shapes
- Buttons: 'Apply and Close', 'Apply', 'Close', and 'Help'.

```
P1 = PARTITION (
    OBJECT=D3 ,
    TOOL=D1+D2
)
```

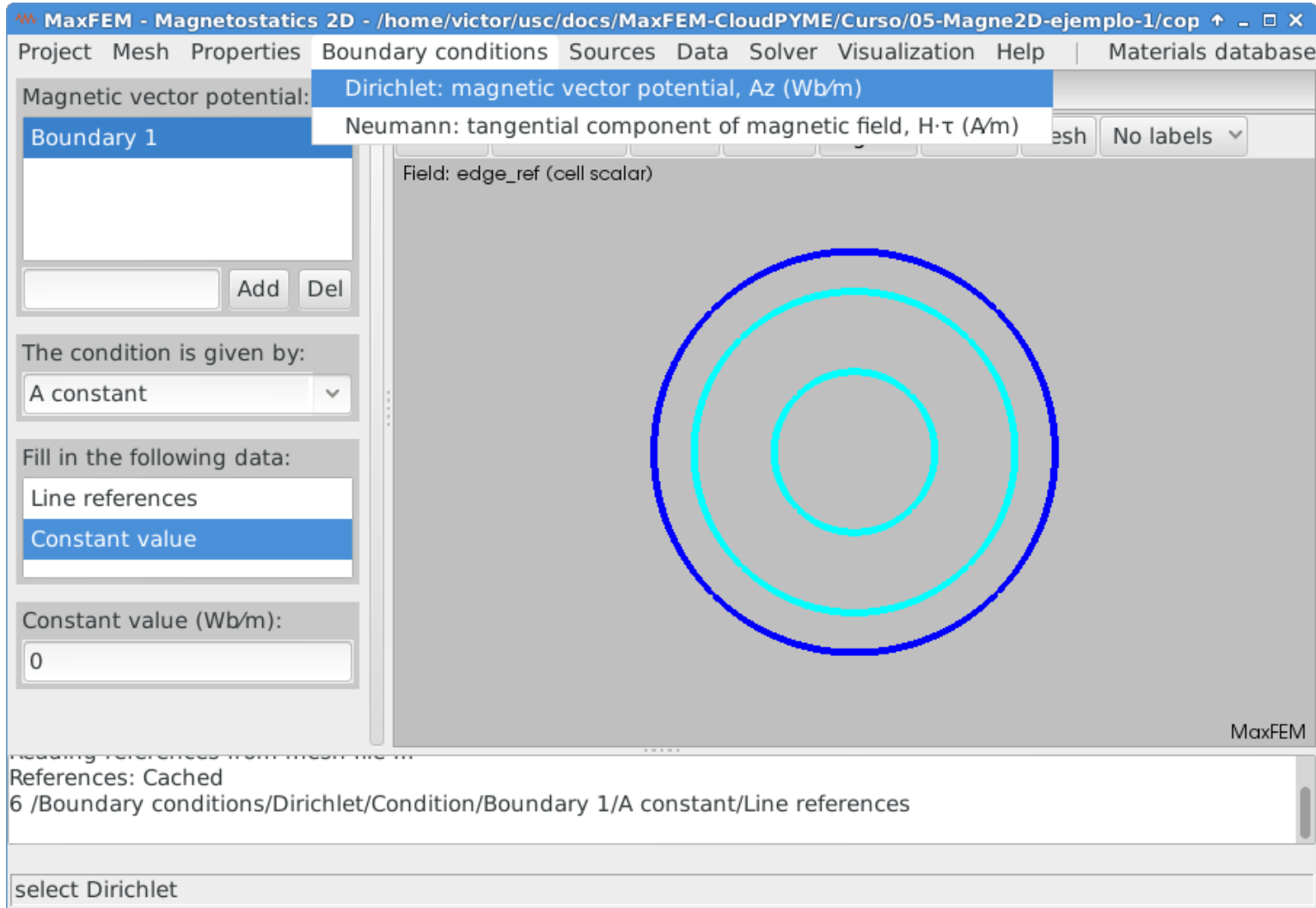
Magnetostatics 2D (I): Mesh



Magnetostatics 2D (I): MaxFEM



Magnetostatics 2D (I): MaxFEM



MaxFEM - Magnetostatics 2D - /home/victor/usc/docs/MaxFEM-CloudPYME/Curso/05-Magne2D-ejemplo-1/cop

Project Mesh Properties Boundary conditions Sources Data Solver Visualization Help Materials database

Magnetic vector potential: Dirichlet: magnetic vector potential, A_z (Wb/m)

Boundary 1 Neumann: tangential component of magnetic field, $H \cdot \tau$ (A/m)

Field: edge_ref (cell scalar)

The condition is given by: A constant

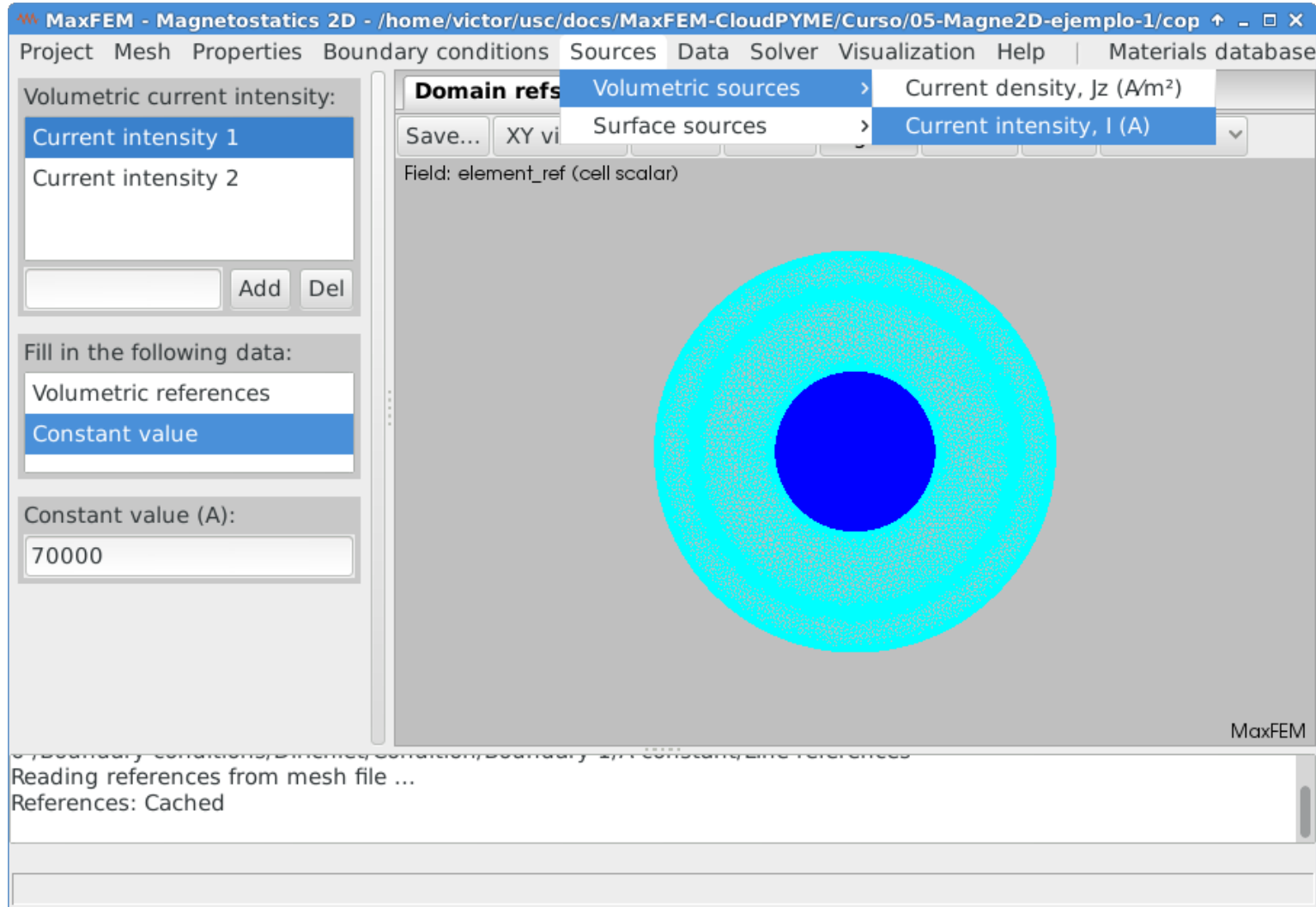
Fill in the following data: Constant value

Constant value (Wb/m): 0

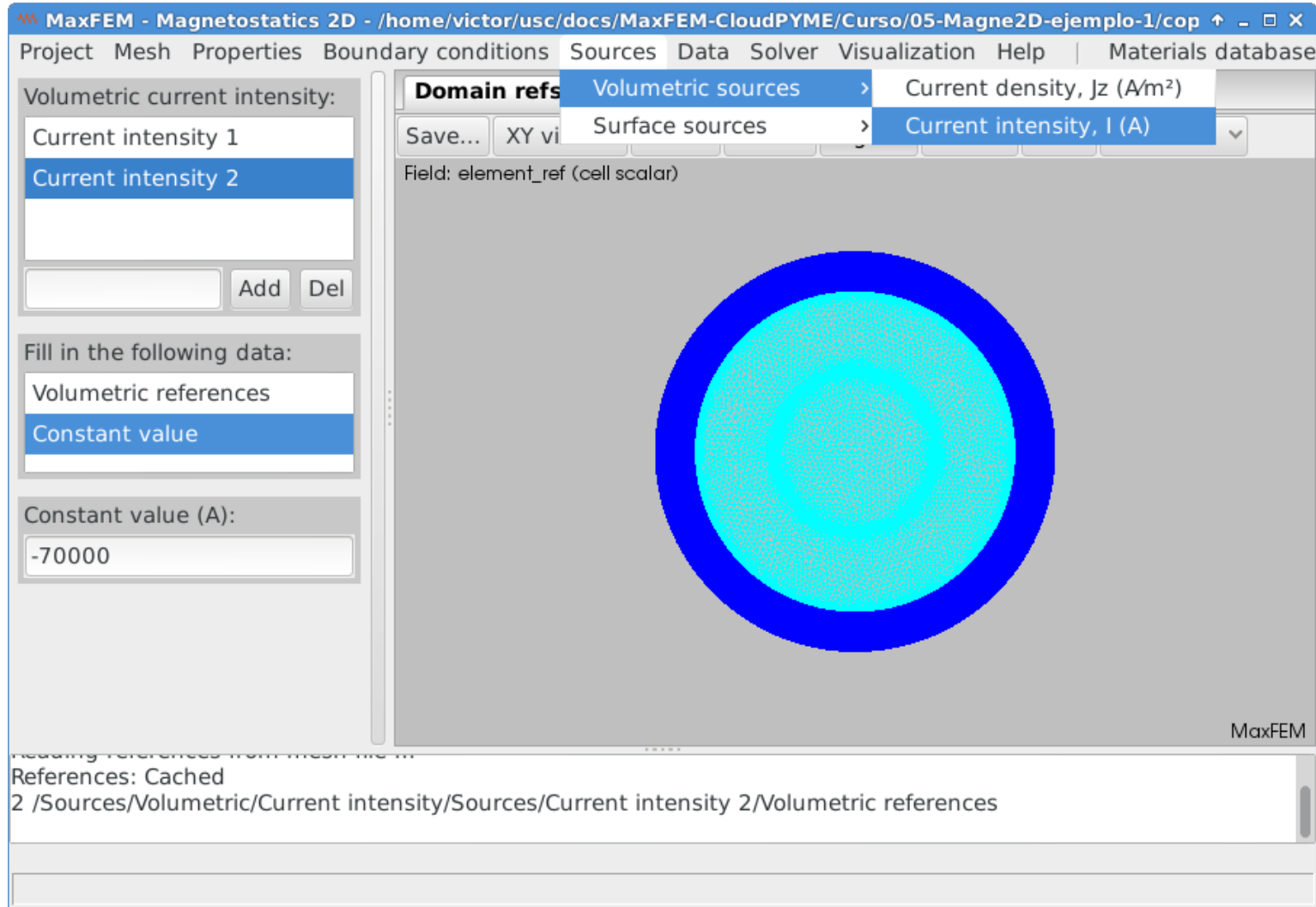
References: Cached
6 /Boundary conditions/Dirichlet/Condition/Boundary 1/A constant/Line references

select Dirichlet

Magnetostatics 2D (I): MaxFEM



Magnetostatics 2D (I): MaxFEM



MaxFEM - Magnetostatics 2D - /home/victor/usc/docs/MaxFEM-CloudPYME/Curso/05-Magne2D-ejemplo-1/cop

Project Mesh Properties Boundary conditions Sources Data Solver Visualization Help | Materials database

Volumetric current intensity:

- Current intensity 1
- Current intensity 2**

Add Del

Fill in the following data:

- Volumetric references
- Constant value**

Constant value (A):

-70000

Domain refs Volumetric sources > Current density, Jz (A/m²)

Save... XY vi Surface sources > **Current intensity, I (A)**

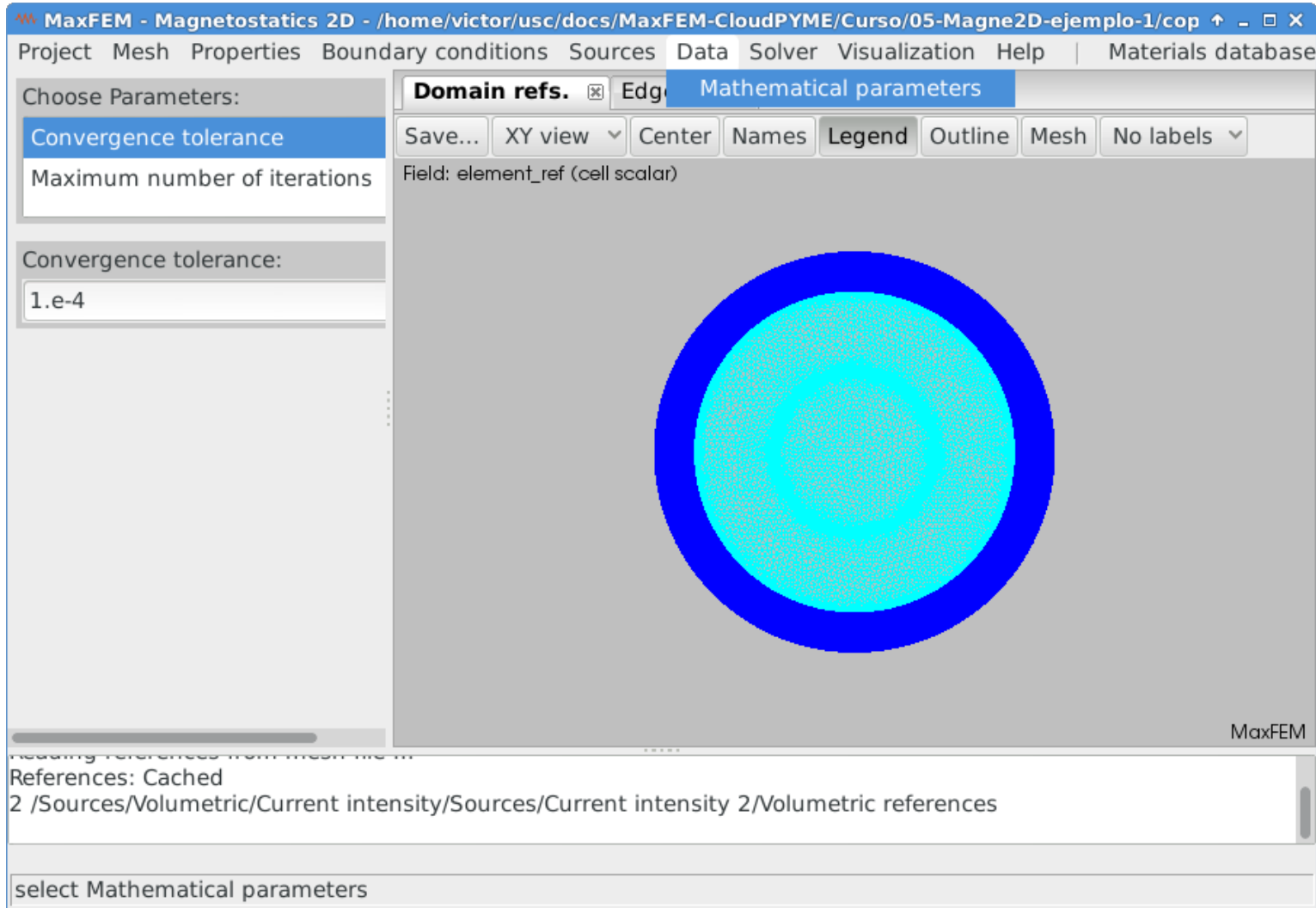
Field: element_ref (cell scalar)

MaxFEM

References: Cached

2 /Sources/Volumetric/Current intensity/Sources/Current intensity 2/Volumetric references

Magnetostatics 2D (I): MaxFEM



Magnetostatics 2D (I): MaxFEM

