



Exercise 5: Geometry - II

FLUKA Beginner's Course

Exercise 5: Geometry - II

Aim of the exercise:

- 1- Get familiar with the Geometry Editor
- 2- Edit geometry using the Geometry Editor
- 3- Use of different layers of Geometry Editor

Exercise 5: Geometry - II

- ❑ Start a new project based on the **empty** input template
- ❑ Save the project in a new directory "**ex5**" with the name "**ex5**"
- ❑ Try to reproduce the same geometry of exercise 4 using ONLY the Geometry Editor
- ❑ Play with the different views and layers

Exercise 5: Geometry - II

- One infinite ZCC cylinder "TARG". Radius = 5 cm, center in $x=0, y=0$
- Four XYP planes ("*ZTlow*", "*T1seg*", "*T2seg*", "*ZThigh*")
- Surrounding medium CO2 – Region name "INAIR"
- Three target regions

<i>From</i>	<i>To</i>	<i>Region</i>	<i>Material</i>
<i>z=0.</i>	<i>z=1.</i>	<i>TARGS1</i>	<i>Water</i>
<i>z=1.</i>	<i>z=2.</i>	<i>TARGS2</i>	<i>Aluminum</i>
<i>z=2.</i>	<i>z=10.</i>	<i>TARGS3</i>	<i>Lead</i>

Water, Aluminum, and Lead are predefined materials

Exercise 5: Geometry - II

- Complete the input file by adding also a BEAM card as in ex3 [input tab] (will be useful later):
 - Origin $(x,y,z) = (0.0, 0.0, -0.1)$
 - Directed **toward positive z**
 - Pencil proton beam
 - Kinetic energy **$E=3.5 \text{ GeV}$**
 - Momentum Gaussian spread **$\Delta p= 0.8 \text{ GeV}/c$**
 - Divergence Gaussian **$\Delta\phi=1.7 \text{ mrad}$**
- Keep it error free you will use it later