



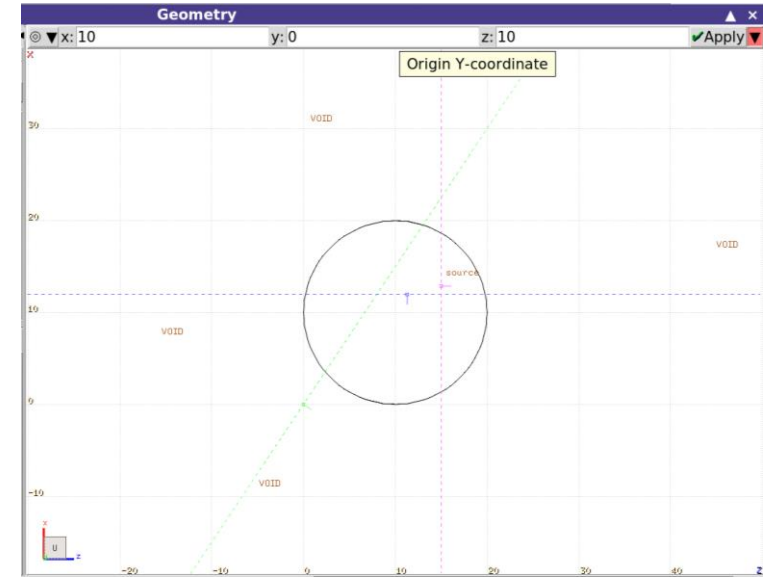
“New” source routine hands on

A first example how to use the “new” source routine

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Geometry

- Everything is in vacuum
- An ideal sphere ($R=10\text{cm}$) enclose the beam origin located in (10., 0., 10.)



Scoring

- **USRBIN** scoring of **ALL-PART** fluence (just to see where the beam goes)
- **USRBDX** scoring of **ALL-PART** outgoing the ideal sphere

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Case 1

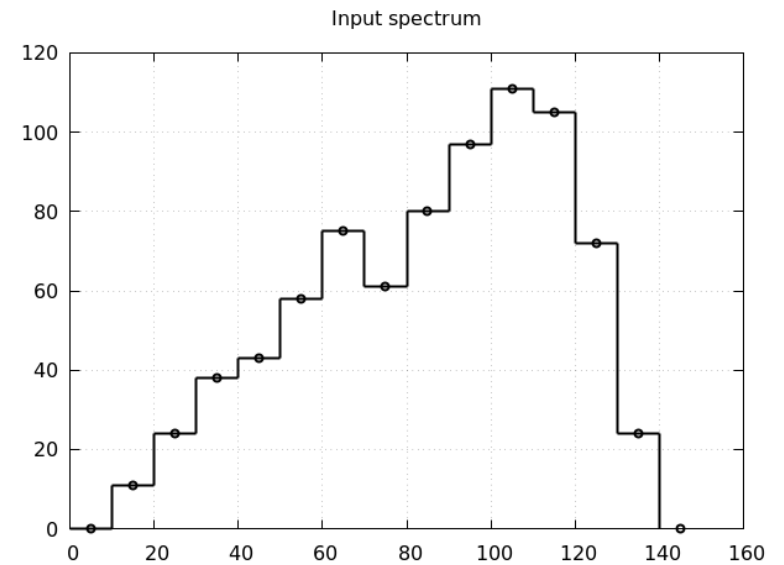
- Electron beam
- Beam origin in (10., 0., 10.)
- Beam directed along the z axis
- Divergence in x = 180 mrad ; divergence in y = 90 mrad
- Beam momentum uniformly distributed between 105 and 135 MeV

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Case 2

- Electron beam
- Beam origin in (10., 0., 10.)
- Beam directed at 45 degrees between x and z axes
- Divergence in x = 180 mrad ; divergence in y = 90 mrad
- Beam momentum sampled from an histogram (between 0 and 150 MeV)

histogram is given in the files **histo.txt** and **histo.png**



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Case 3: Let's try to generate some errors

- Missing executable
- Missing executable in the run window
- Wrong variable name with implicit none
- Missing histogram text file
- Division by zero

