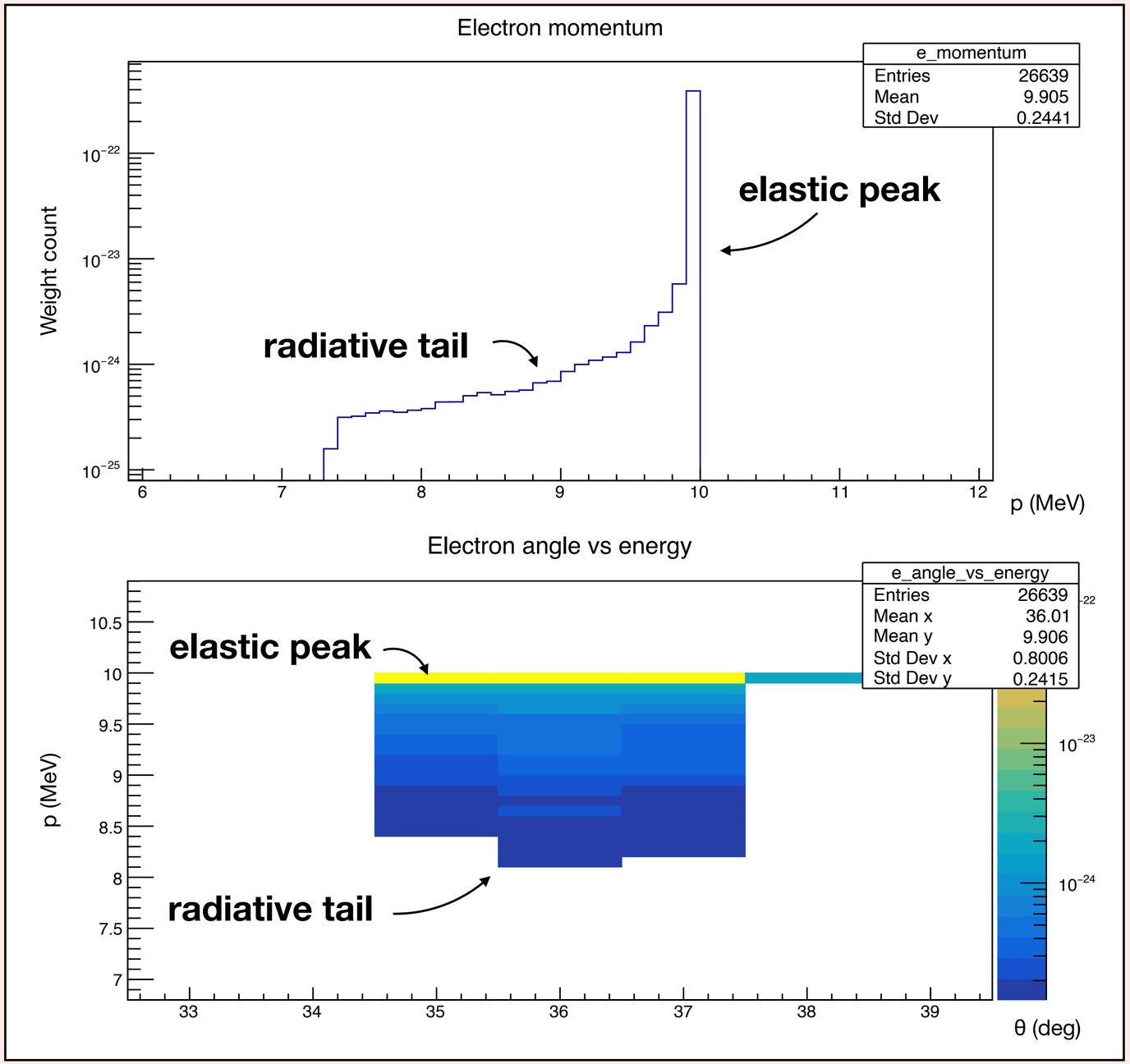
Radgen simulation: 10 MeV eC scattering

- 10 MeV kinetic energy e-
- Scattered off a proton with mass of carbon

Setup file for radgen

setup	= eC
beam_energy	= 0.01
e-_angle	= 36
e-_momentum	= 0.010497
e-_acceptance_theta	= 0.02357
e-_acceptance_phi	= 0.08727
e-_acceptance_momentum	= 0.3

- Result is directly output to a ROOT tree that g4DL can read
- Only tested for left arm, but simulation and analysis should work the same for the right

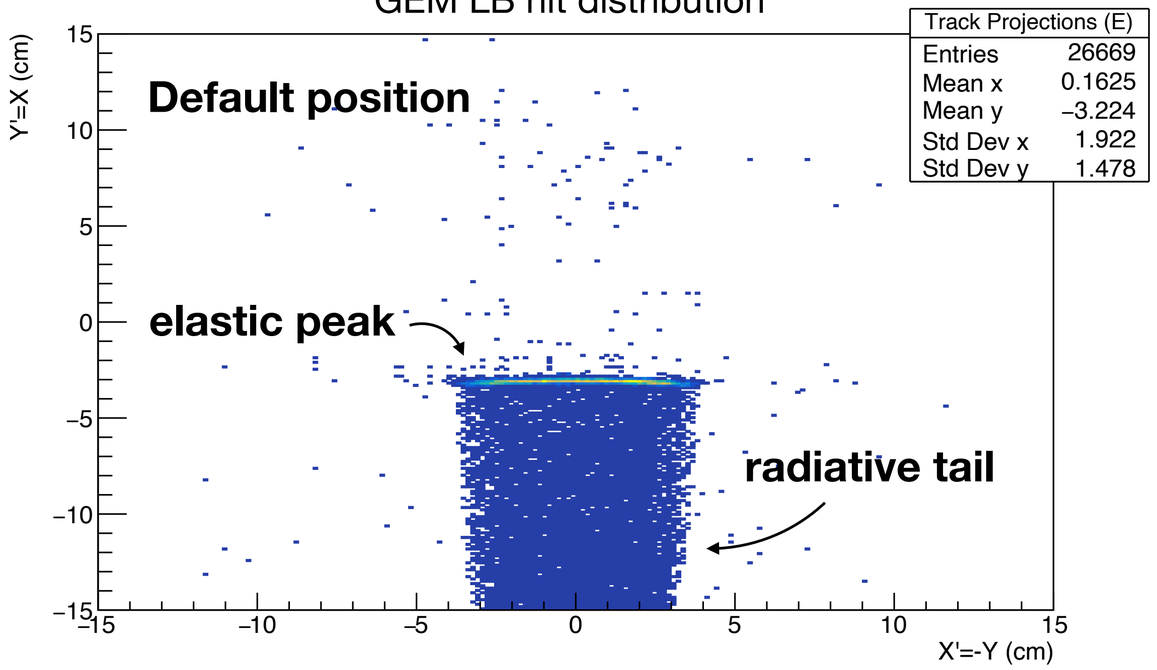


Radgen simulation: 10 MeV eC scattering

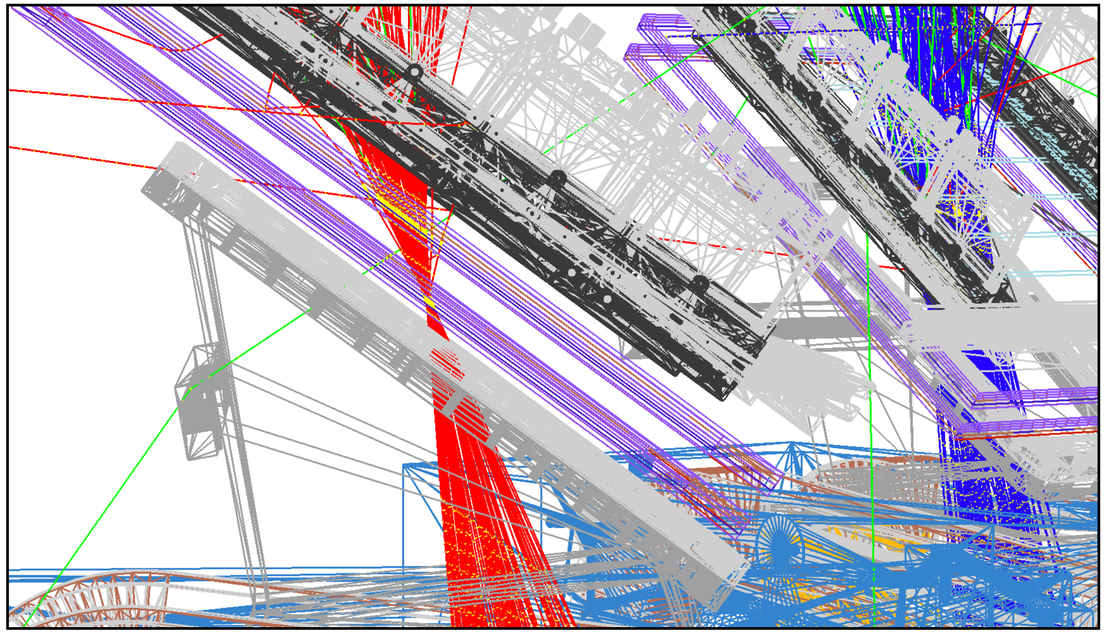
- Passed generated event to simulation and analysis chain
- Update default momentum settings in simulation accordingly so the magnetic field is scaled:

```
/det/setESpecMom 10.497 MeV
/det/setPSpecMom 10.498 MeV
```

GEM LB hit distribution



Validation gun mode for nominal momentum



Radgen simulation: 10 MeV eC scattering

- Hit distribution in dispersion direction can be used to
  - Find GEM plane position (by comparing to the same setting in simulation)
  - Find focal plane position (by looking for the narrowest peak)
  - Calibrate spectrometer nominal momentum (by comparing peak position after the above two are calibrated)