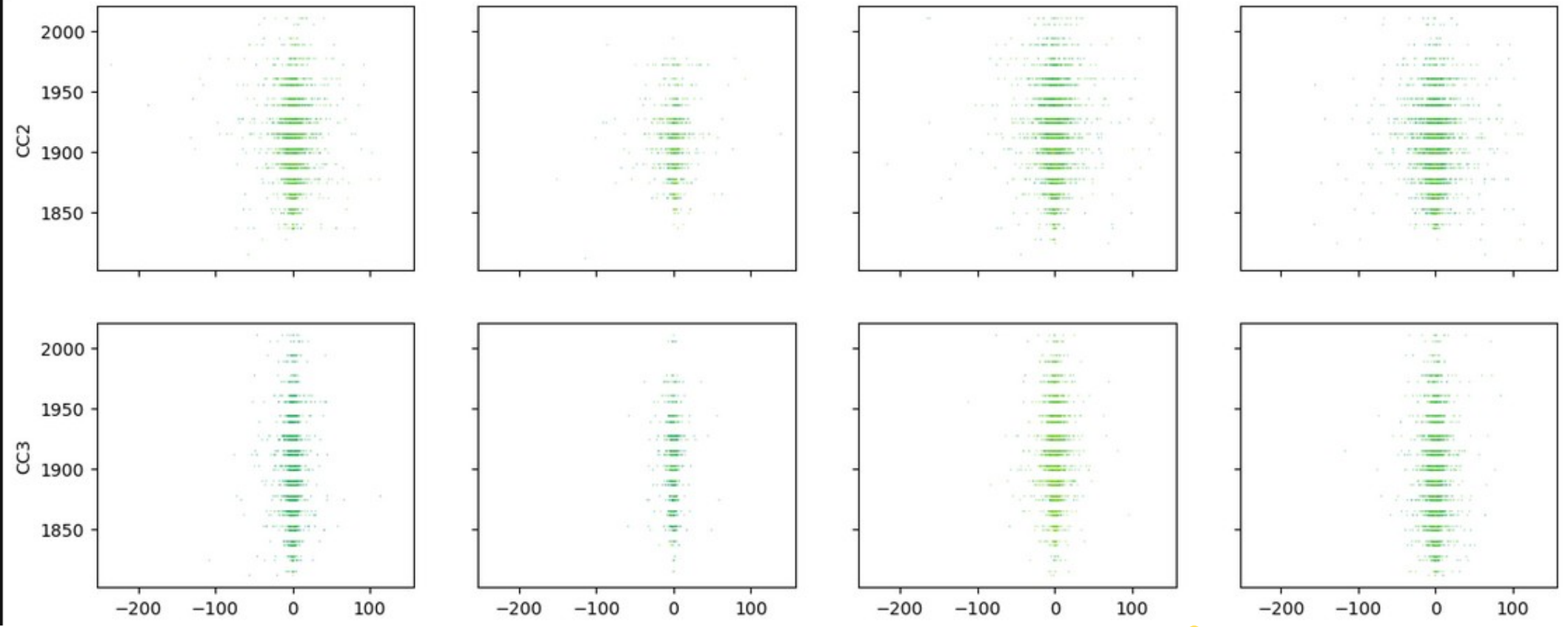
# CC2 vs CC3

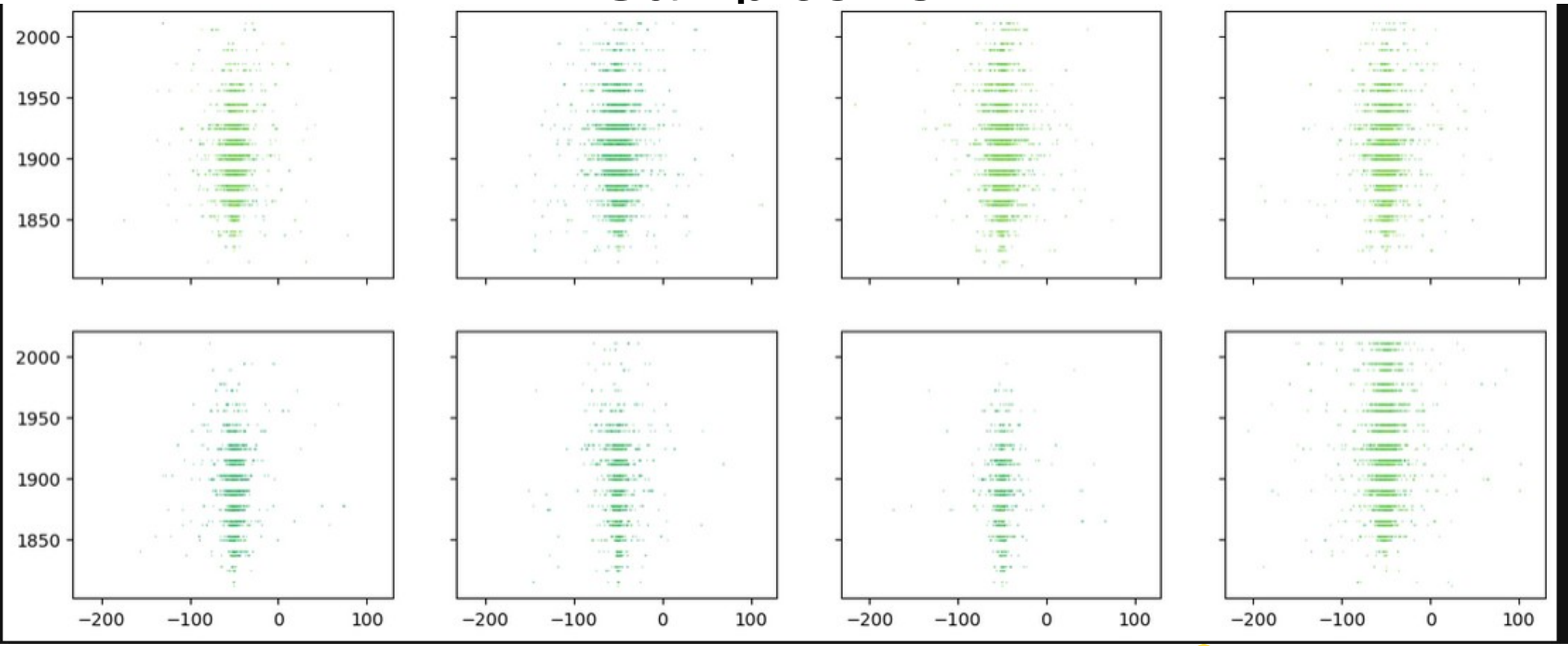
# Setup

- All calculations done in python, no C++ embedding
- Conditioning values correspond to
  - Photons between 0 and 100 MeV going straight up (90 eta 90 phi)
- G4 reference is for the conditioning values
  - With a real detector, not a regular detector
  - With the gun pulled back to make sure the first absorber is in use
- Models are
  - CC2 loaded from save files used for CC2 paper
  - CC3 distilled reduced diffusion model + CC3 reduced showerflow

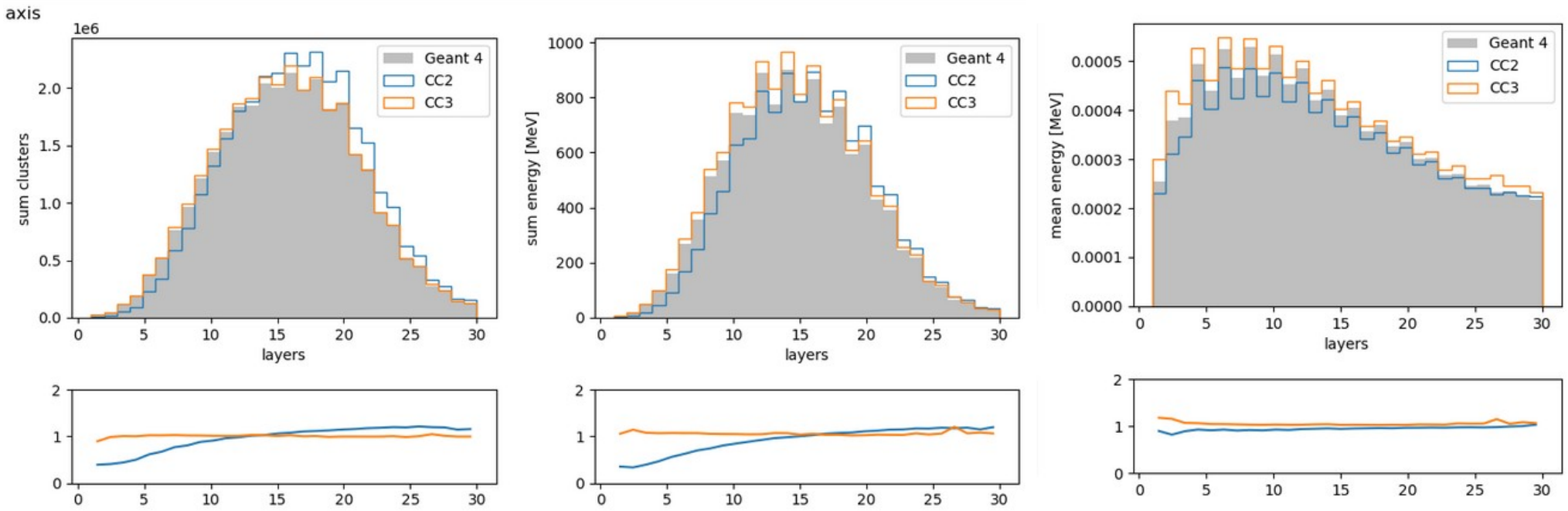
# Samples



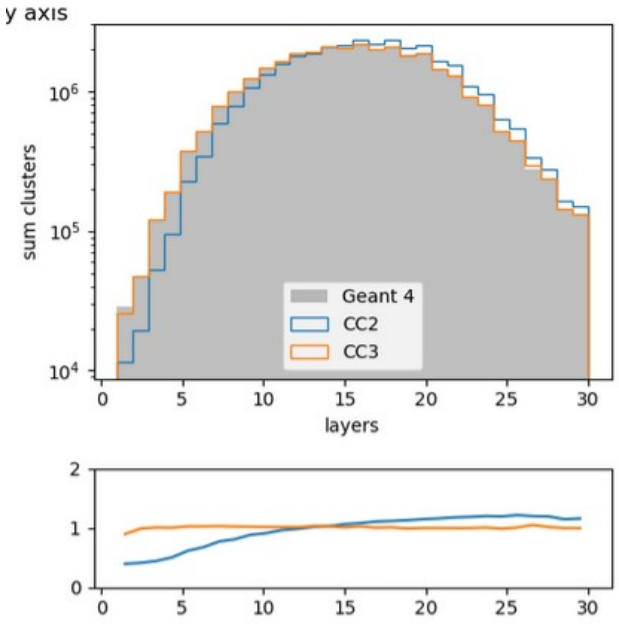
# Samples -G4

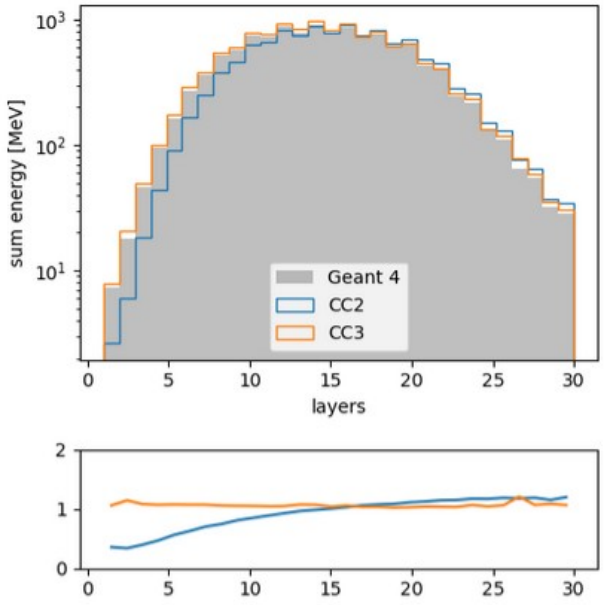

2000
1950
1900
1850
2000
1950
1900
1850
−200
−100
0
100
−200
−100
0
100
−200
−100
0
100
−200
−100
0
100

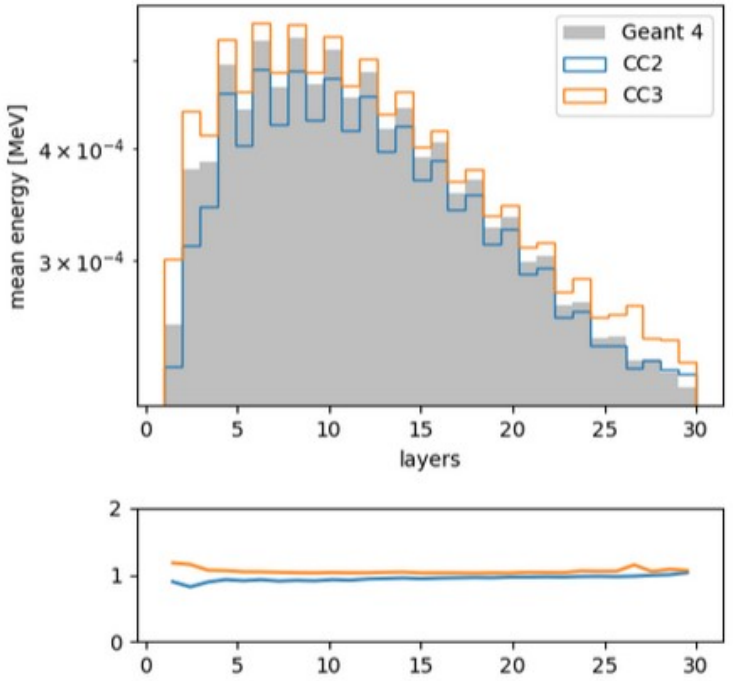
# Layers


axis
1e6
sum clusters
layers
Geant 4
CC2
CC3
sum energy [MeV]
layers
Geant 4
CC2
CC3
mean energy [MeV]
layers
Geant 4
CC2
CC3

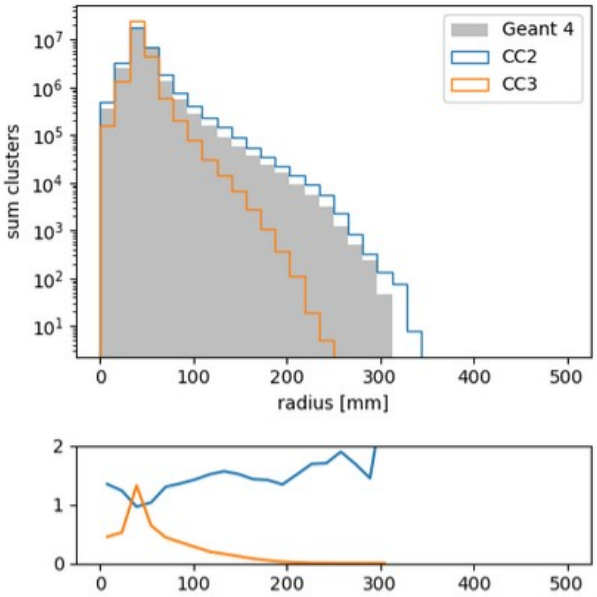
# Layers

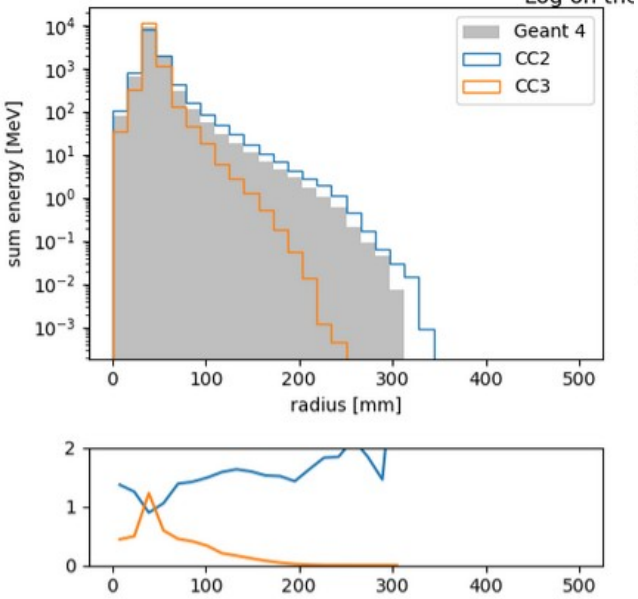

y axis
sum clusters
layers
Geant 4
CC2
CC3

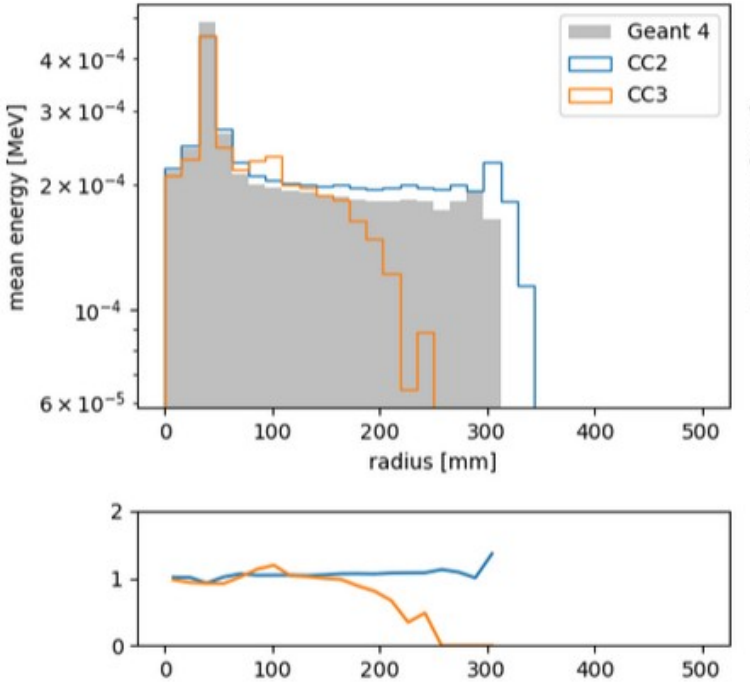

sum energy [MeV]
layers
Geant 4
CC2
CC3


mean energy [MeV]
layers
Geant 4
CC2
CC3

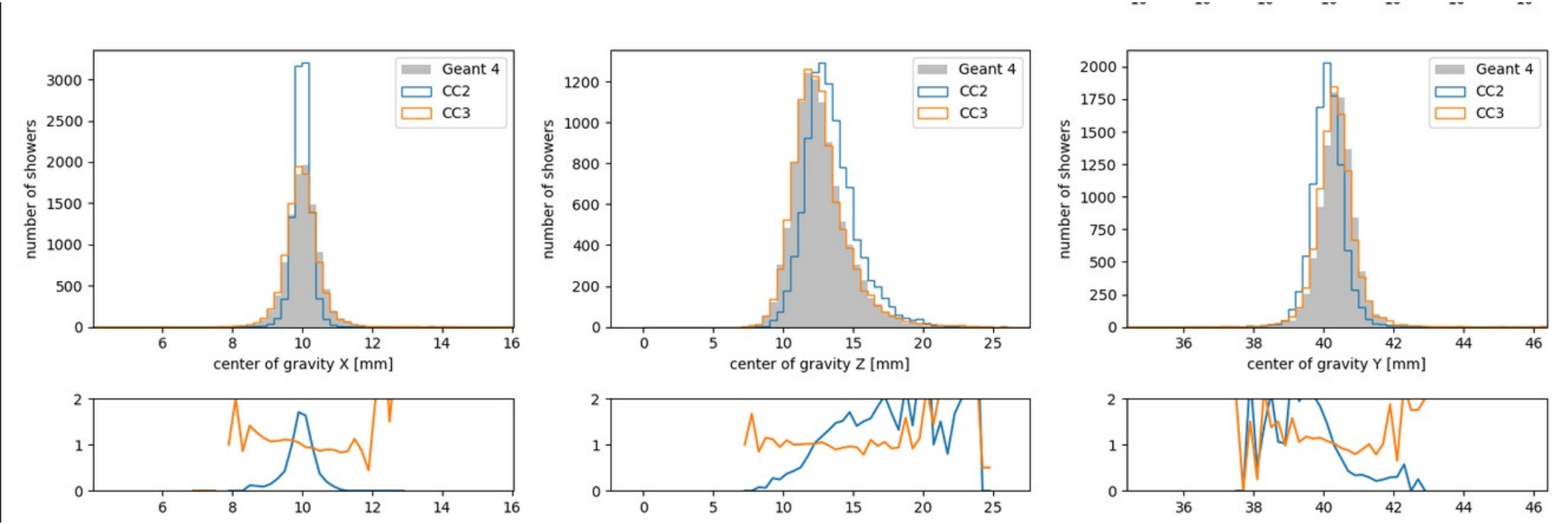
# “radius”


Geant 4
CC2
CC3
sum clusters
radius [mm]

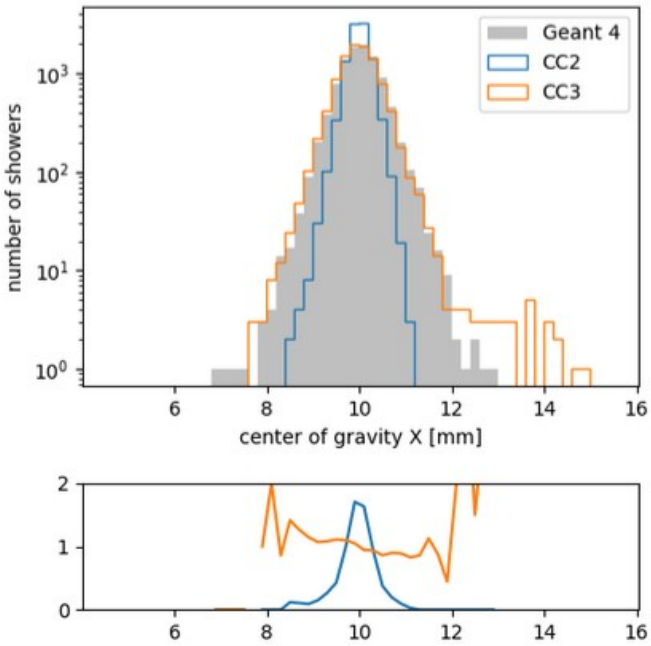

Log on the
Geant 4
CC2
CC3
sum energy [MeV]
radius [mm]

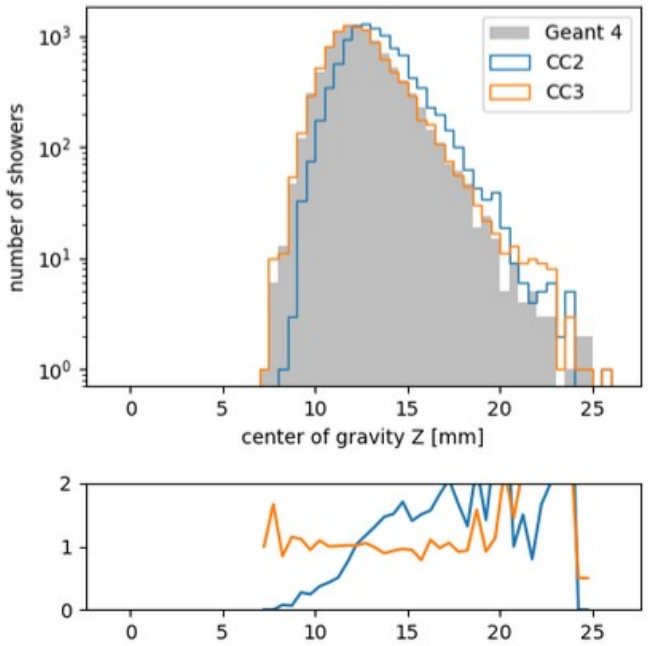

Geant 4
CC2
CC3
mean energy [MeV]
radius [mm]

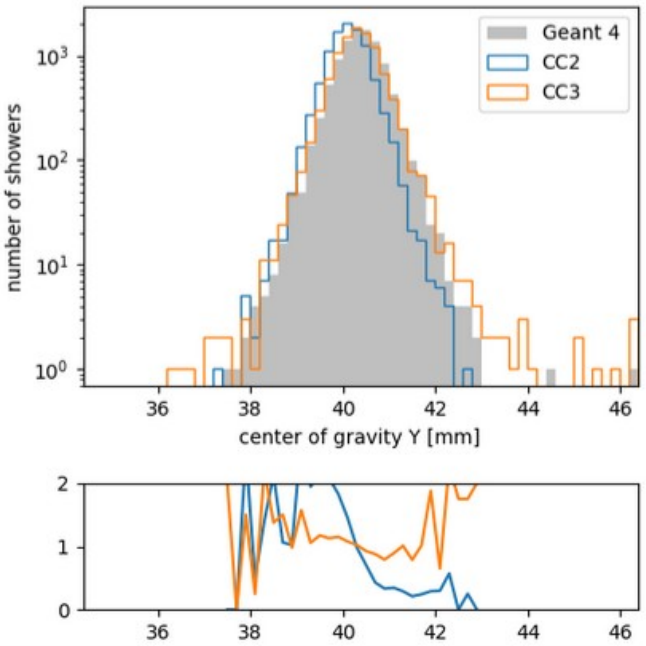
# CoG


Geant 4
CC2
CC3
number of showers
center of gravity X [mm]
center of gravity Z [mm]
center of gravity Y [mm]

# CoG


Geant 4
CC2
CC3
number of showers
center of gravity X [mm]


Geant 4
CC2
CC3
number of showers
center of gravity Z [mm]


Geant 4
CC2
CC3
number of showers
center of gravity Y [mm]