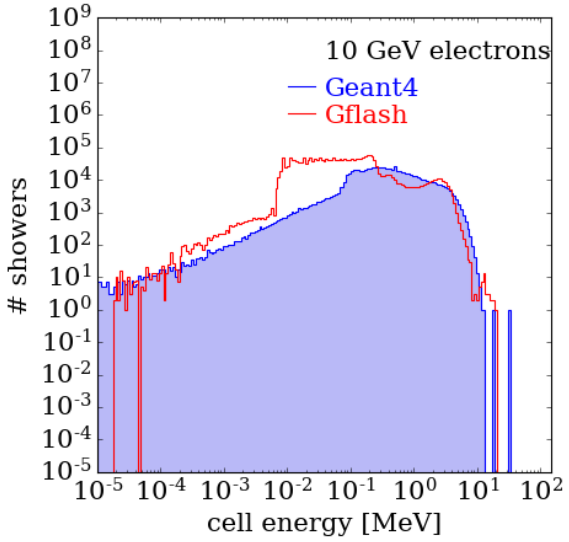
SimpleCalo

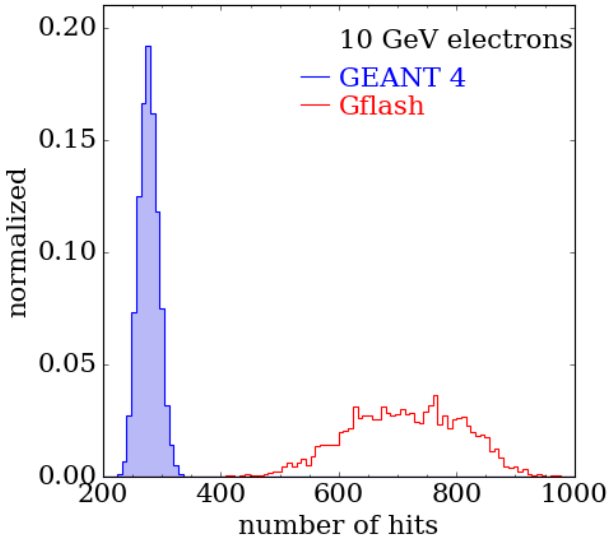
COMPARISON GEANT4 AND GFLASH

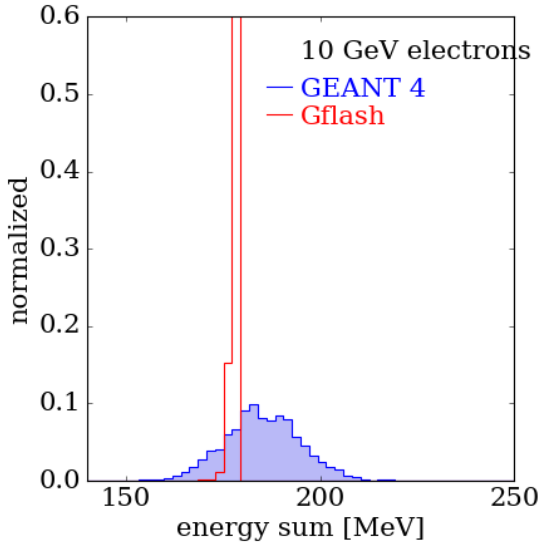
CONFIGURATION PARAMETER:STEP SIZE

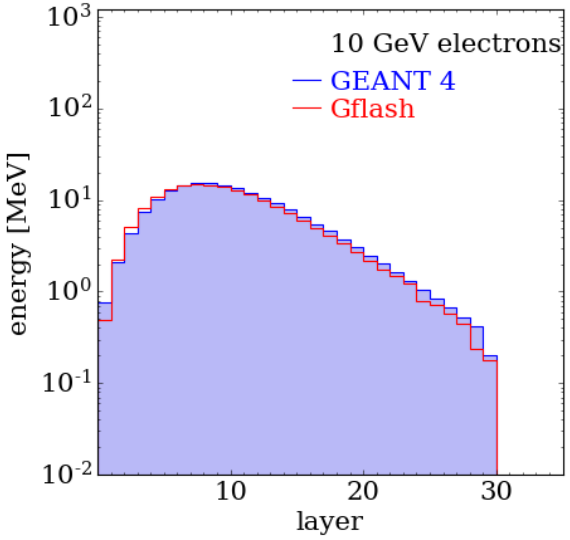
COMPARING DIFFERENT ENERGIES

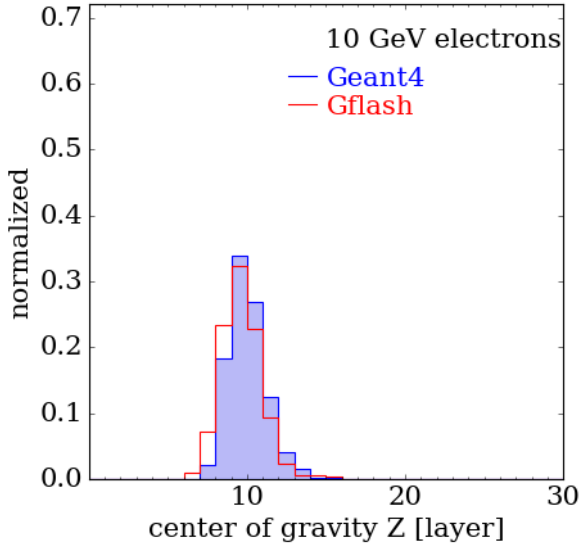
Energy Distributions 10 GeV Electrons

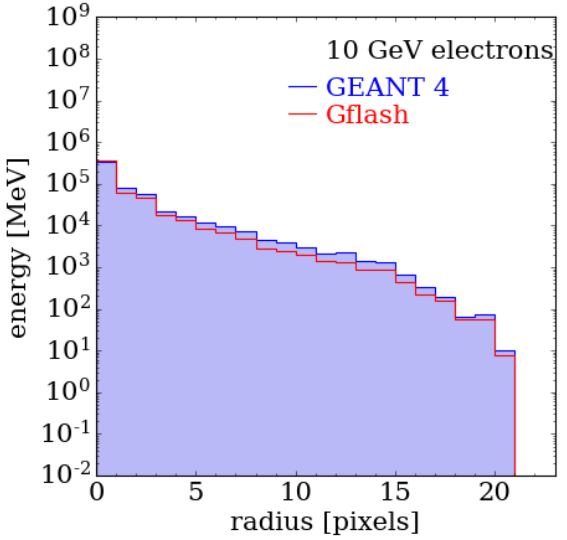




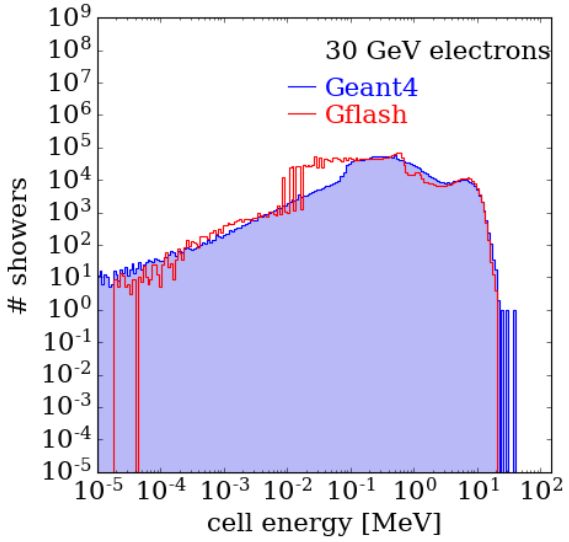


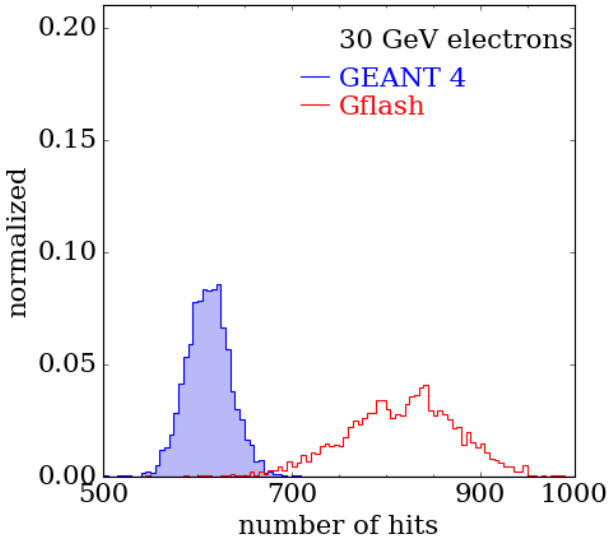


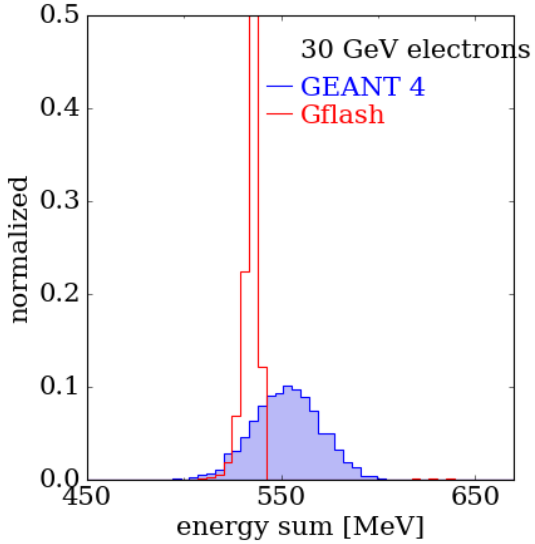


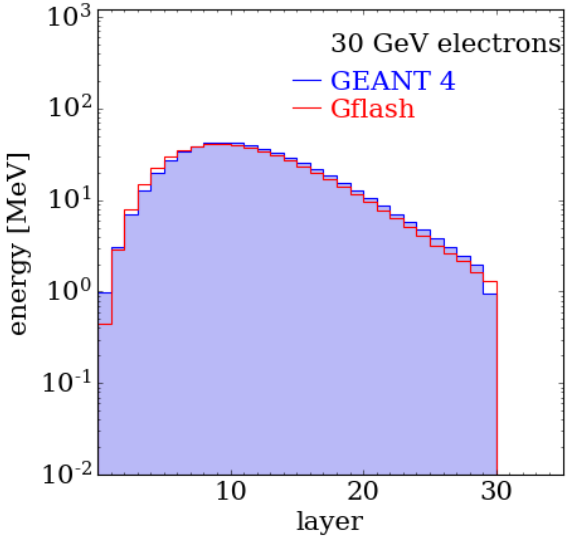


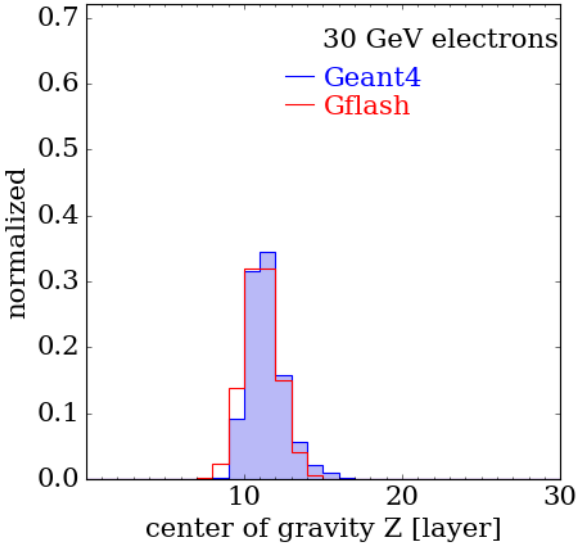
Energy Distributions 30 GeV Electrons

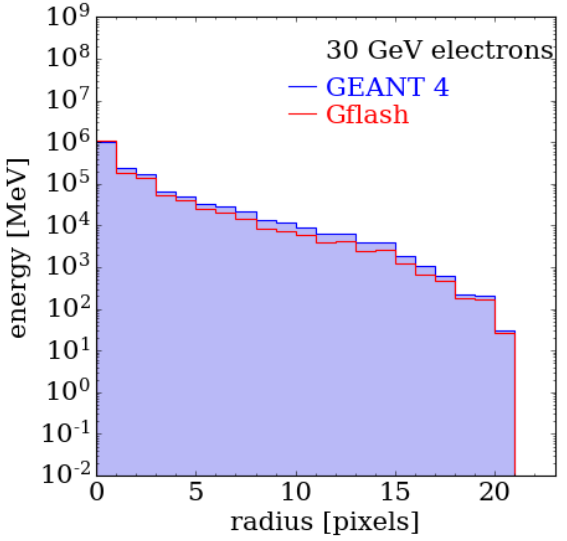




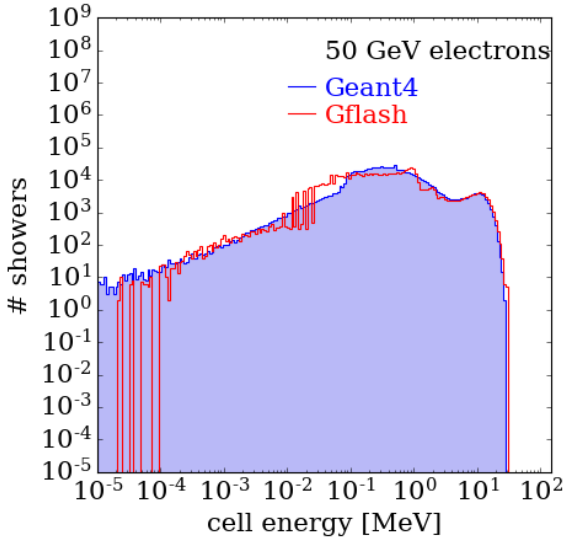


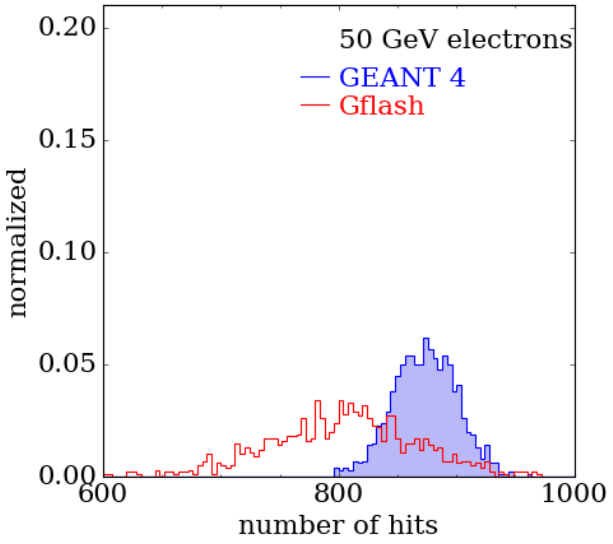


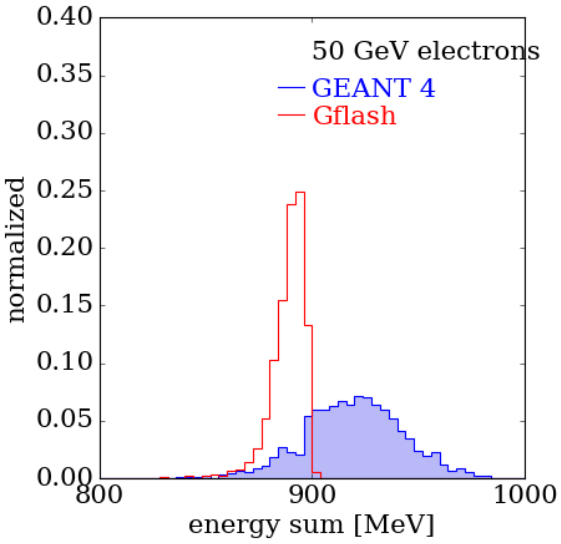


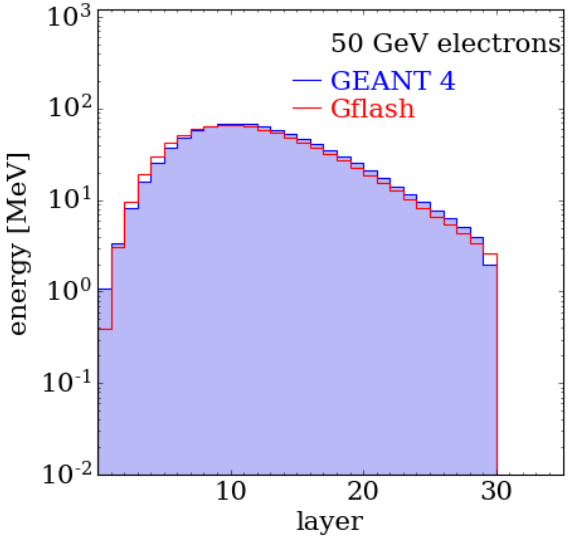


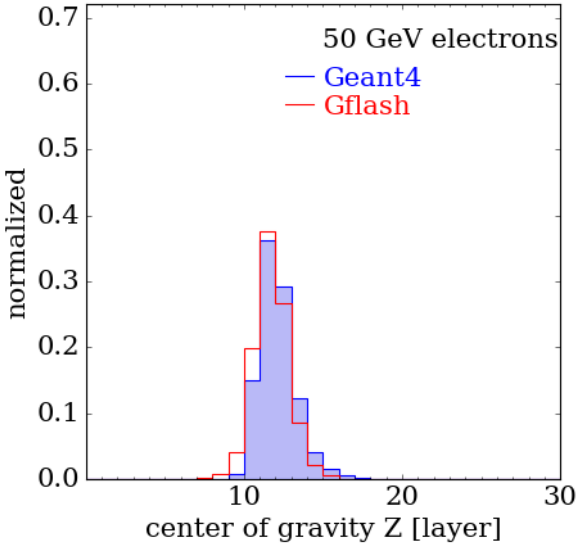
Energy Distributions 50 GeV Electrons

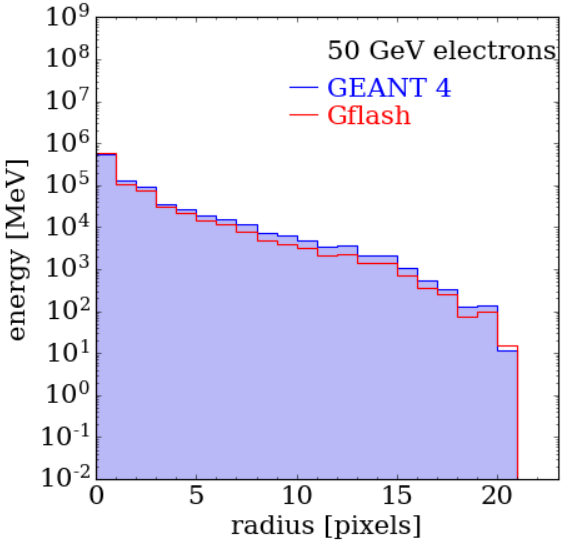




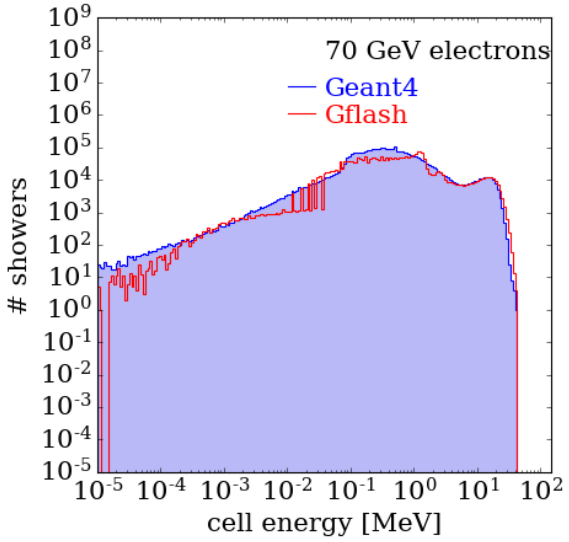


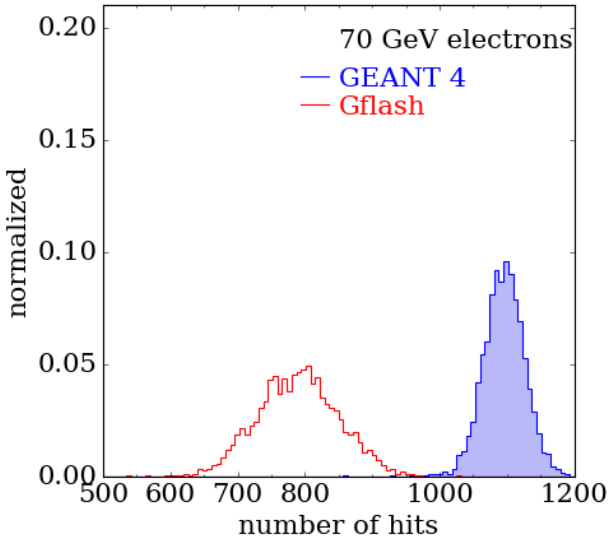


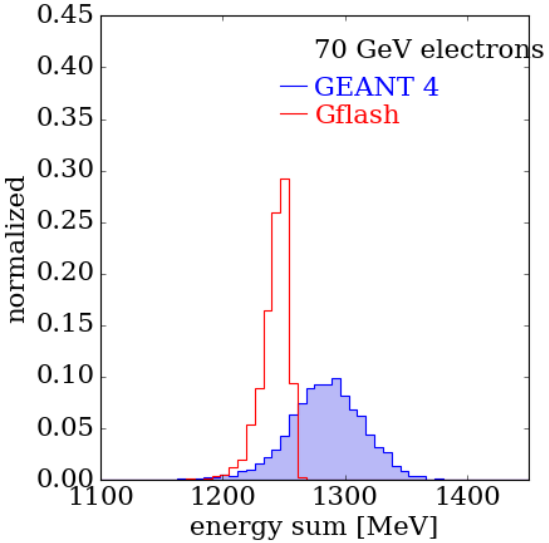


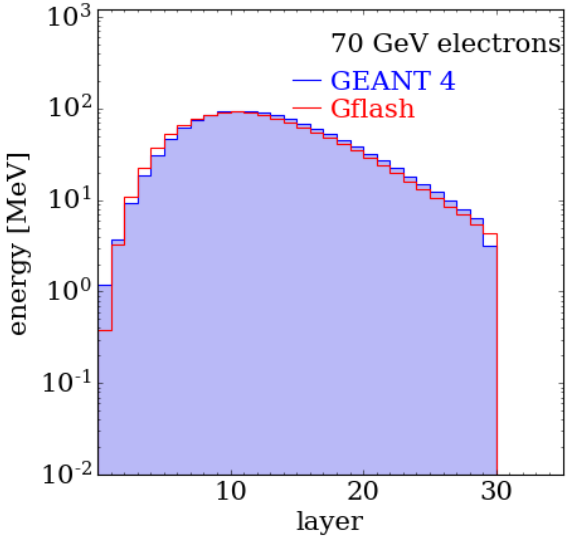


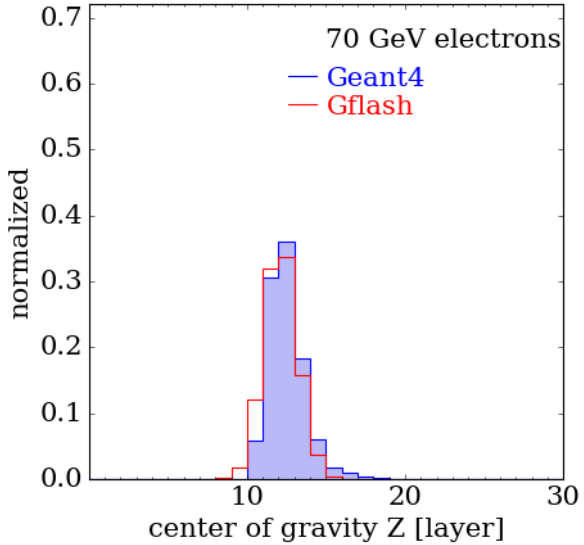
Energy Distributions 70 GeV Electrons

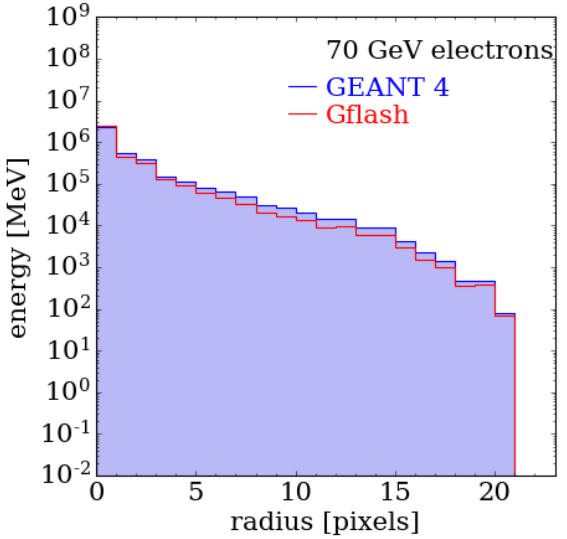




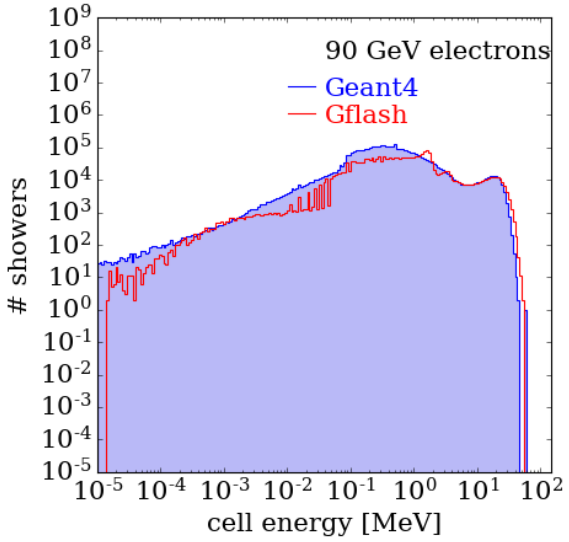


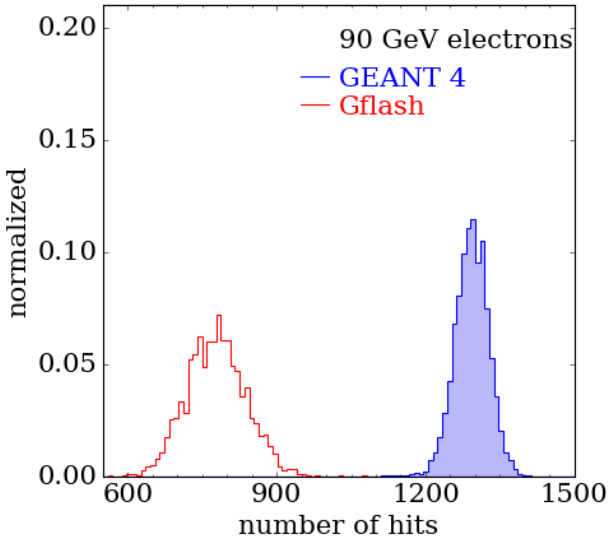


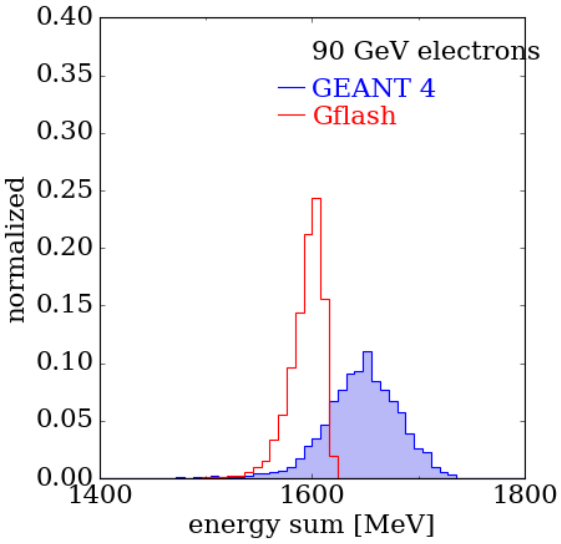


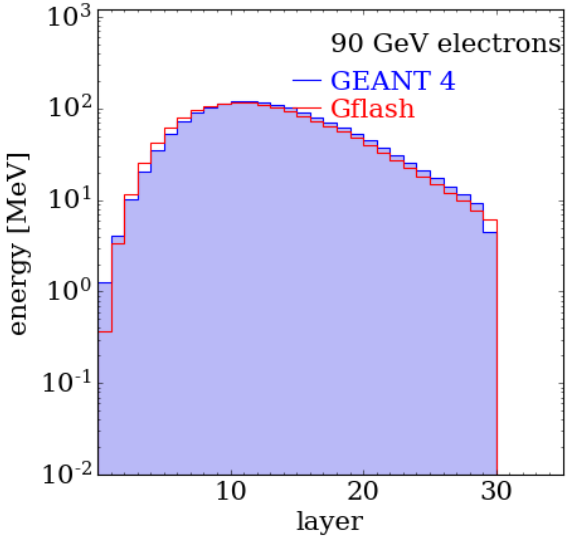


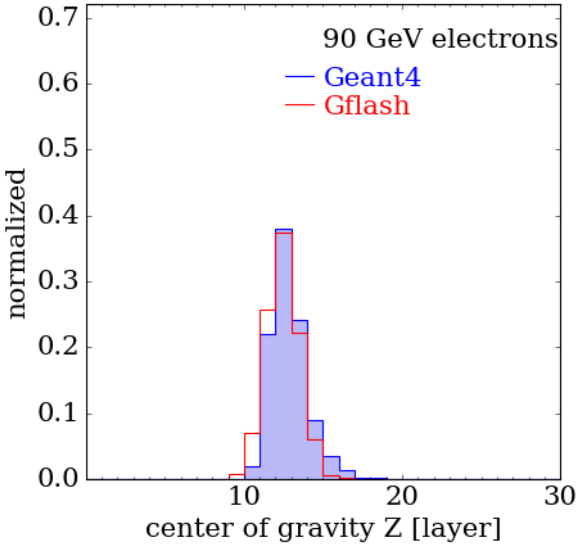
Energy Distributions 90 GeV Electrons

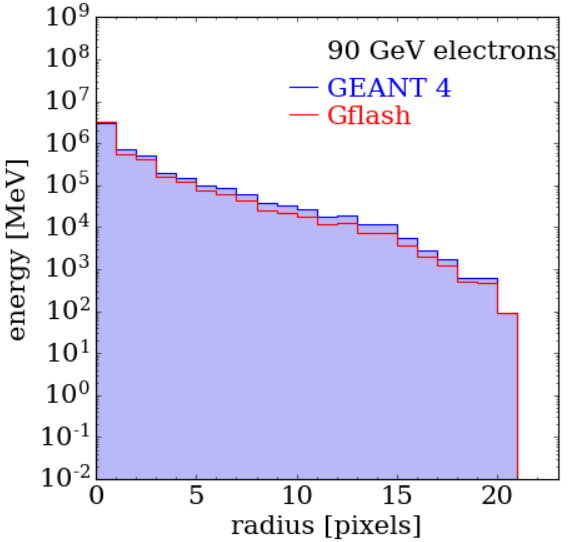








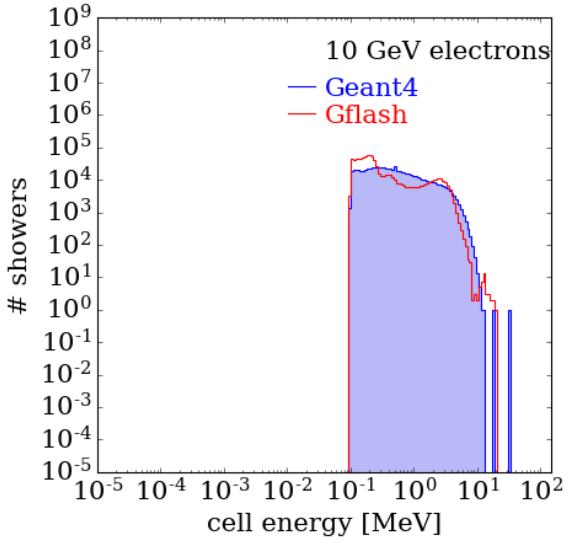


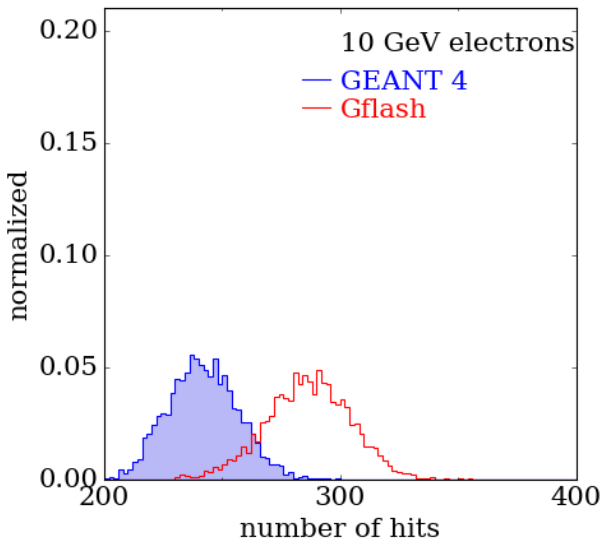


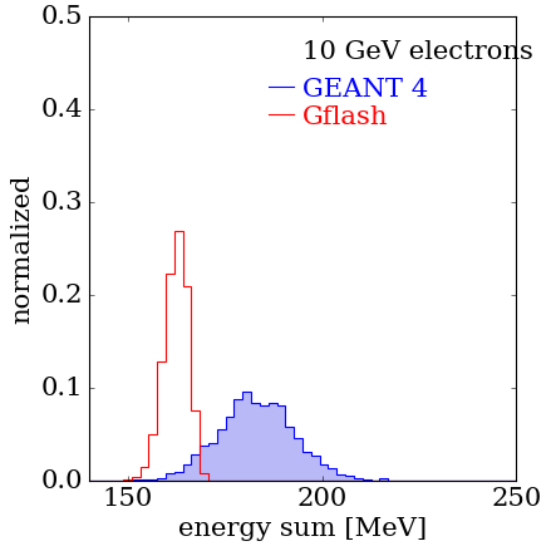
Cut at 0.1 MeV

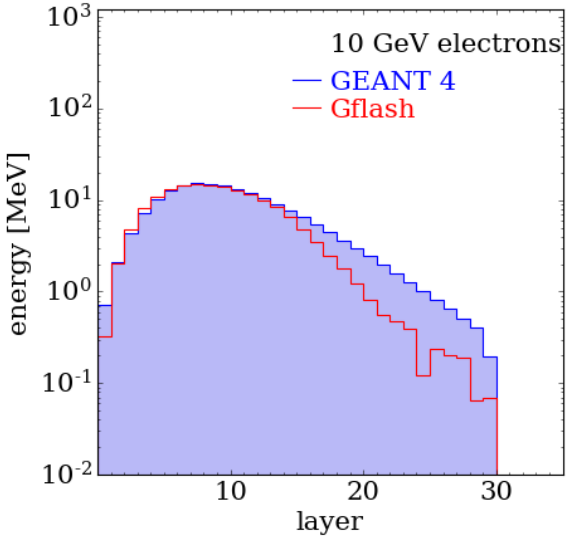
10, 20, 50, 70 and 90 GeV electrons
3000 showers

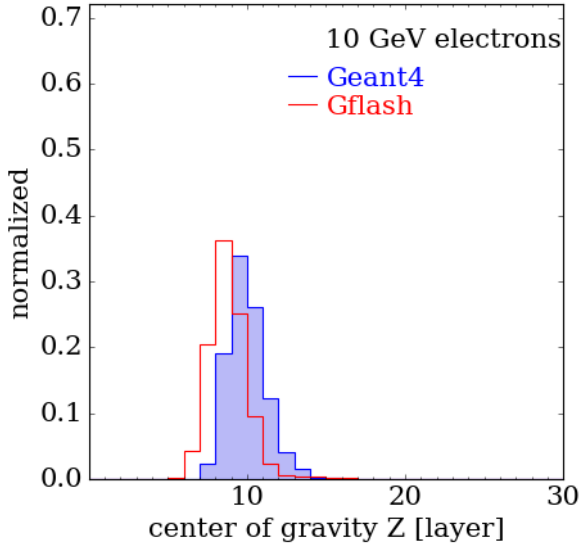
Energy Distributions 10 GeV Electrons with Cut at 0.1 MeV

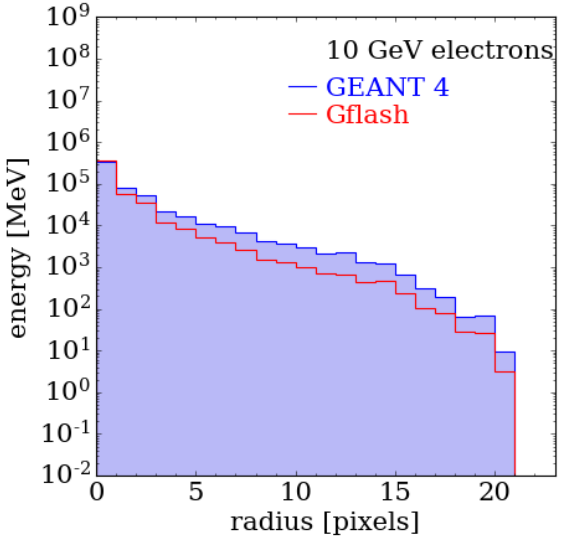




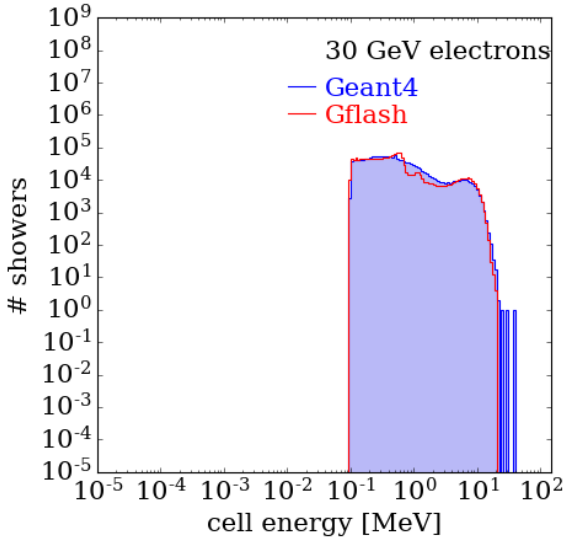


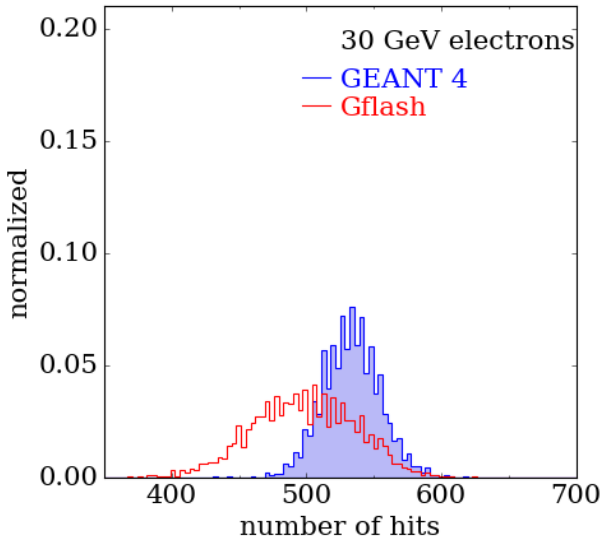


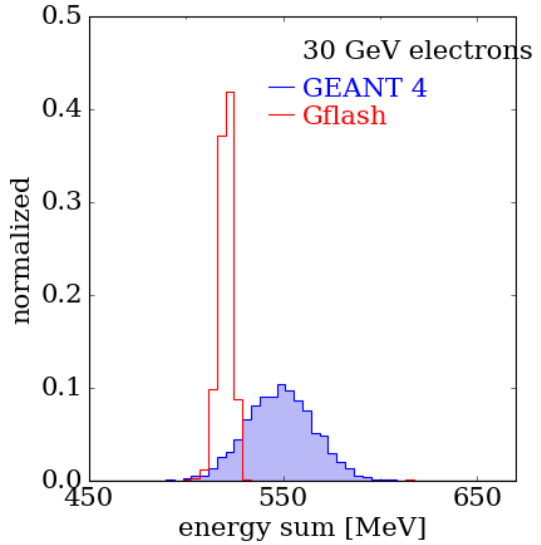


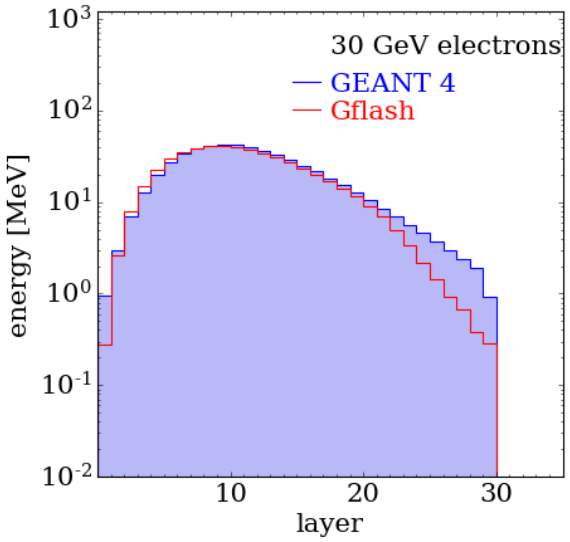


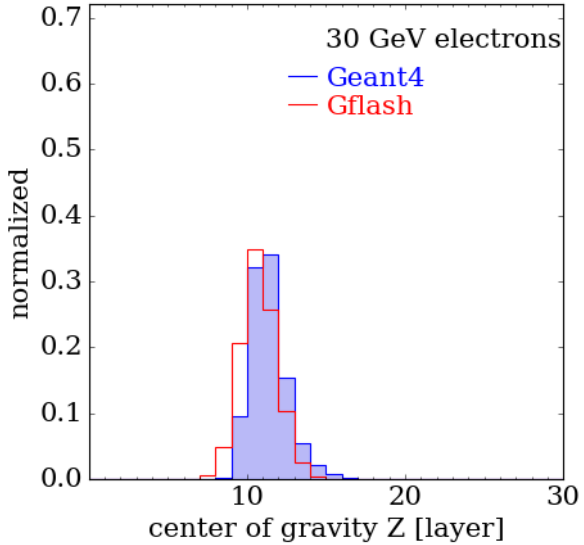
Energy Distributions 30 GeV Electrons with Cut at 0.1 MeV

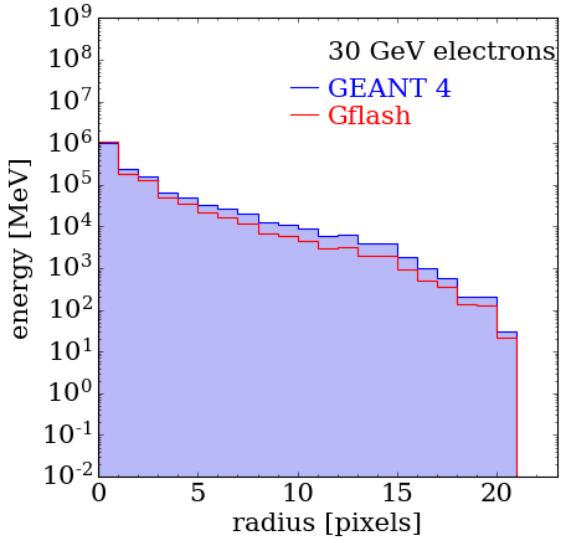




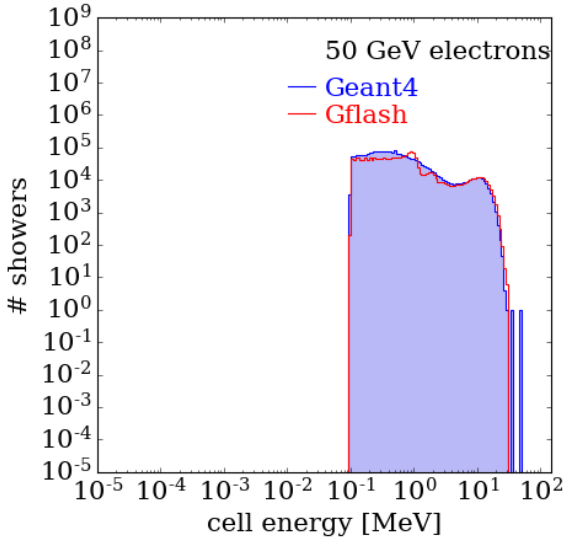


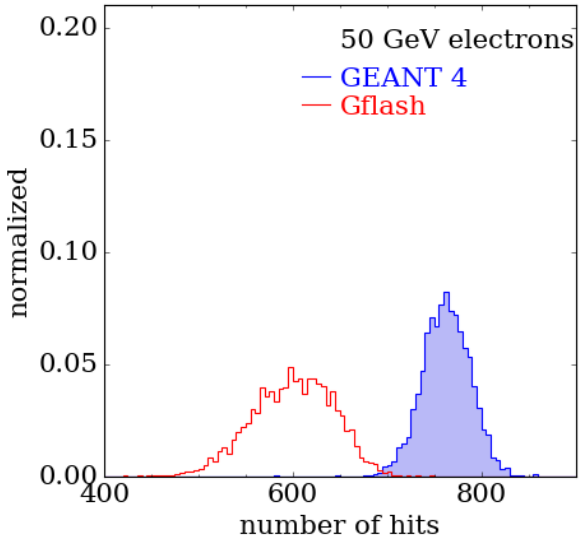


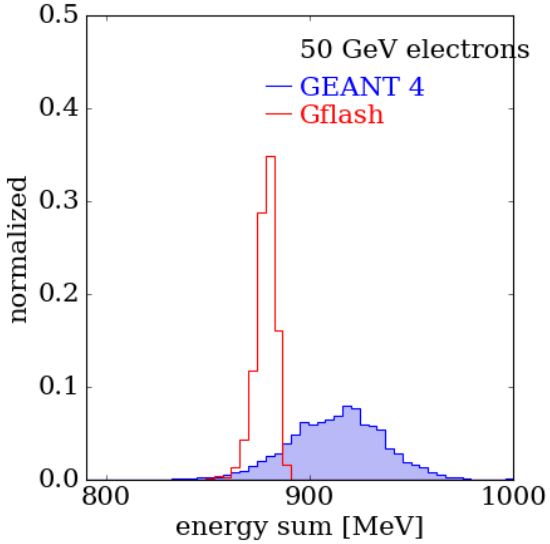


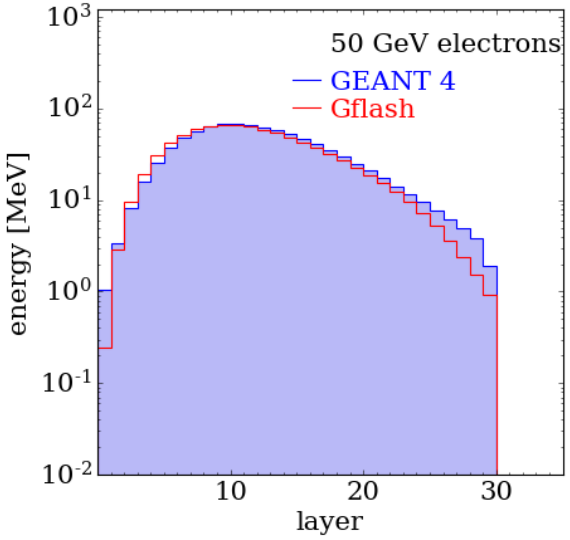


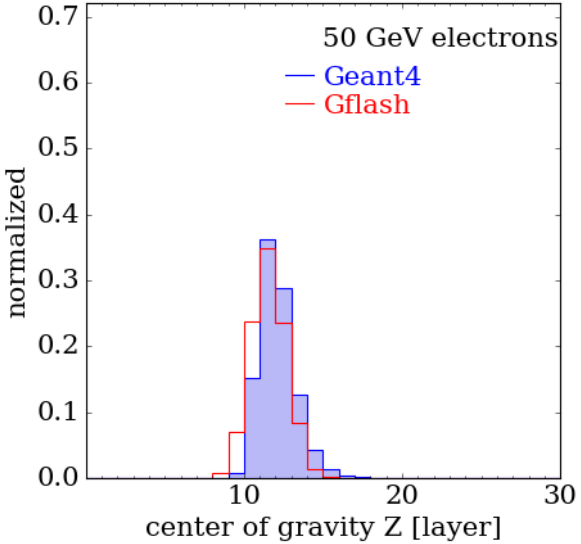
Energy Distributions 50 GeV Electrons with Cut at 0.1 MeV

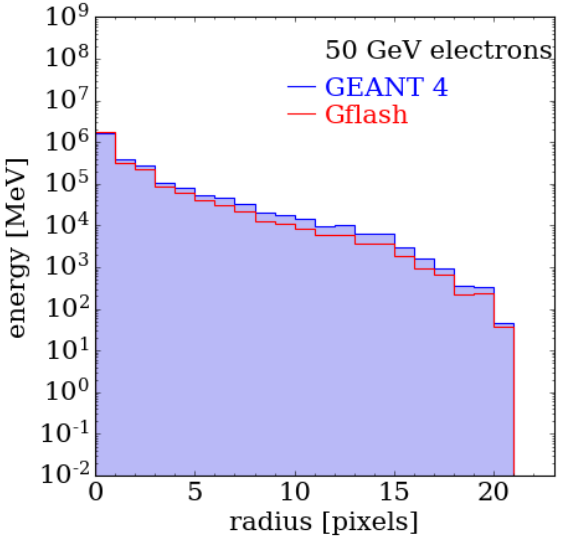




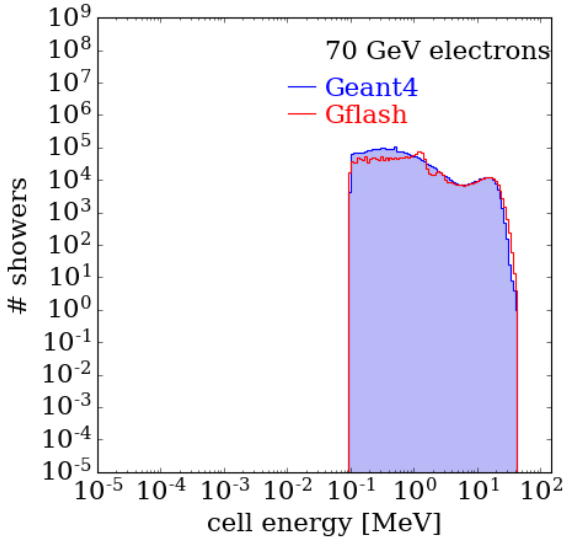


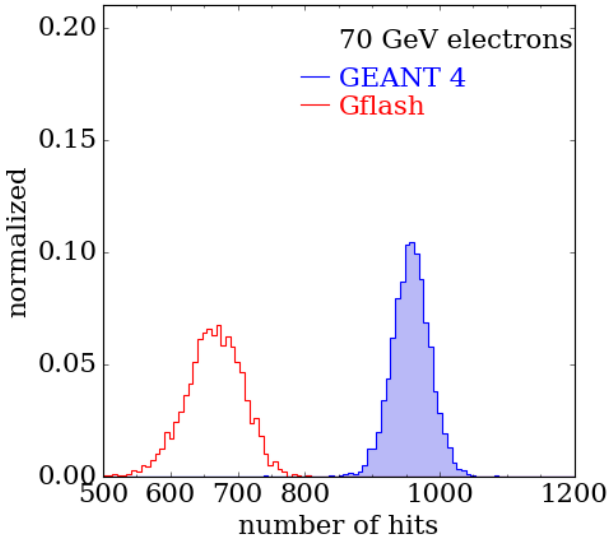


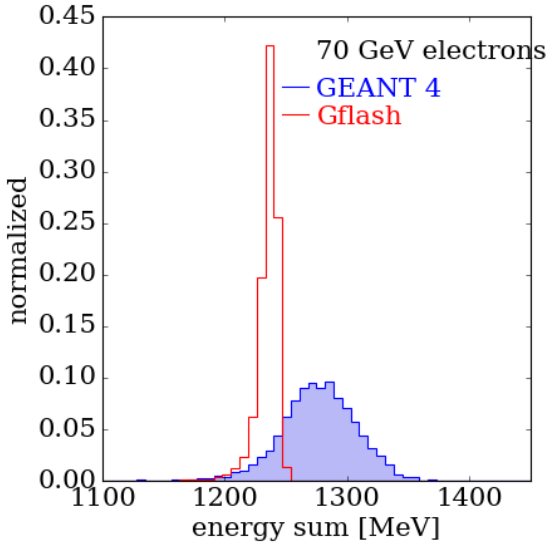


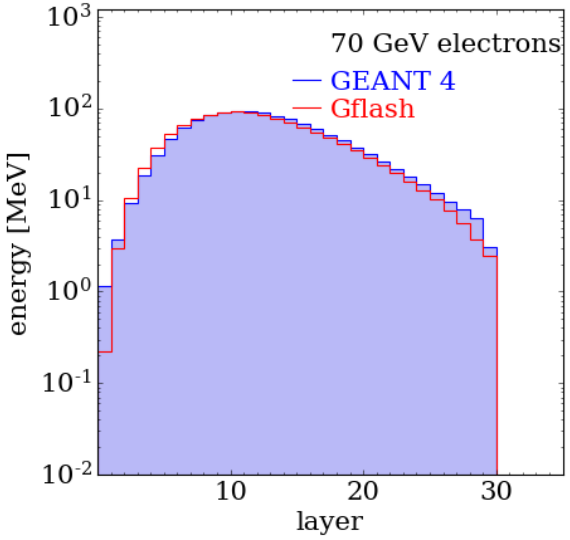


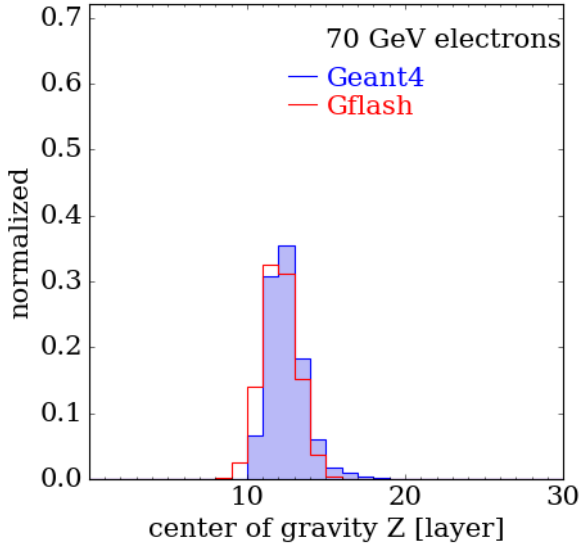
Energy Distributions 70 GeV Electrons with Cut at 0.1 MeV

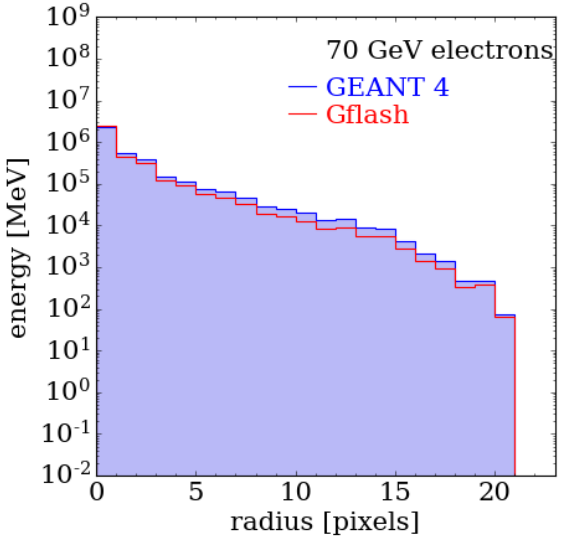




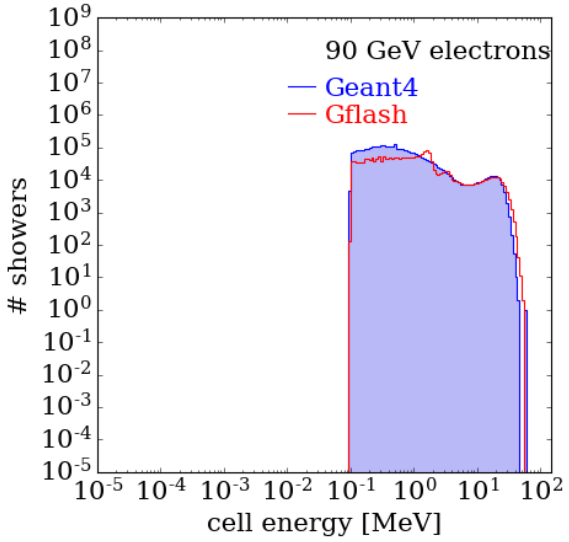


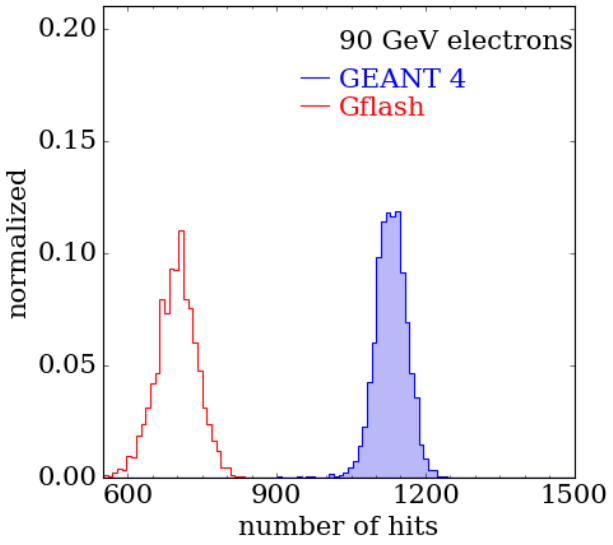


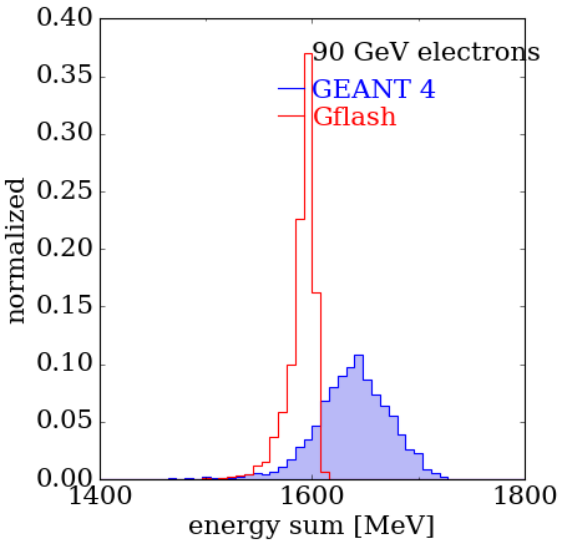


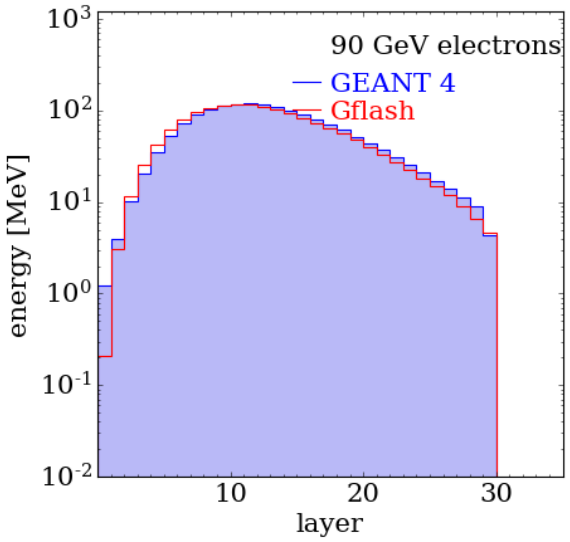


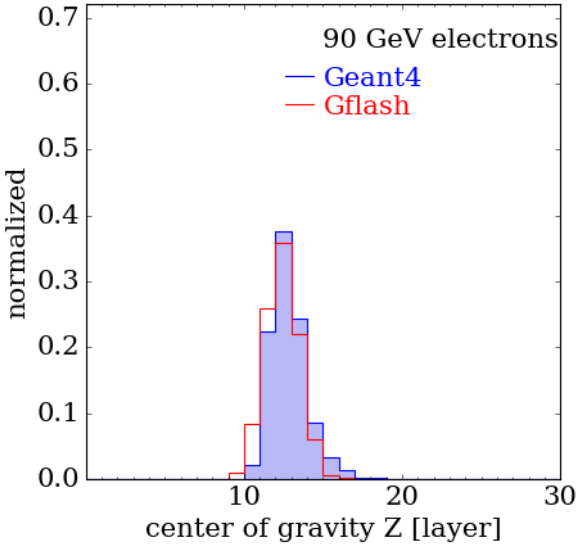
Energy Distributions 90 GeV Electrons with Cut at 0.1 MeV

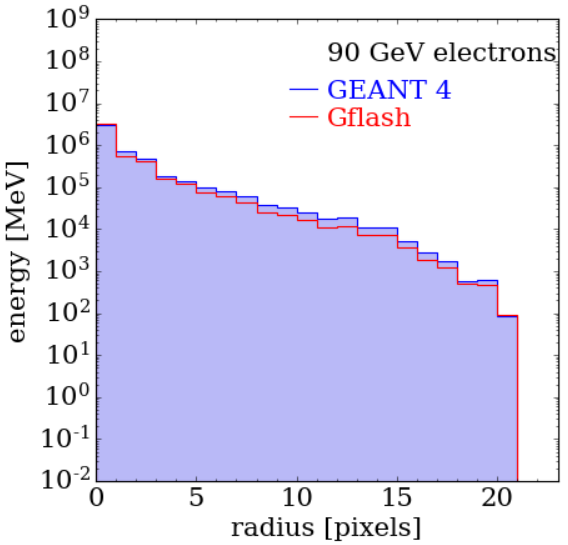








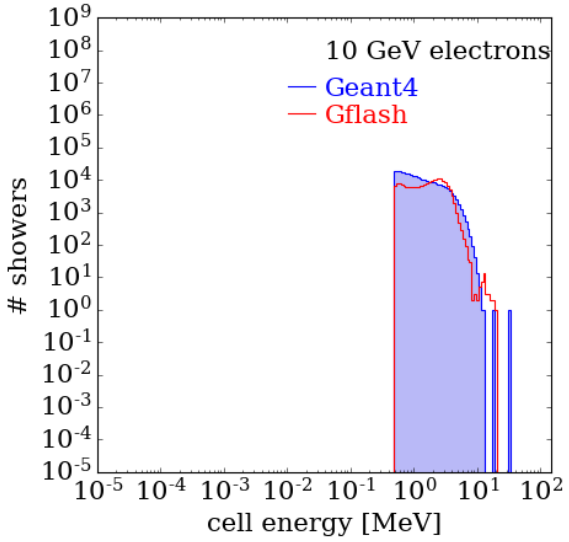


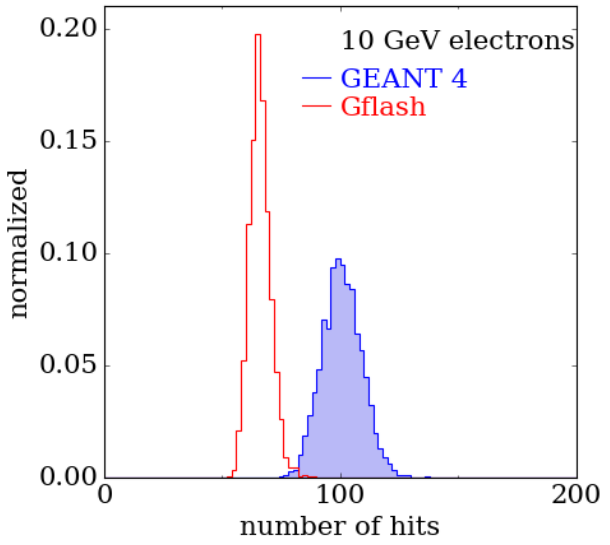


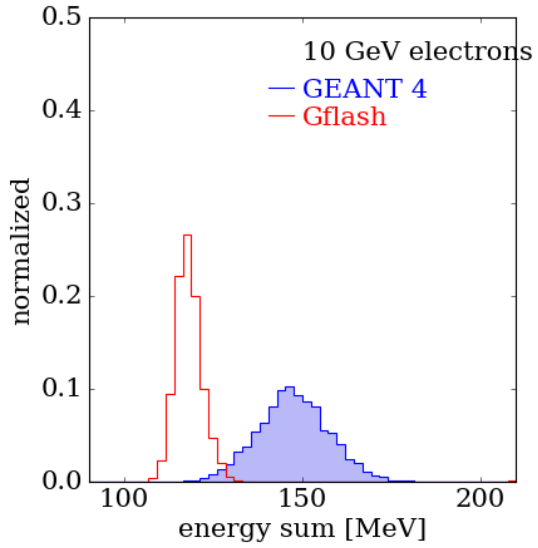
Cut at 0.5 MeV

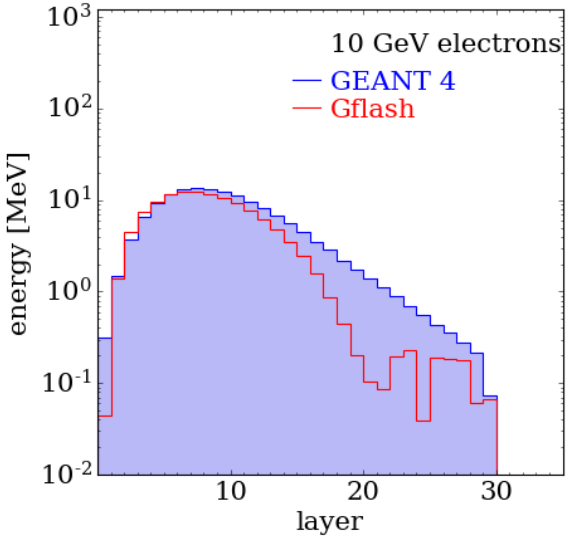
10, 20, 50, 70 and 90 GeV electrons
3000 showers

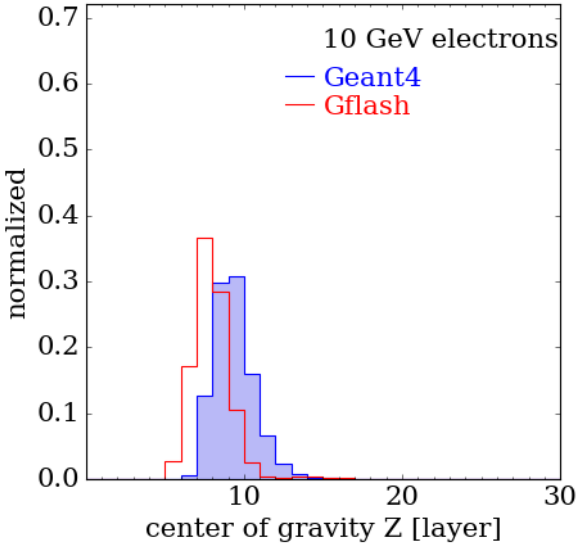
Energy Distributions 10 GeV Electrons with Cut at 0.5 MeV

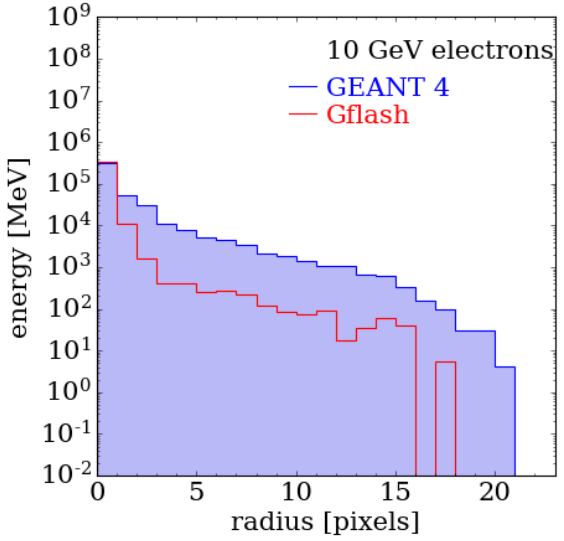




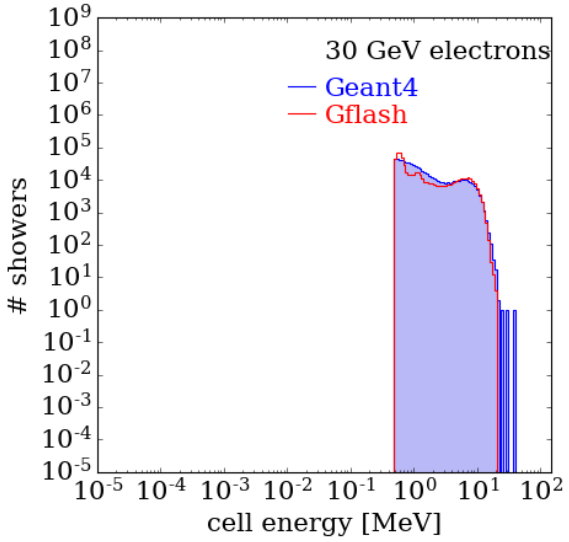


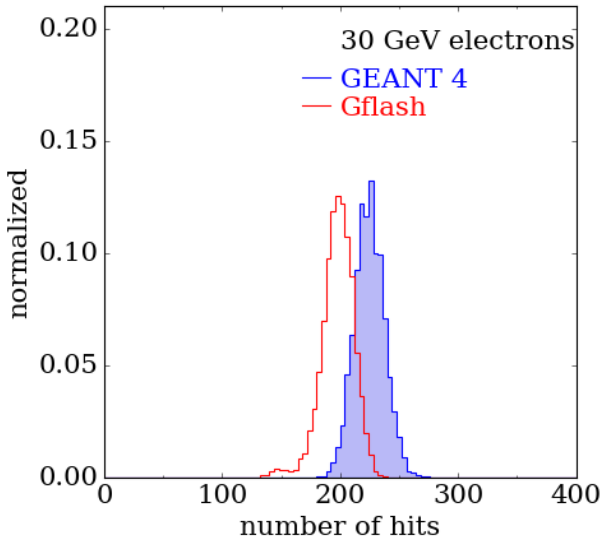


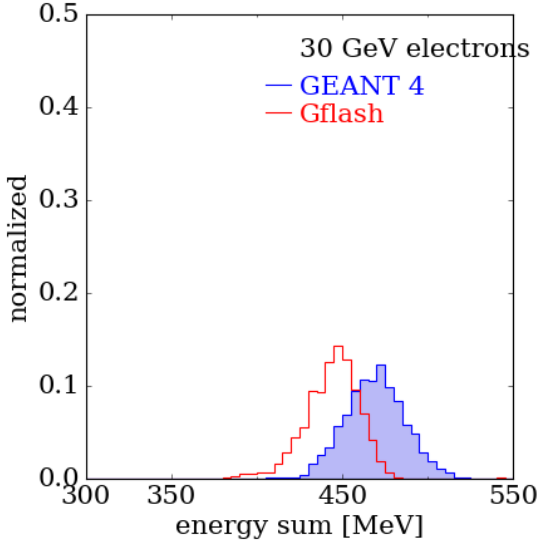


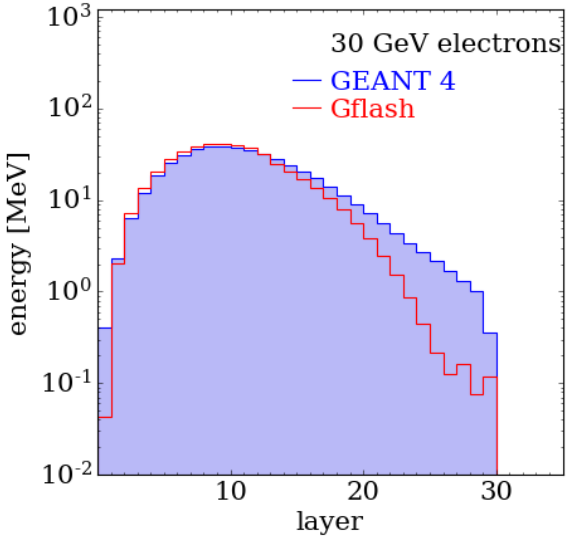


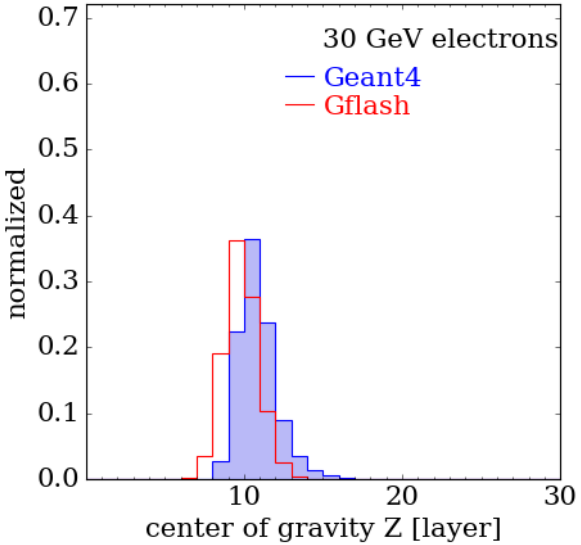
Energy Distributions 30 GeV Electrons with Cut at 0.5 MeV

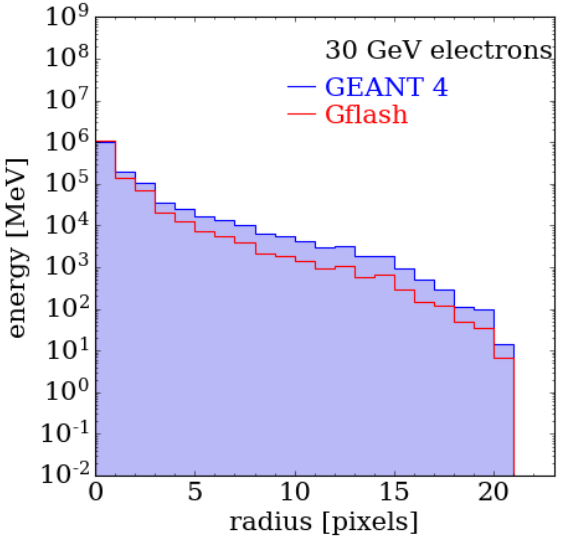




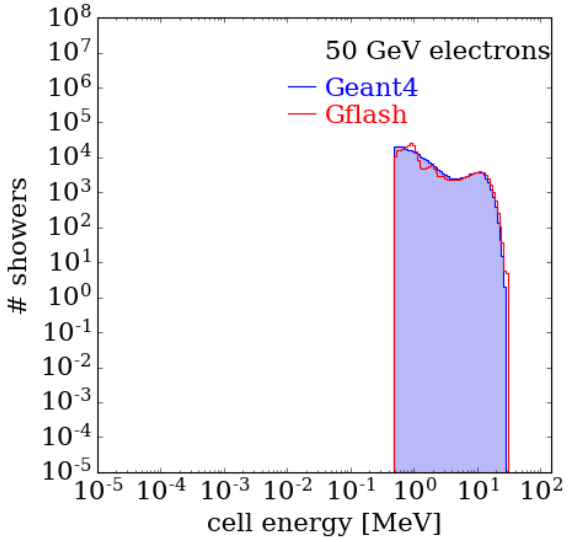


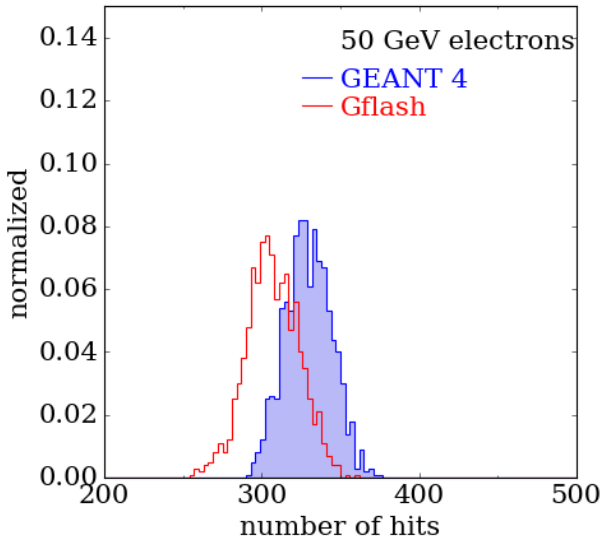


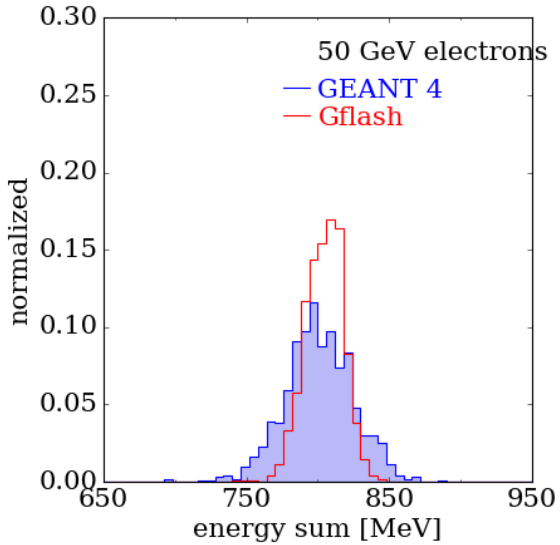


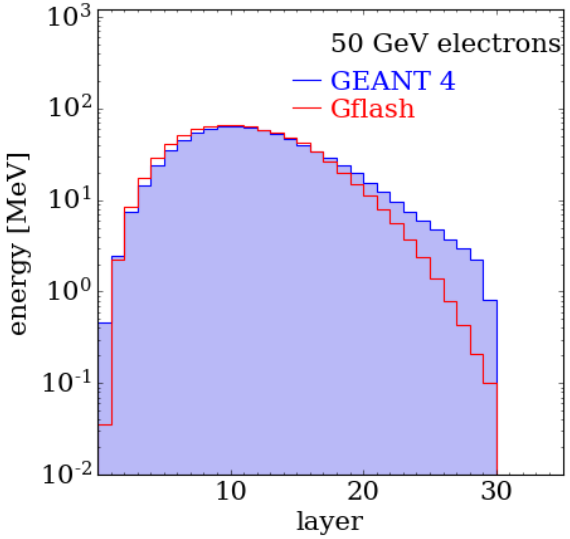


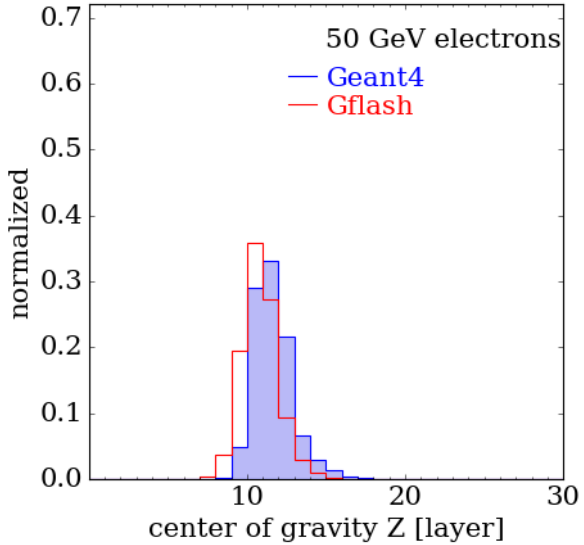
Energy Distributions 50 GeV Electrons with Cut at 0.5 MeV

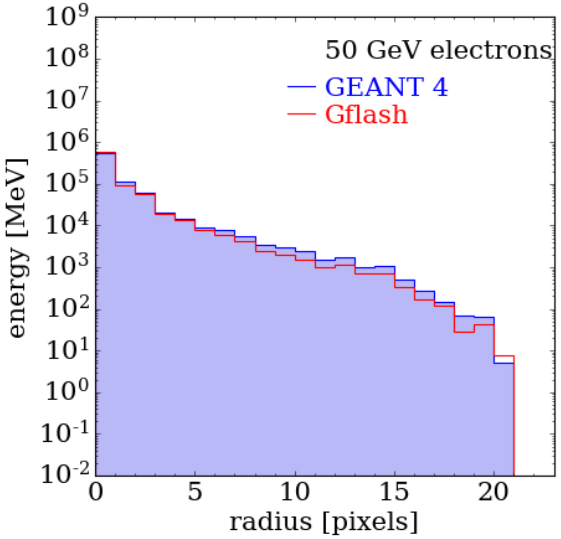




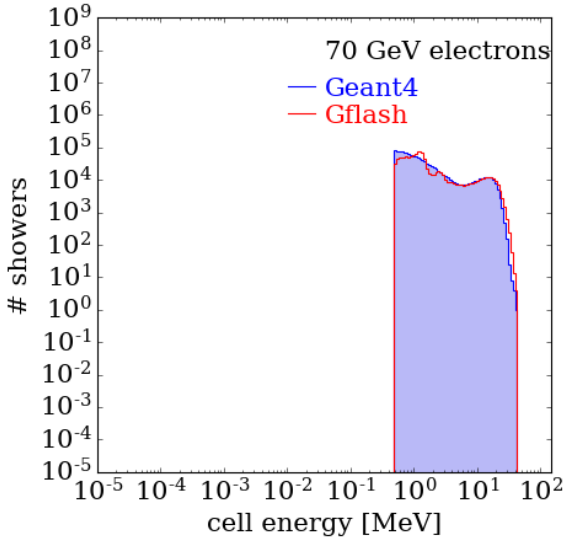


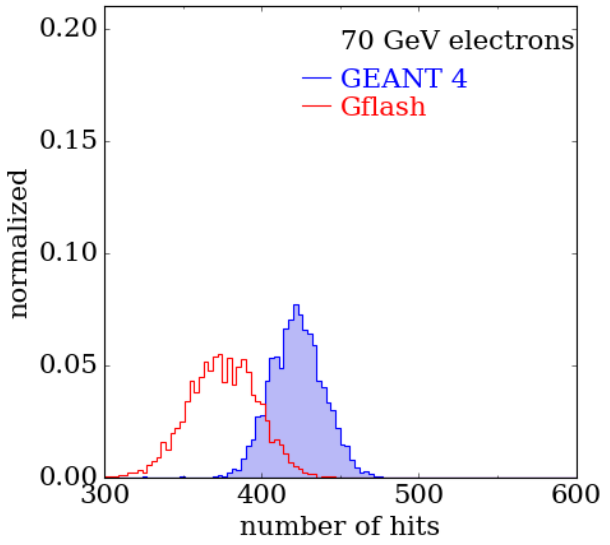


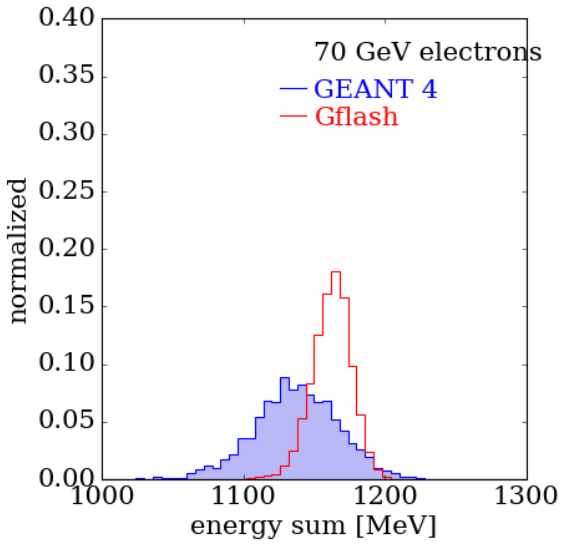


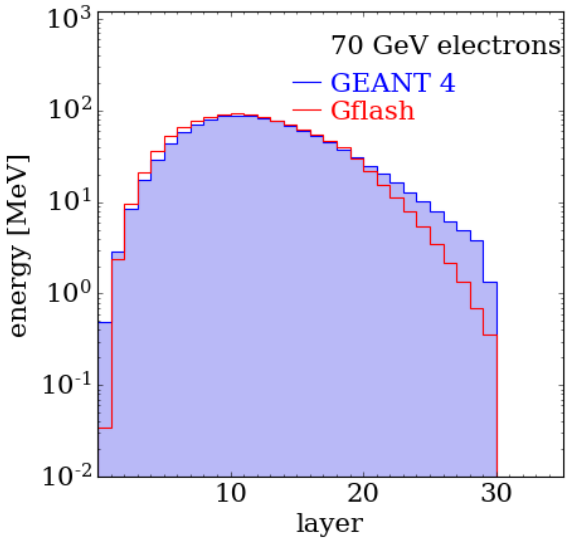


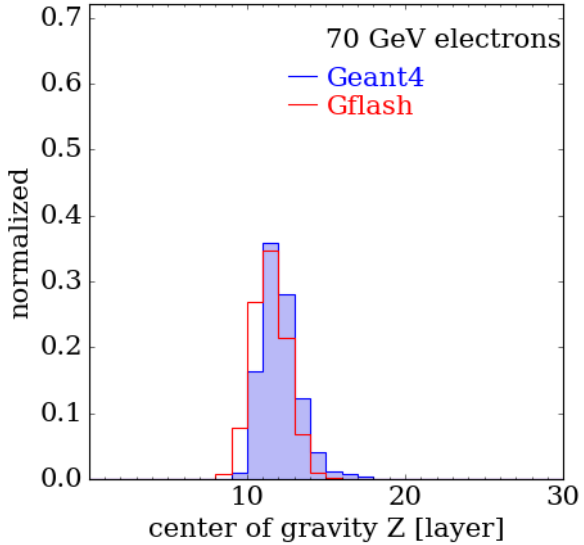
Energy Distributions 70 GeV Electrons with Cut at 0.5 MeV

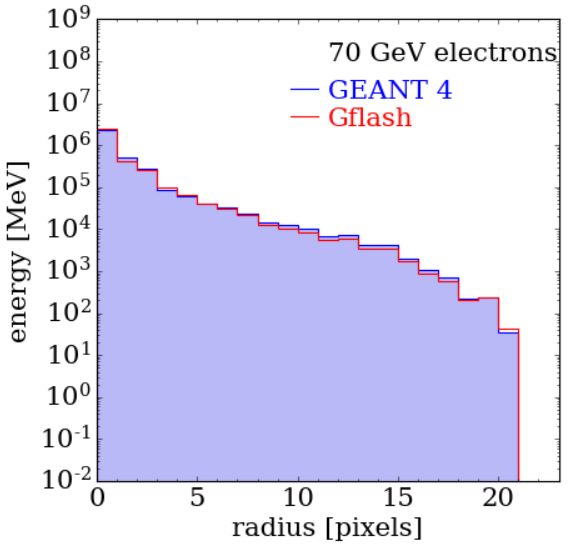




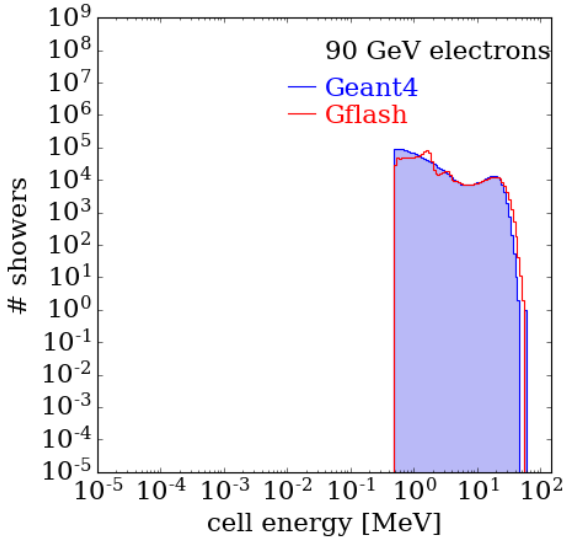


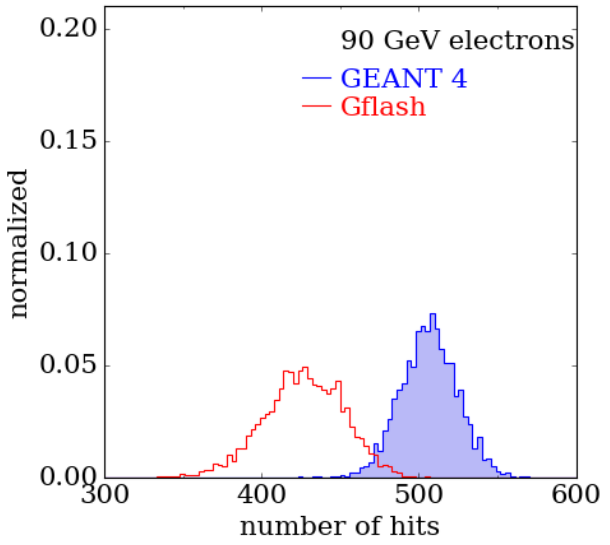


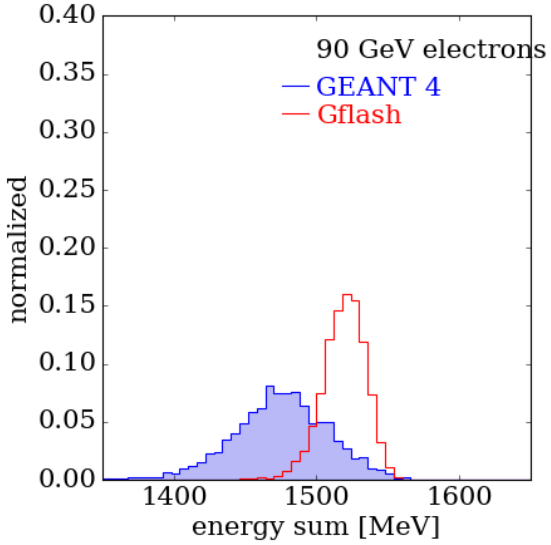


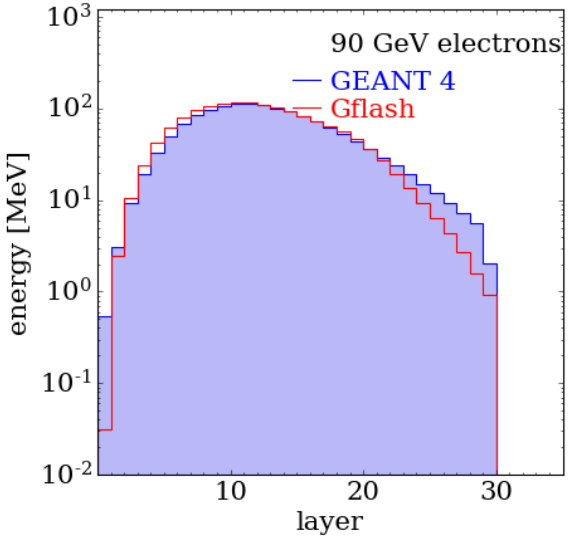


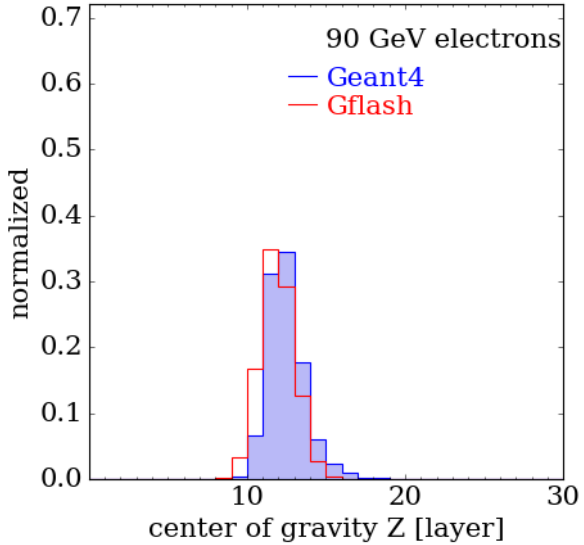
Energy Distributions 90 GeV Electrons with Cut at 0.5 MeV

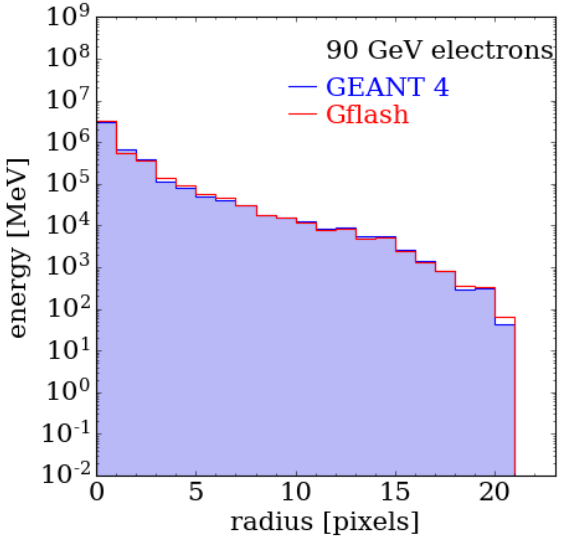








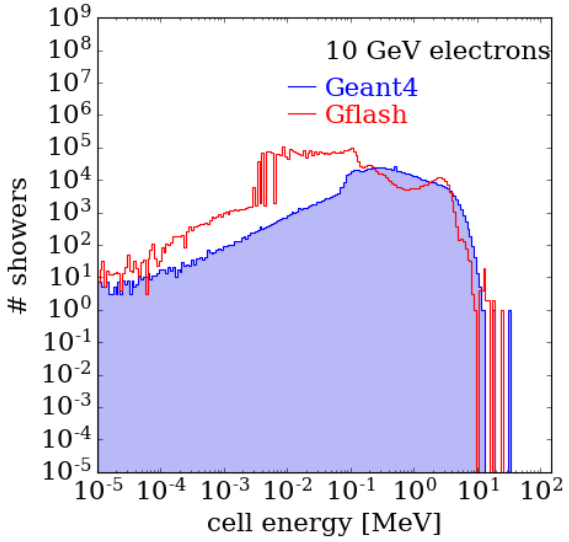


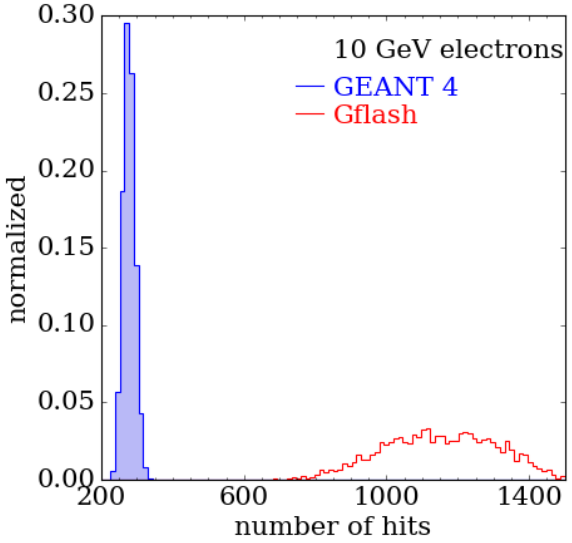


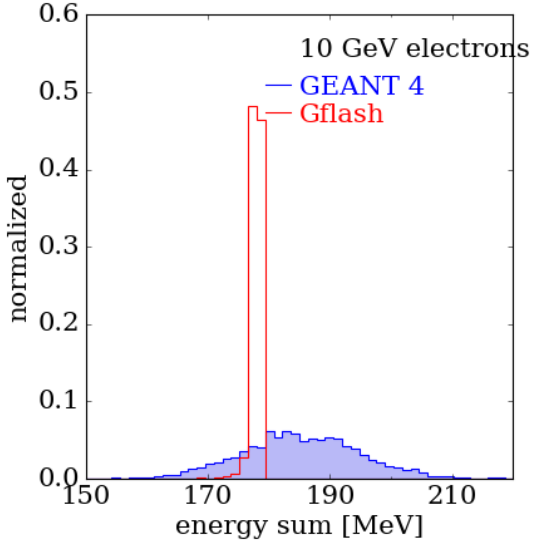
Decreasing step-size by 0.0001

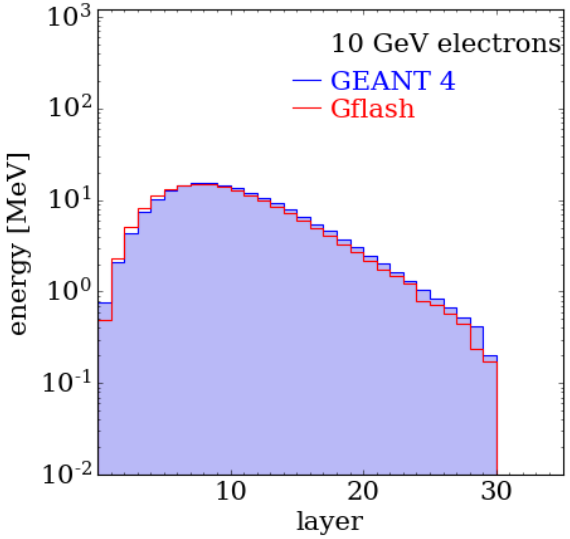
10, 20, 50, 70 and 90 GeV electrons
3000 showers

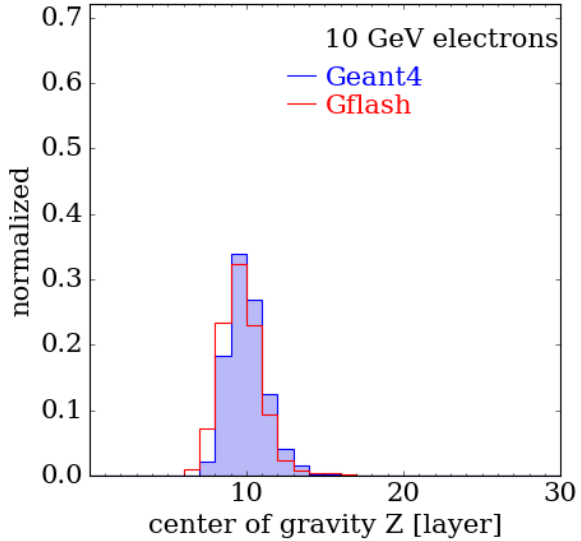
Energy Distributions 10 GeV Electrons

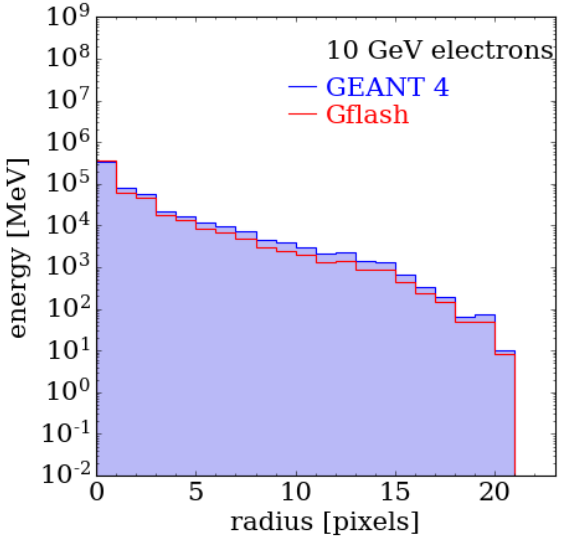




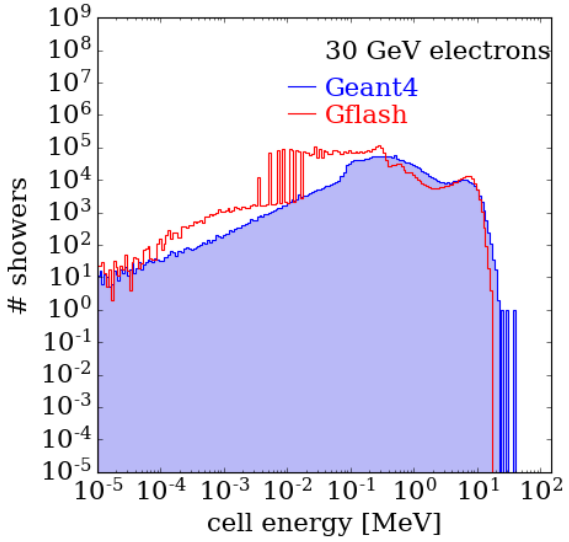


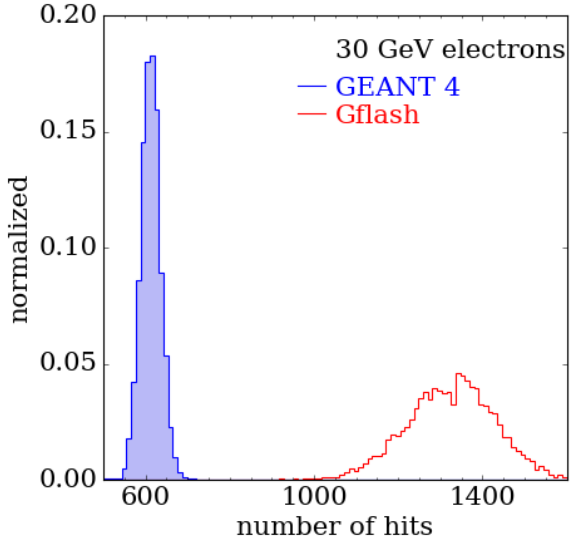


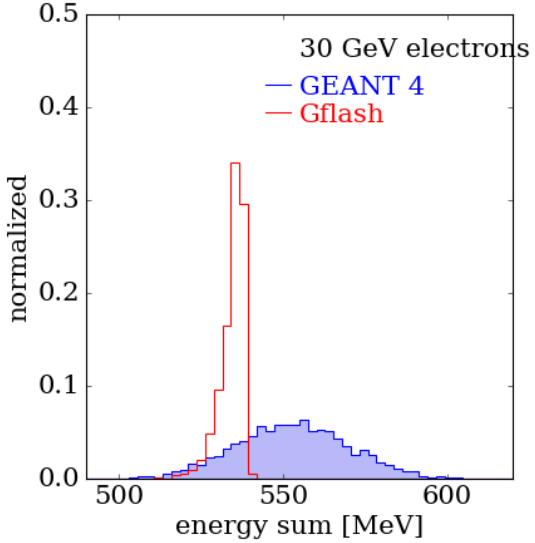


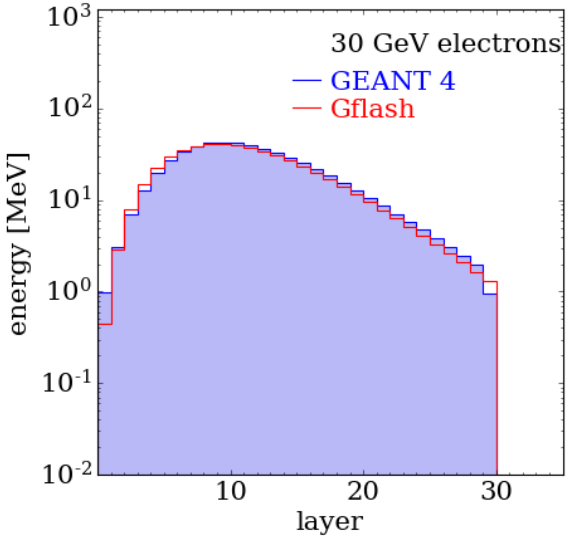


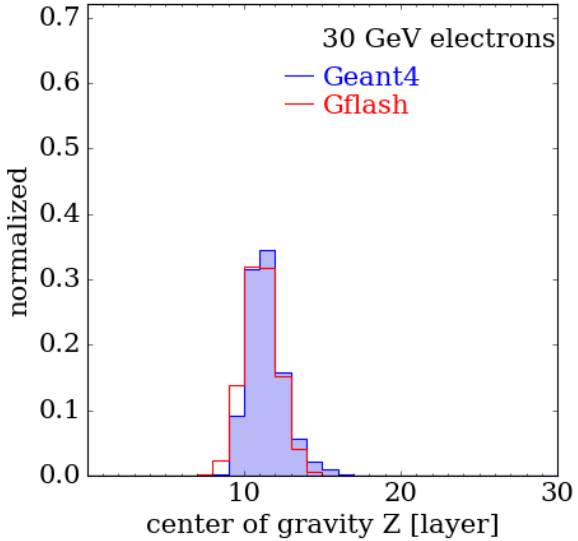
Energy Distributions 30 GeV Electrons

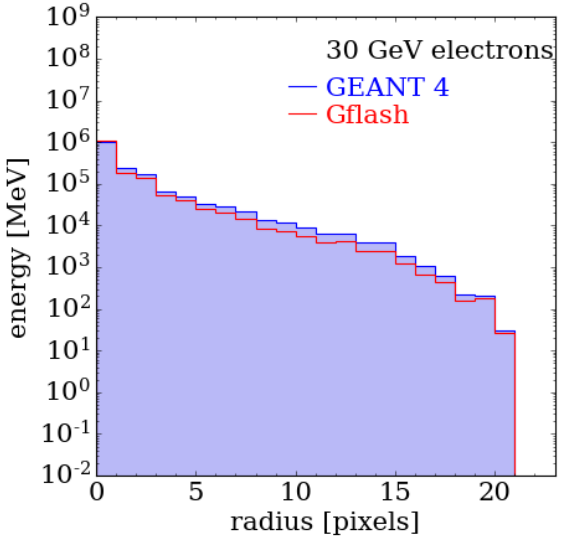




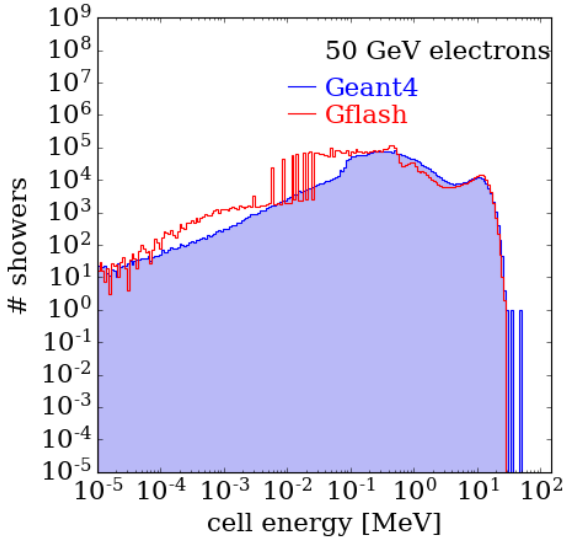


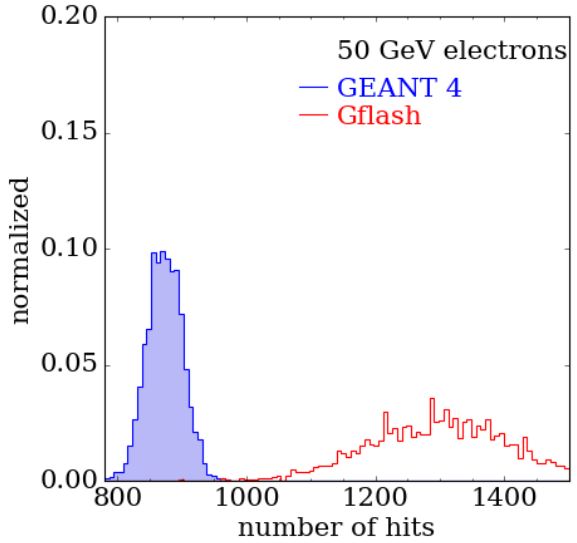


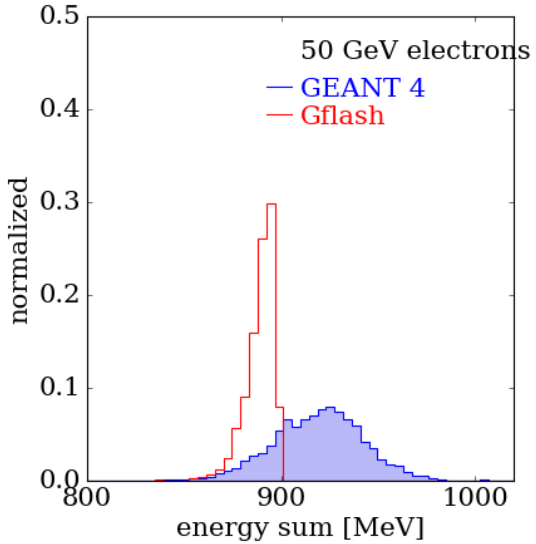


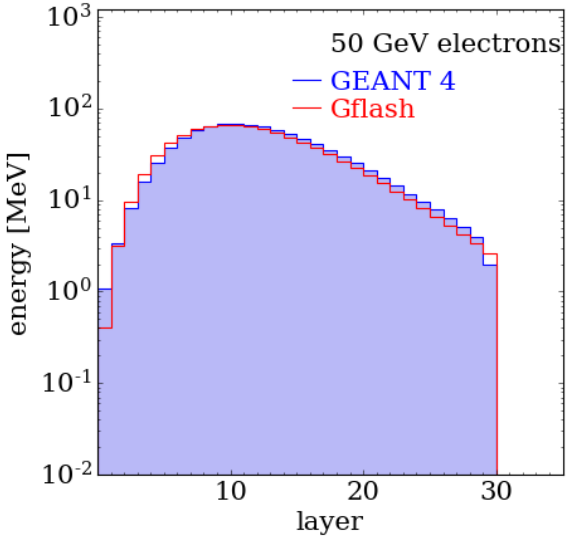


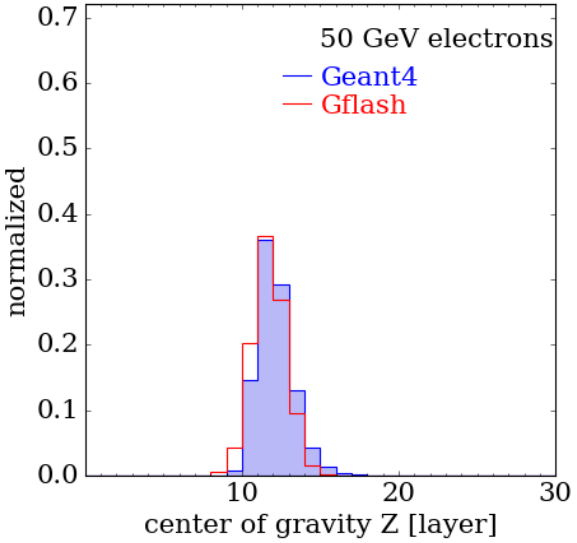
Energy Distributions 50 GeV Electrons

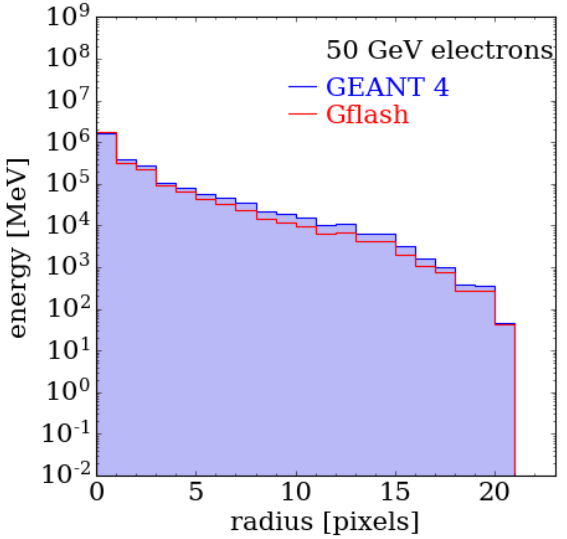




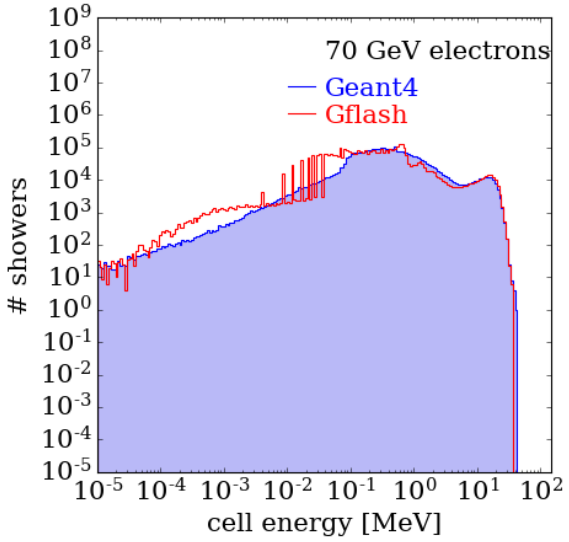


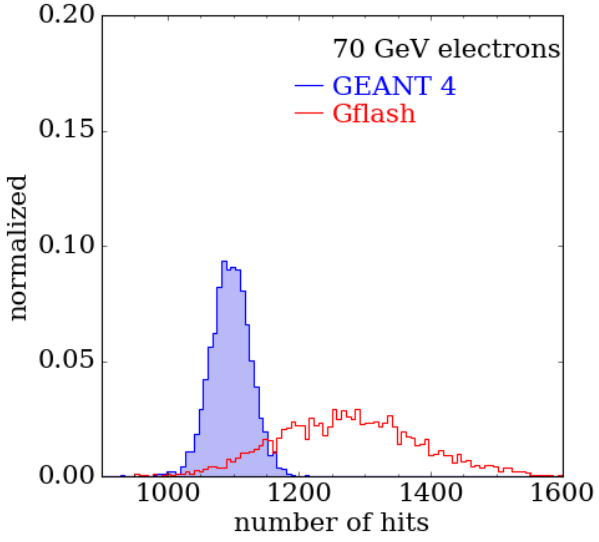


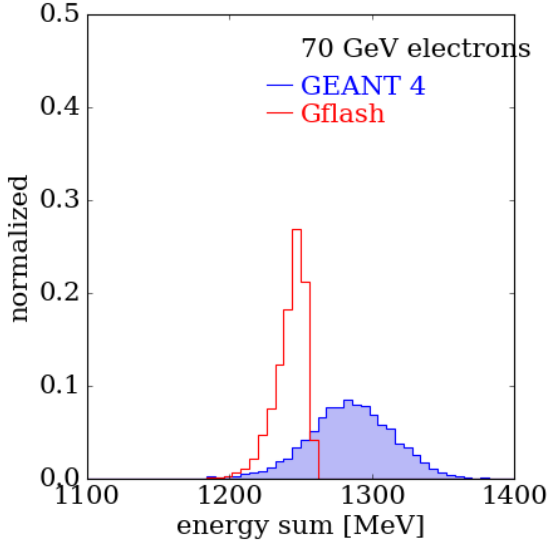


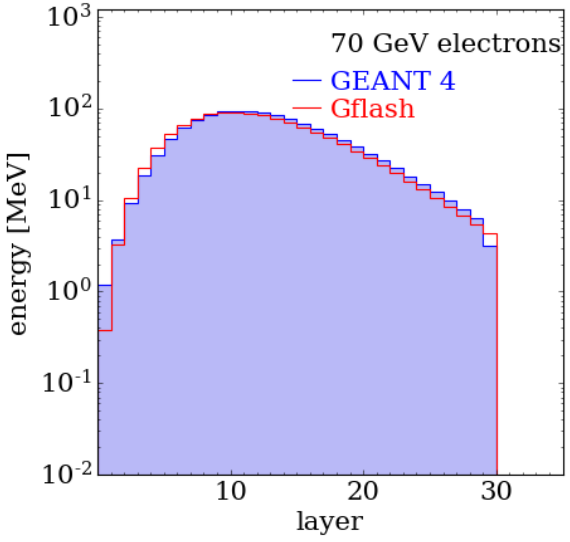


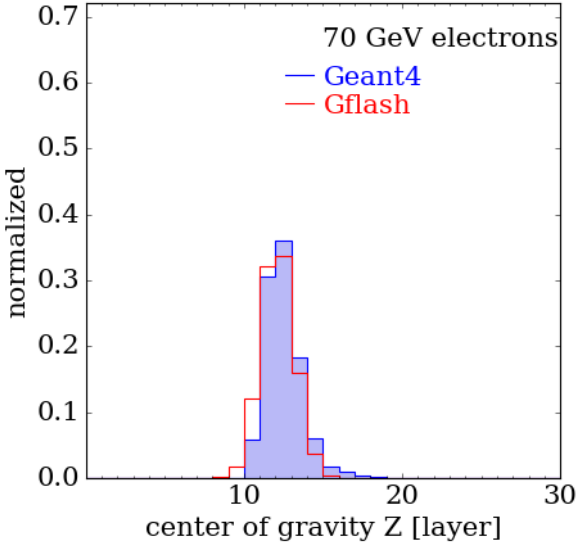
Energy Distributions 70 GeV Electrons

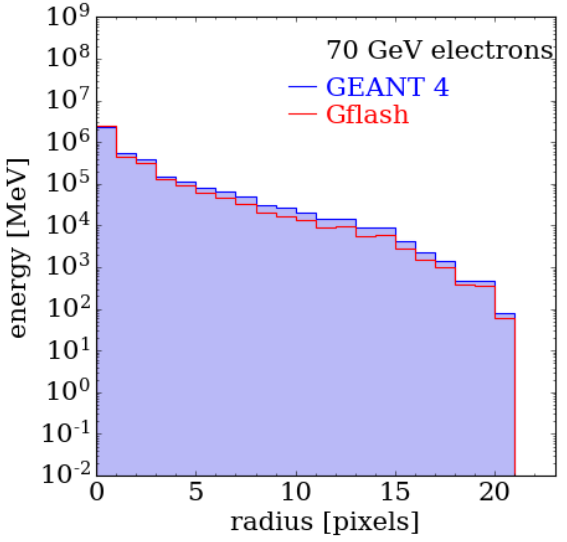




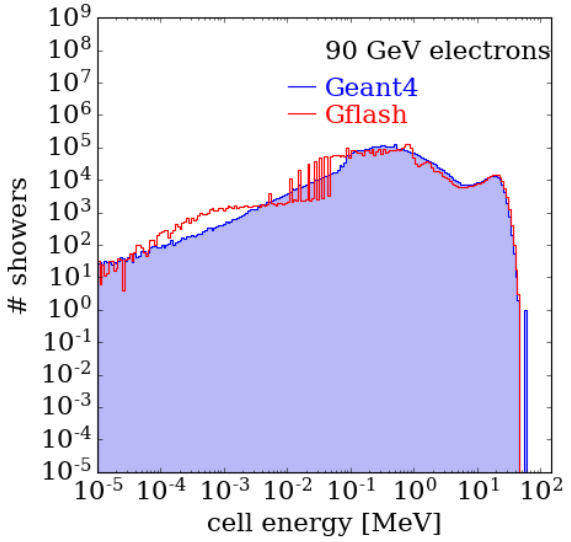


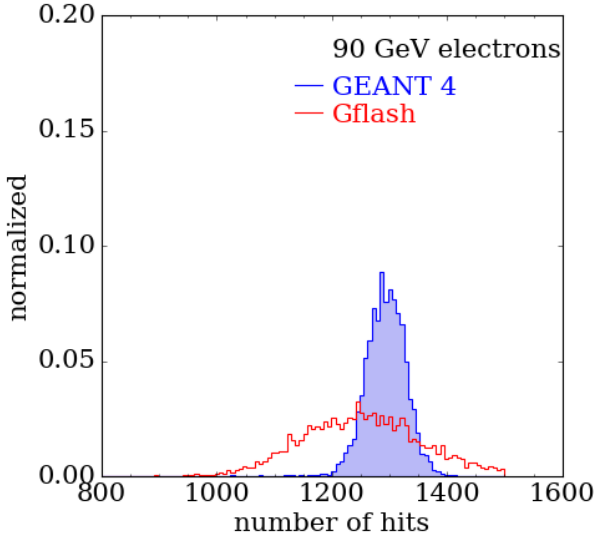


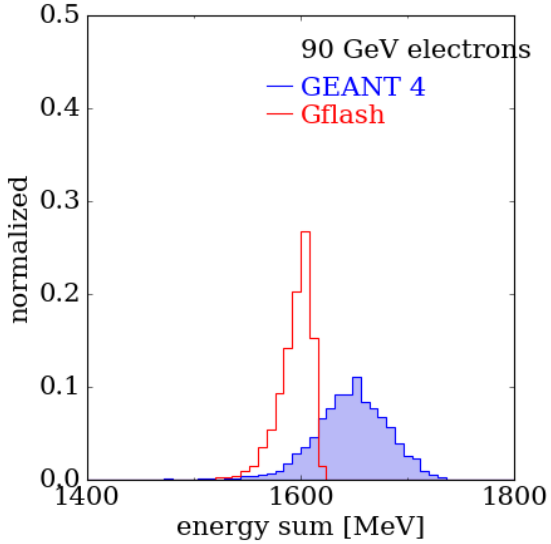


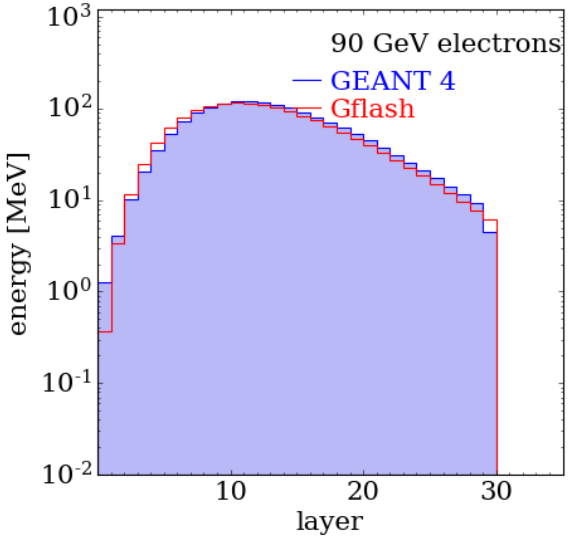


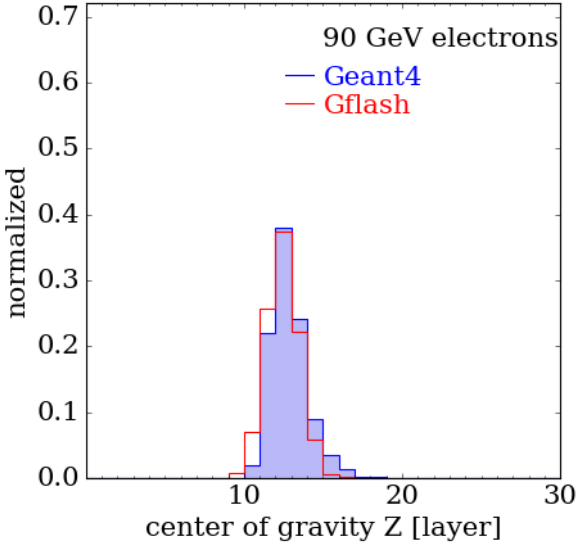
Energy Distributions 90 GeV Electrons

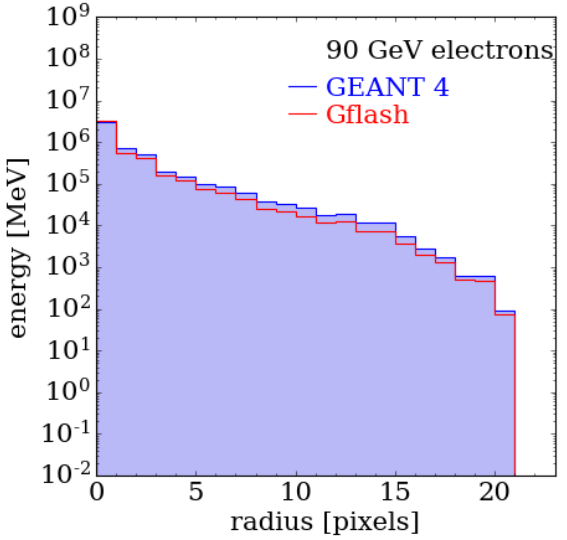








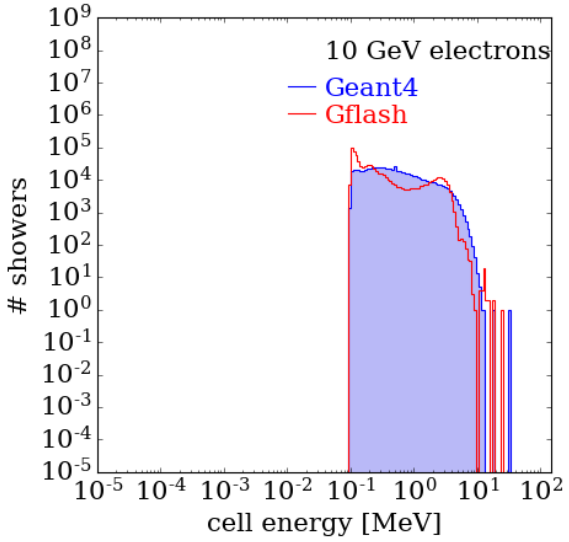


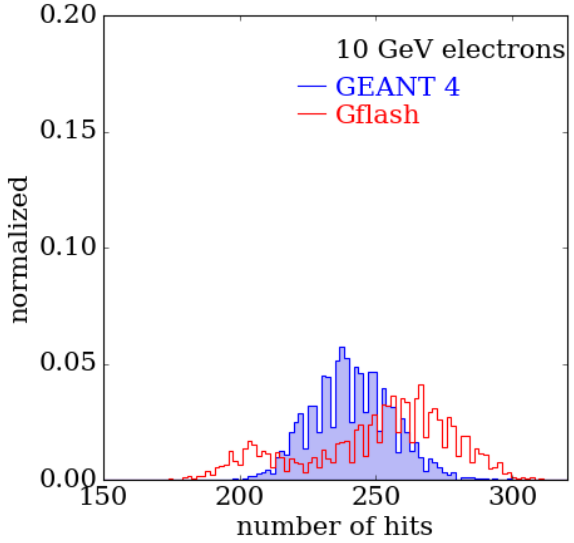


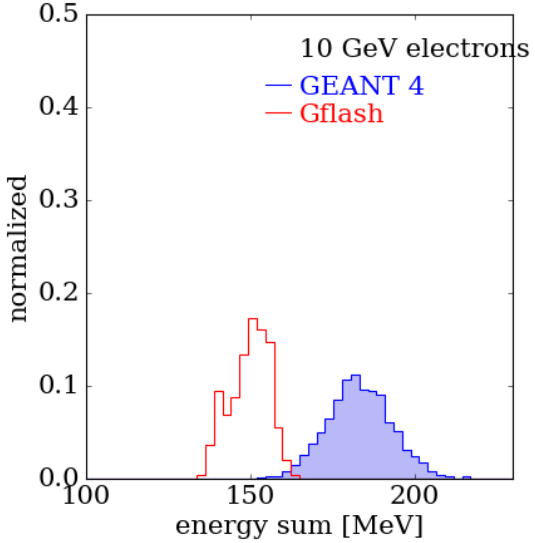
Cut at 0.1 MeV

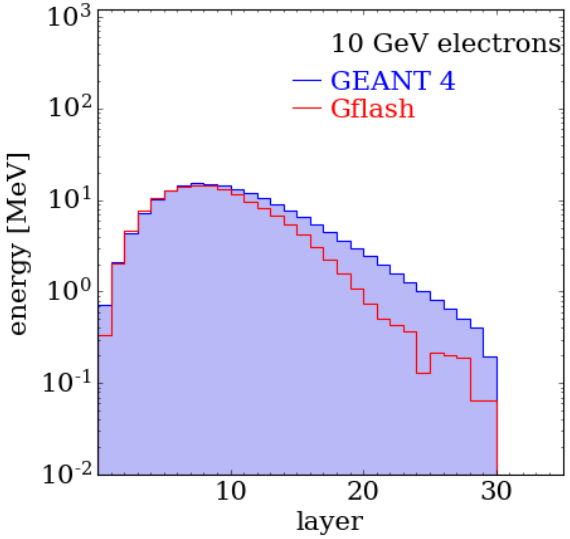
10, 20, 50, 70 and 90 GeV electrons
3000 showers

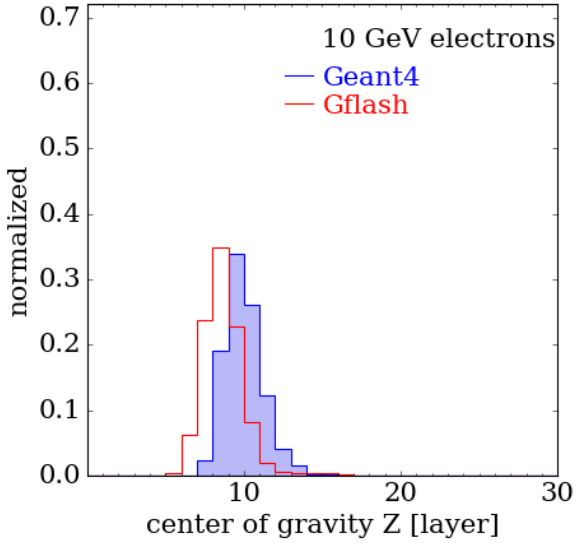
Energy Distributions 10 GeV Electrons with Cut at 0.1 MeV

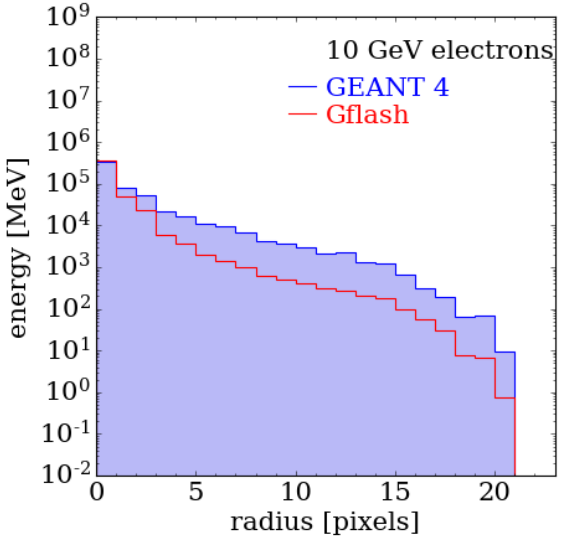




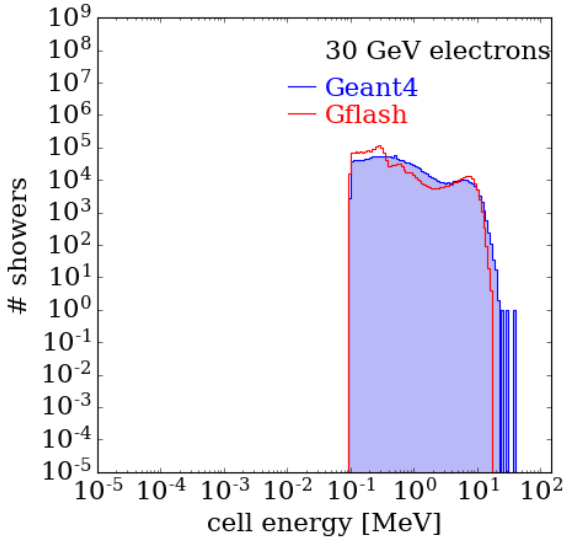


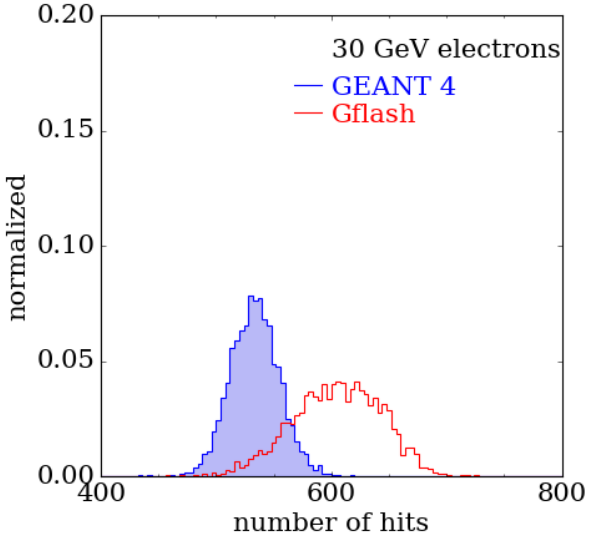


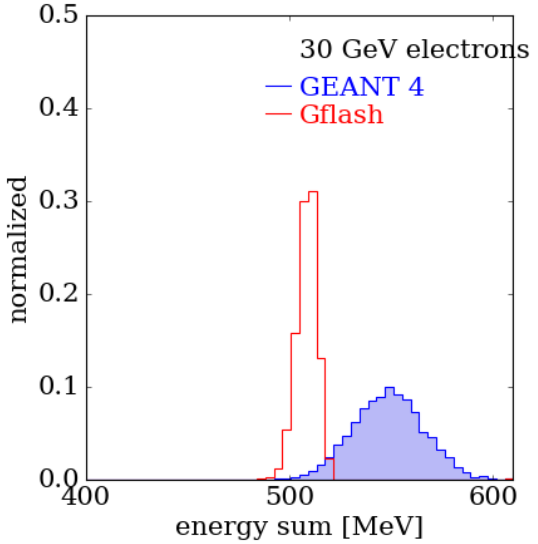


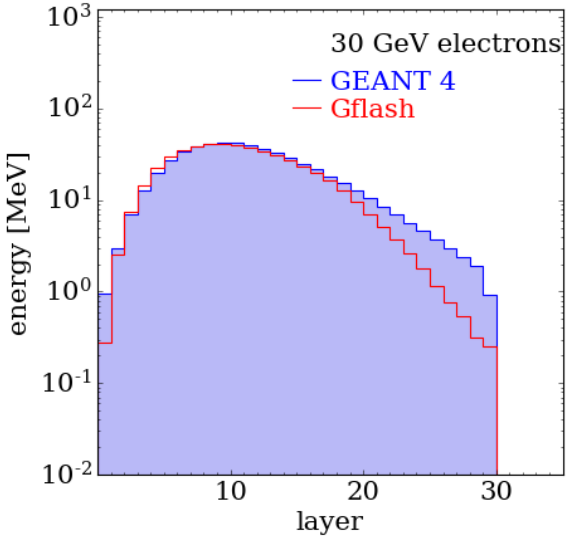


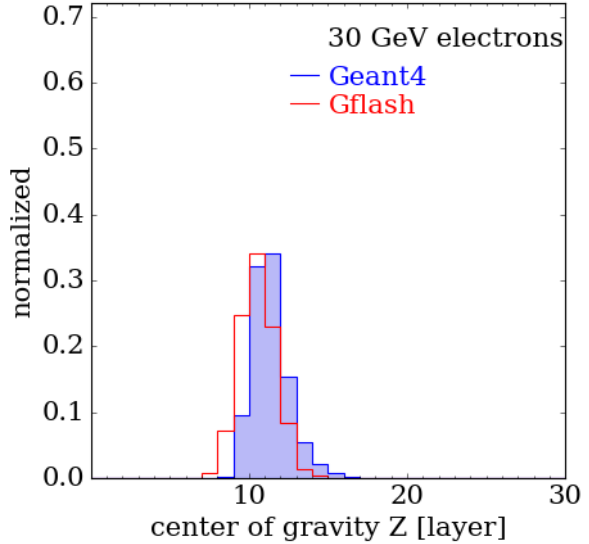
Energy Distributions 30 GeV Electrons with Cut at 0.1 MeV

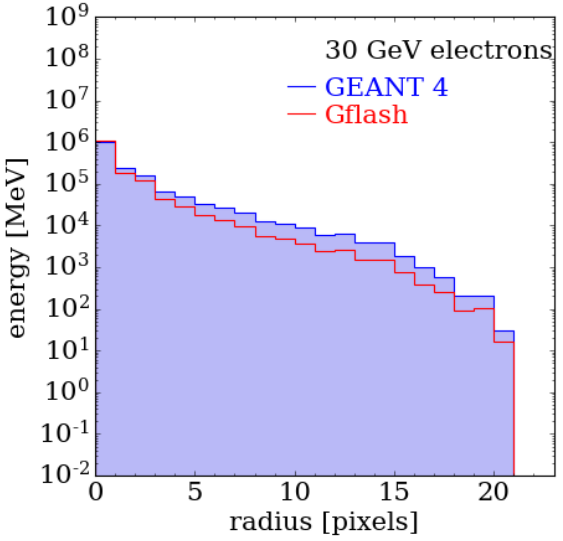




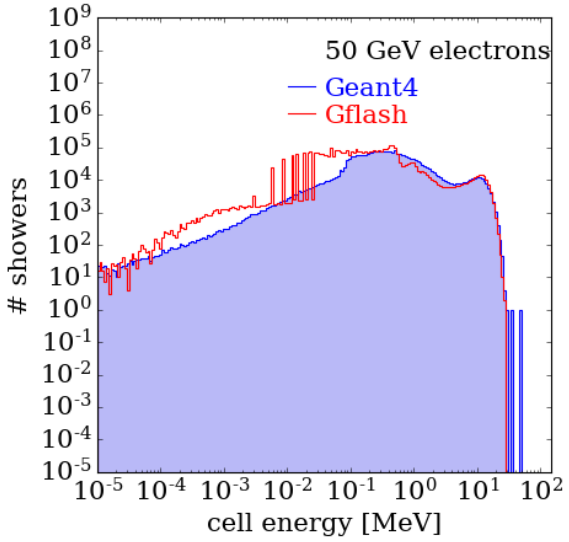


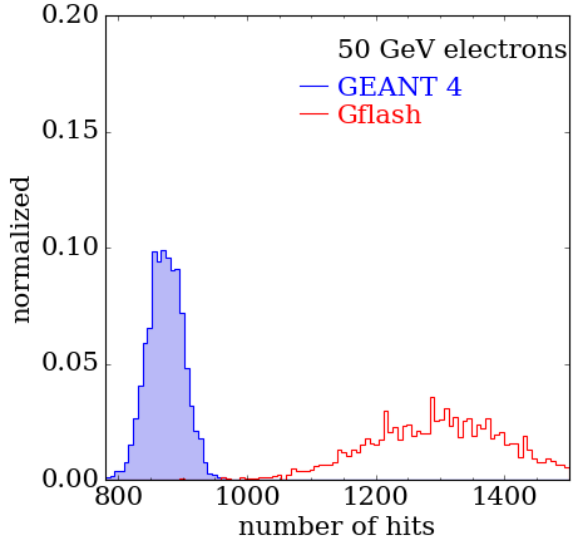


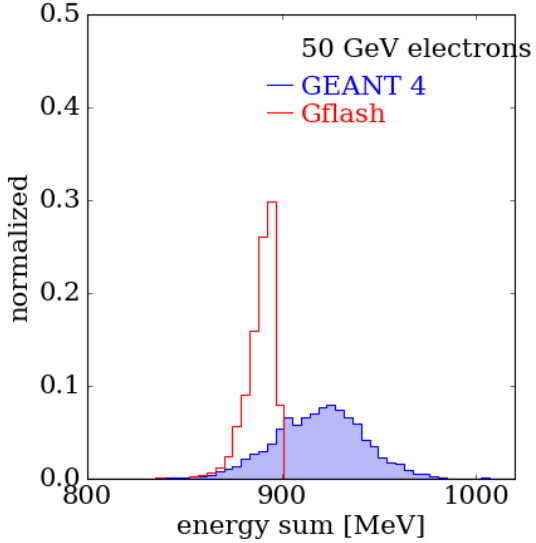


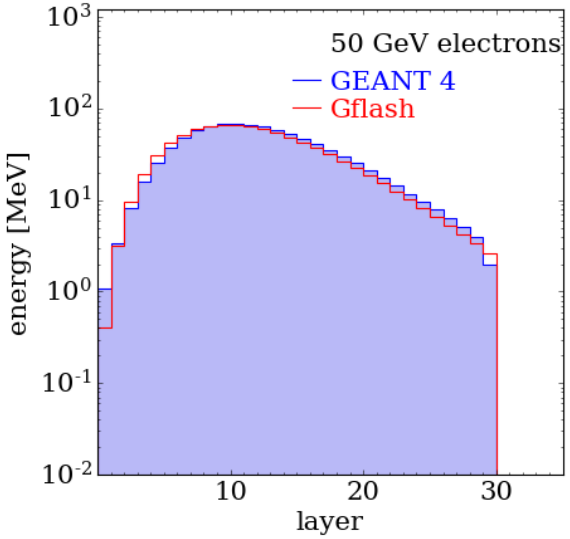


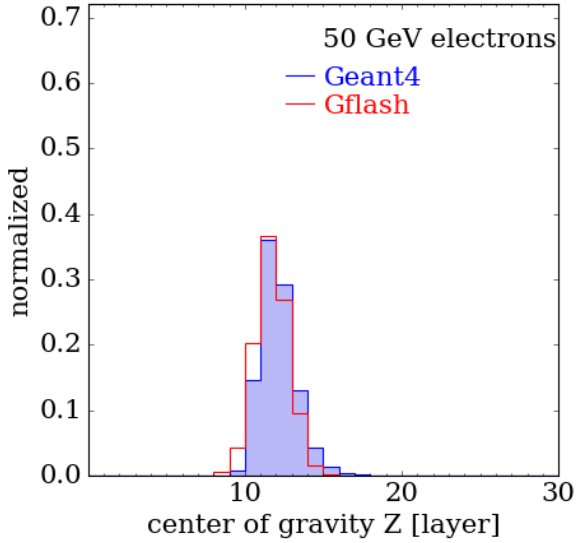
Energy Distributions 50 GeV Electrons with Cut at 0.1 MeV

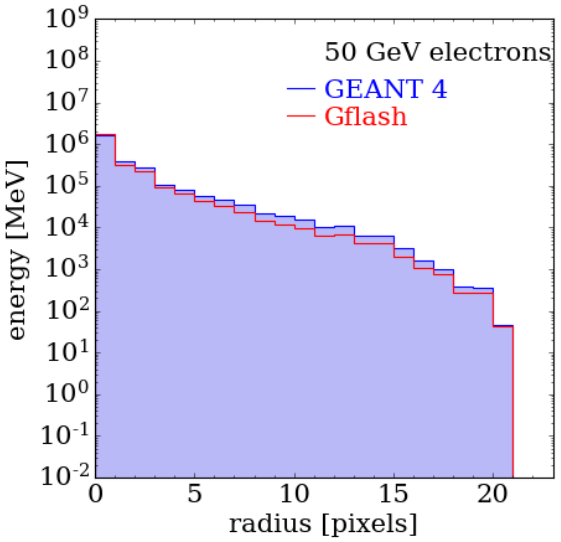




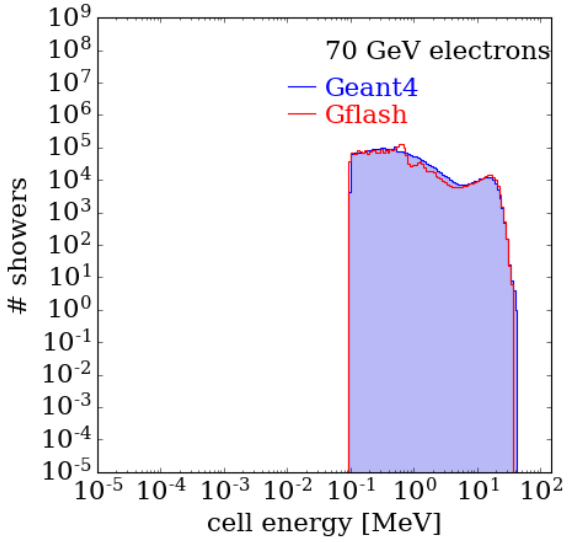


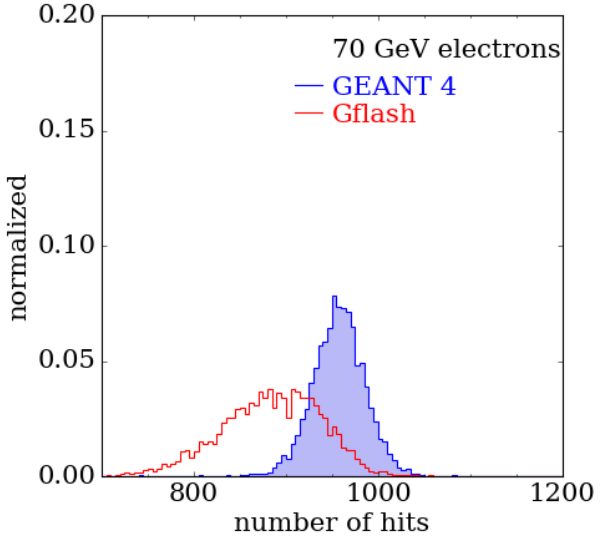


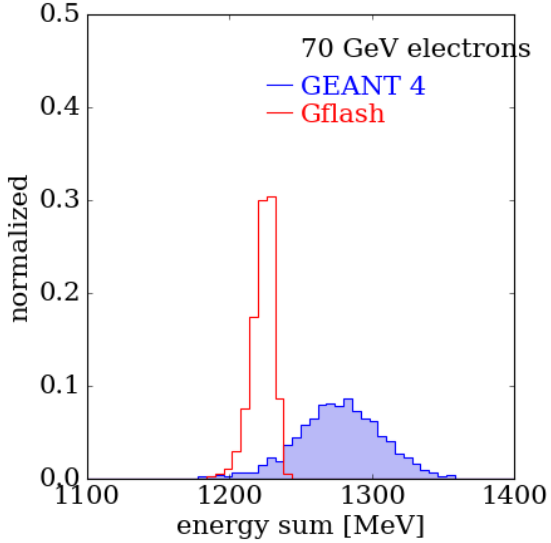


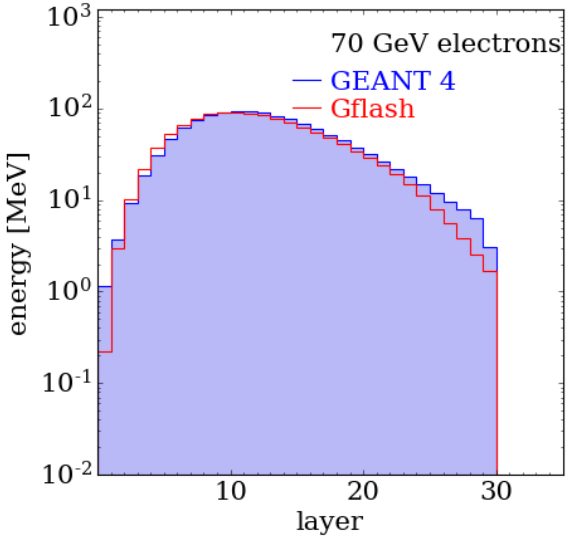


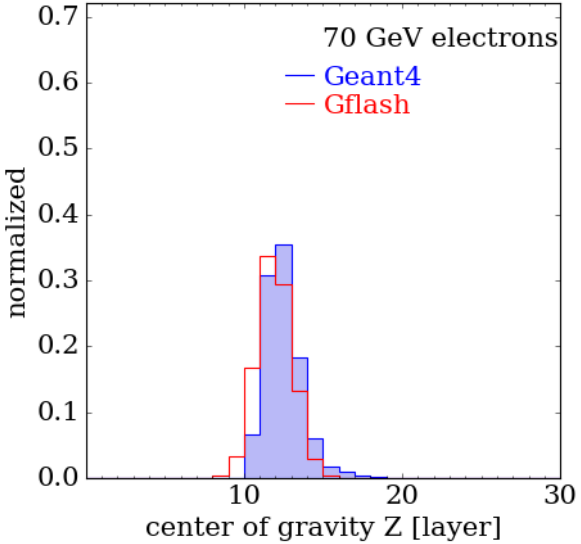
Energy Distributions 70 GeV Electrons with Cut at 0.1 MeV

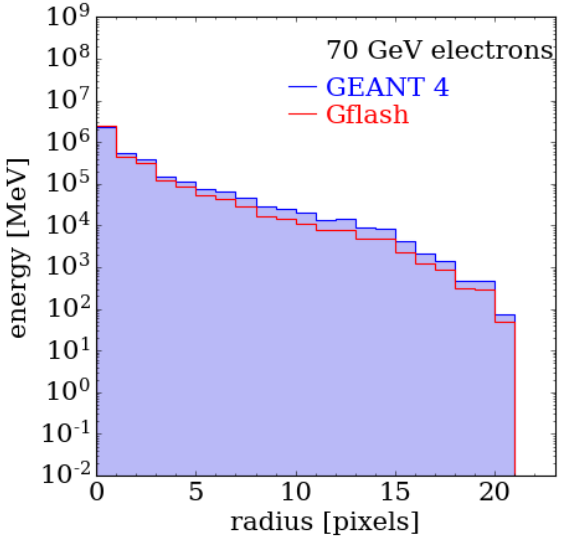




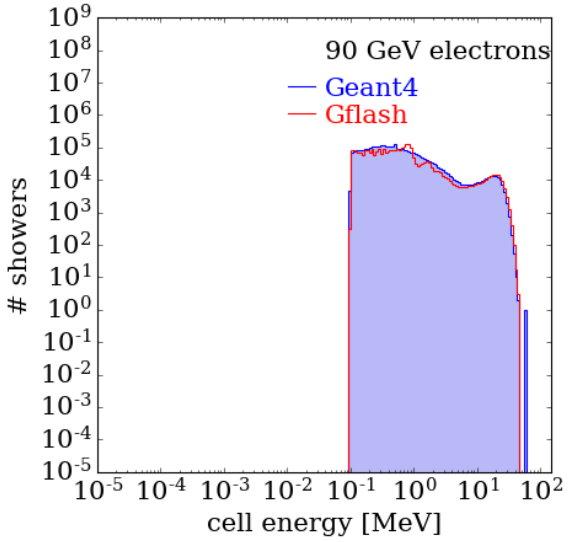


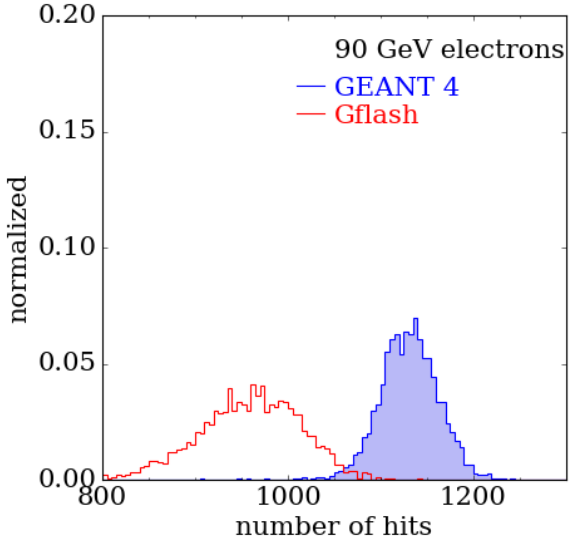


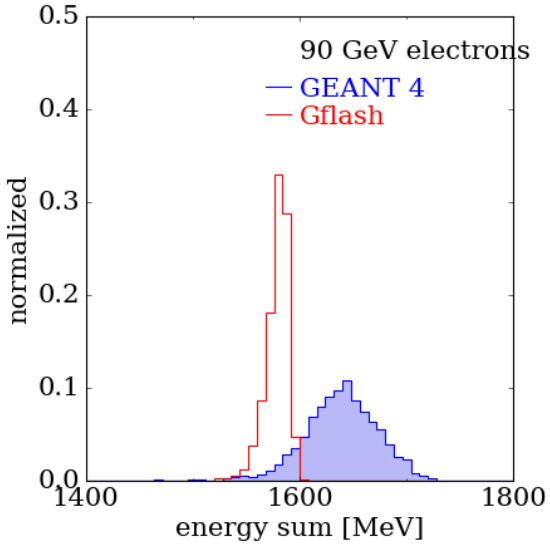


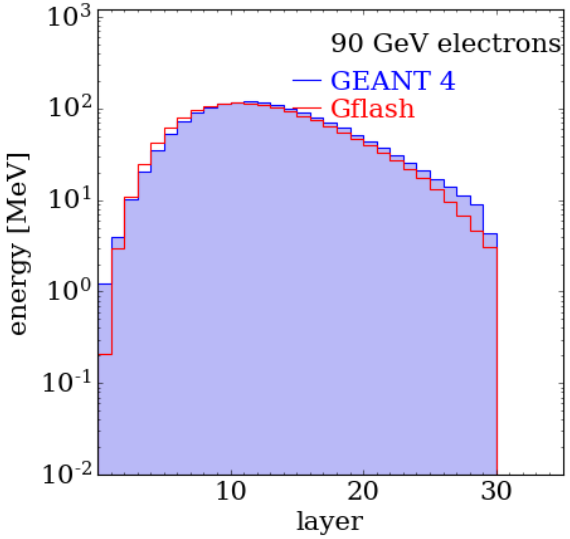


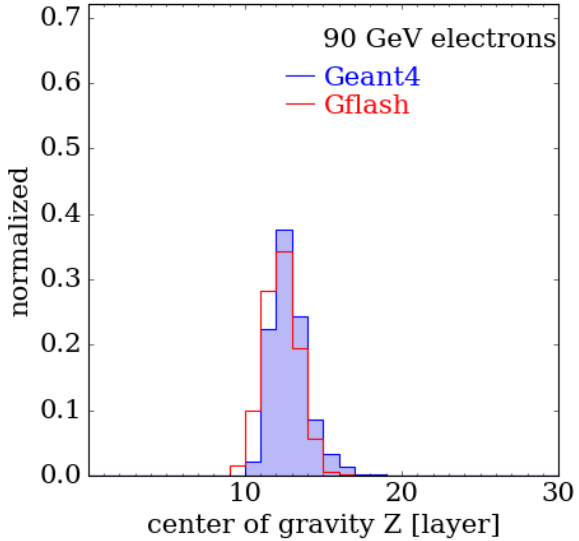
Energy Distributions 90 GeV Electrons with Cut at 0.1 MeV

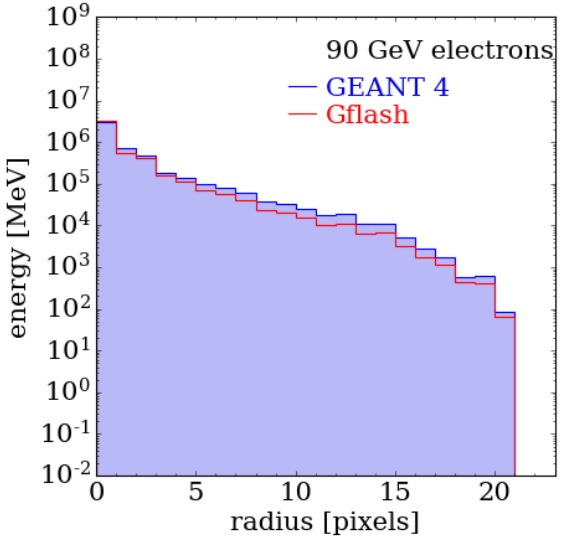








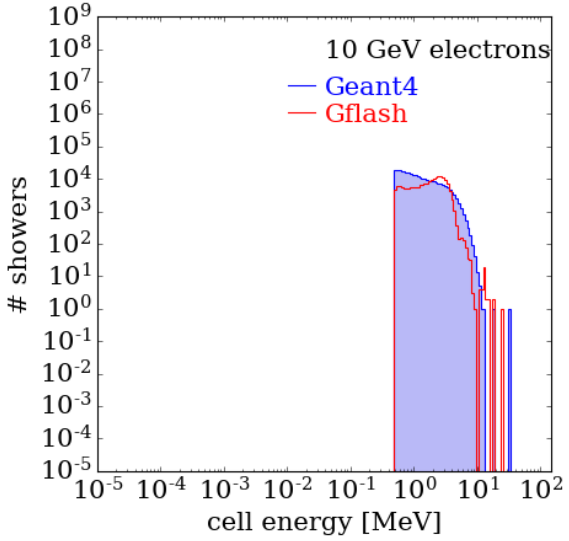


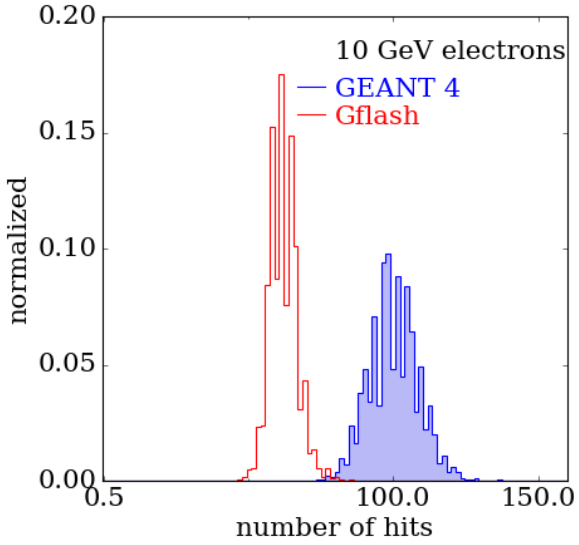


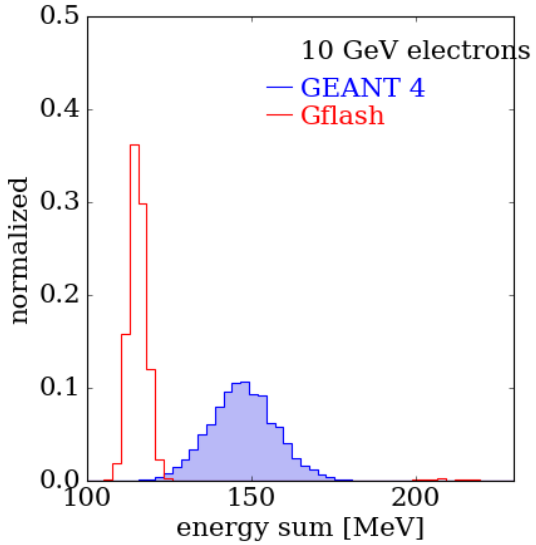
Cut at 0.5 MeV

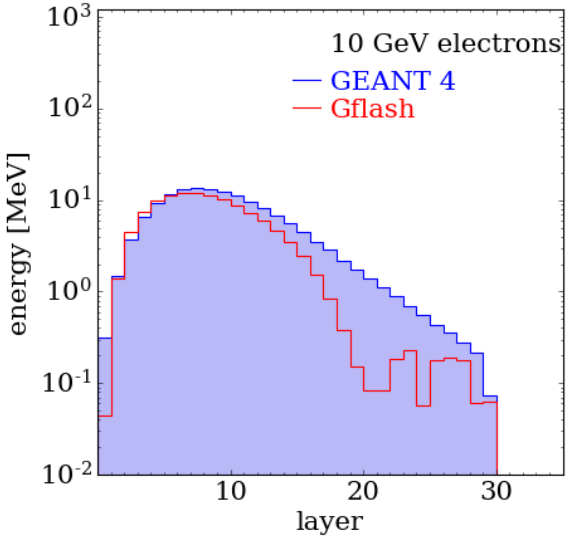
10, 20, 50, 70 and 90 GeV electrons
3000 showers

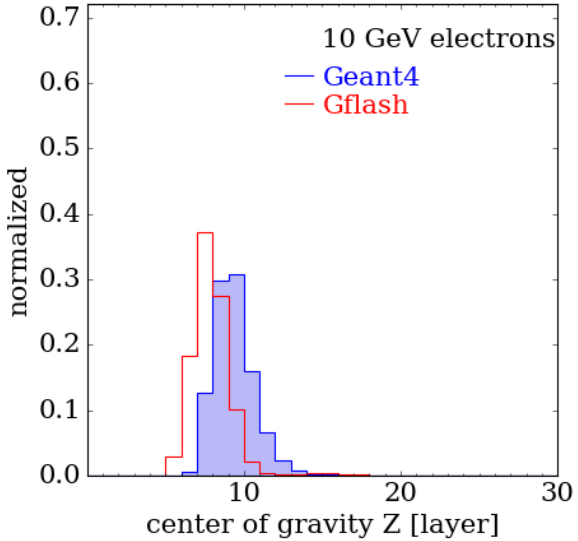
Energy Distributions 10 GeV Electrons with Cut at 0.5 MeV

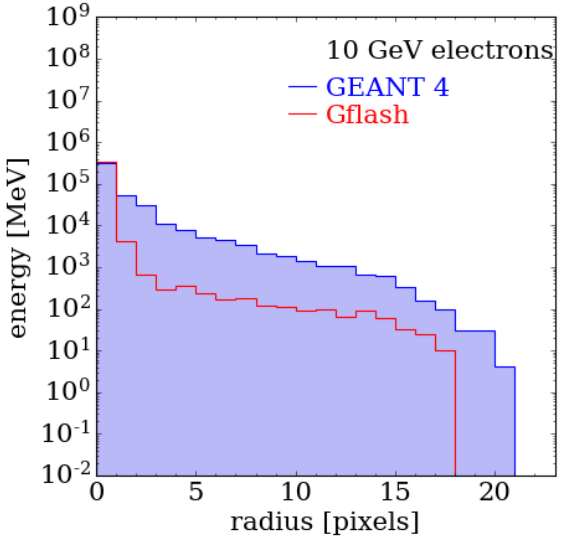




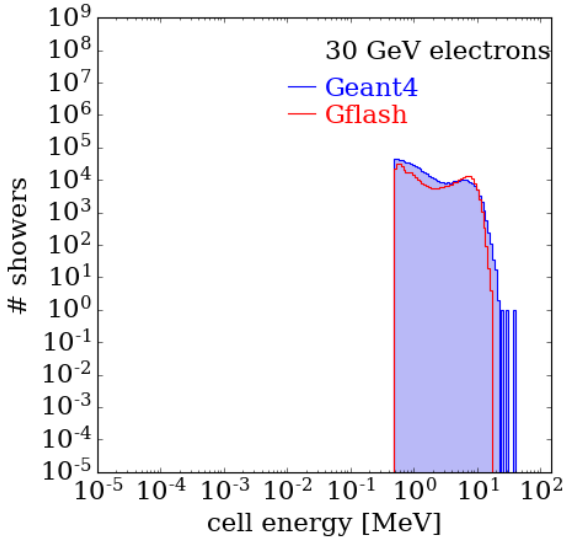


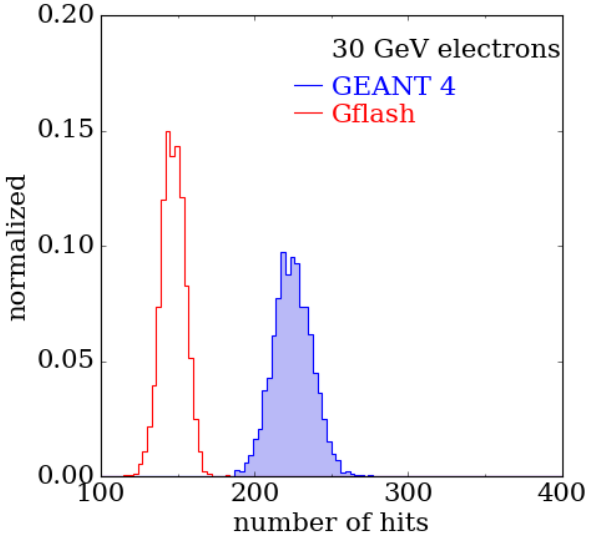


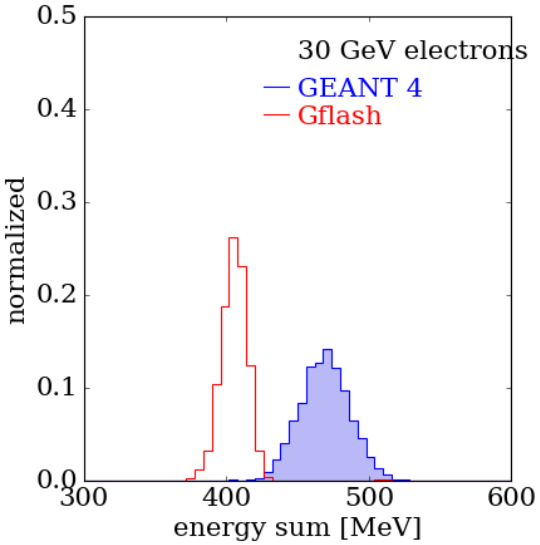


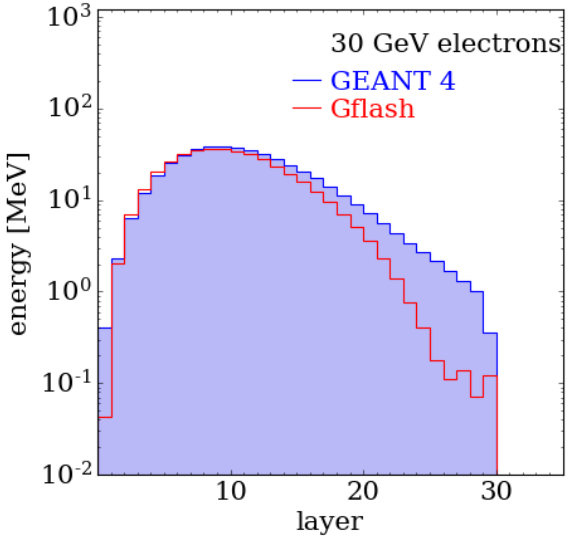


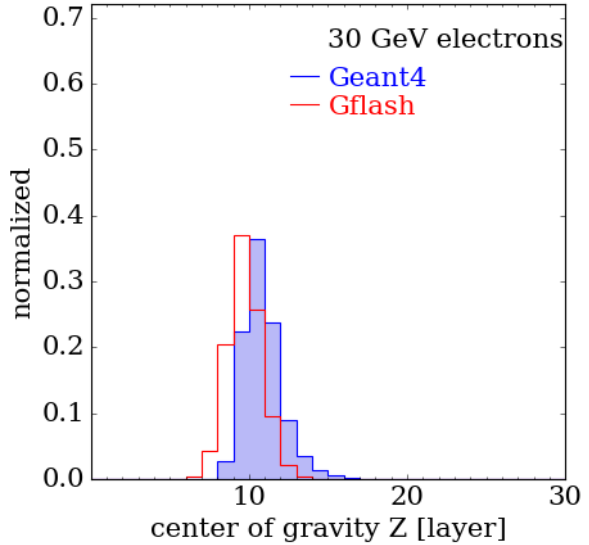
Energy Distributions 30 GeV Electrons with Cut at 0.5 MeV

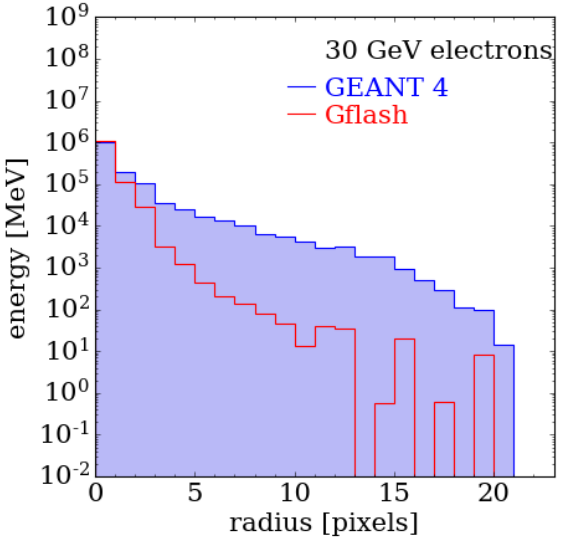




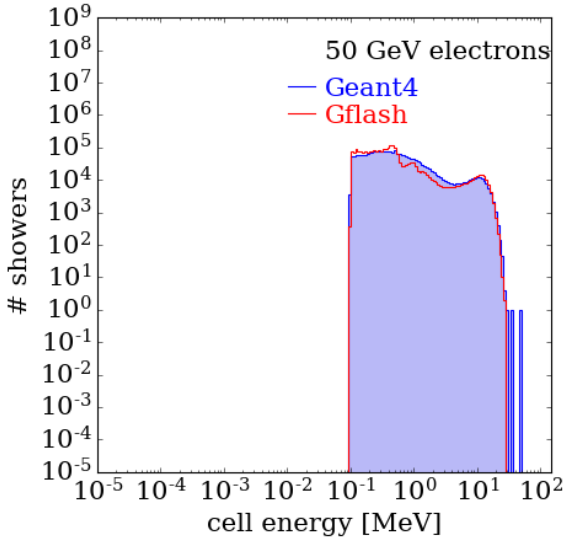


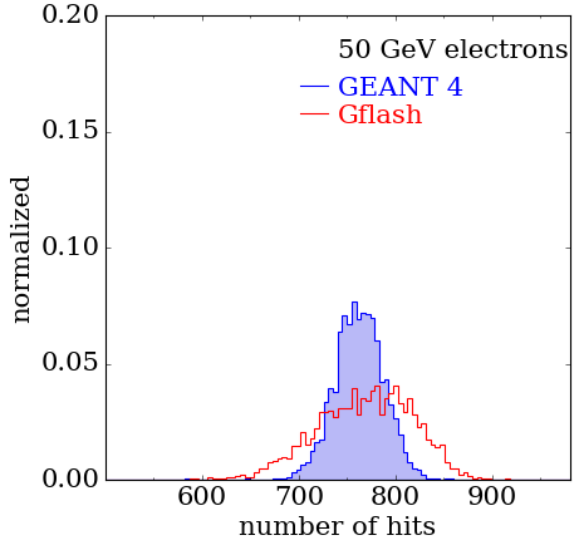


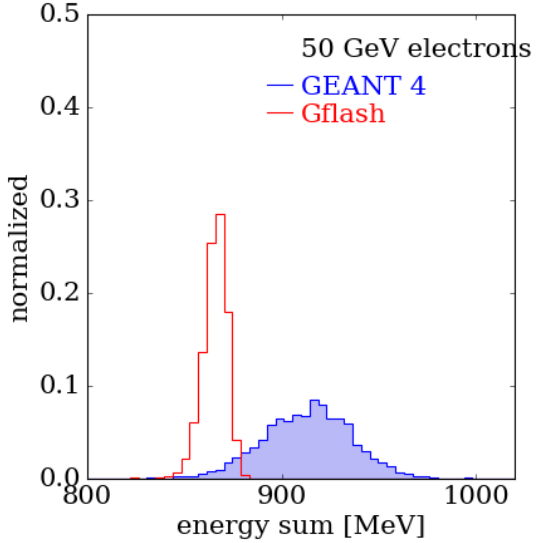


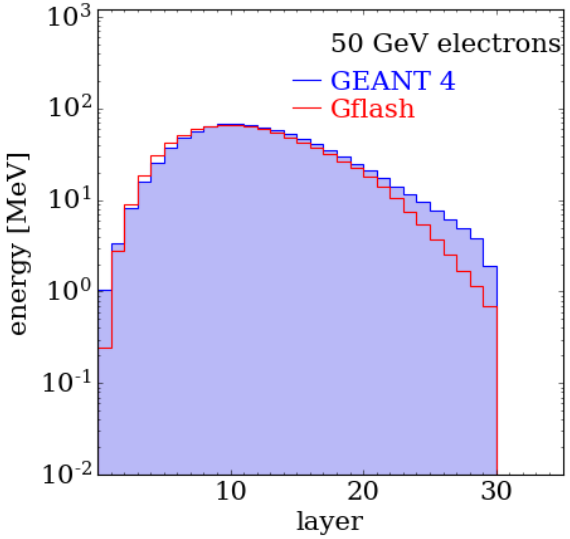


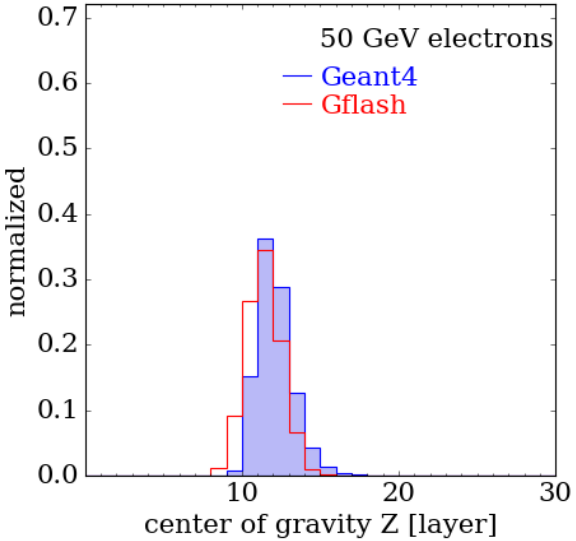
Energy Distributions 50 GeV Electrons with Cut at 0.5 MeV

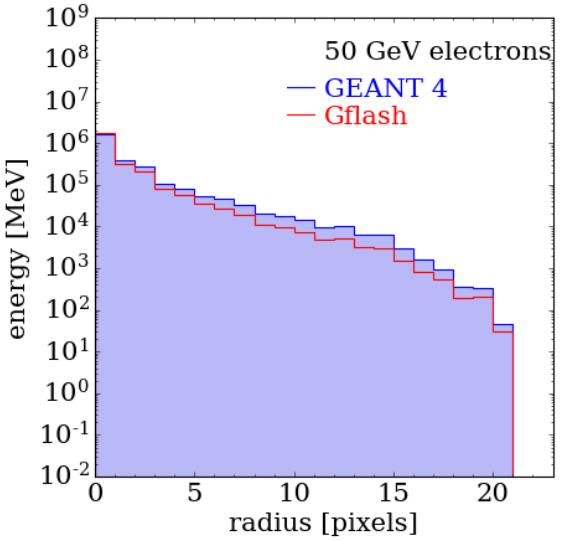




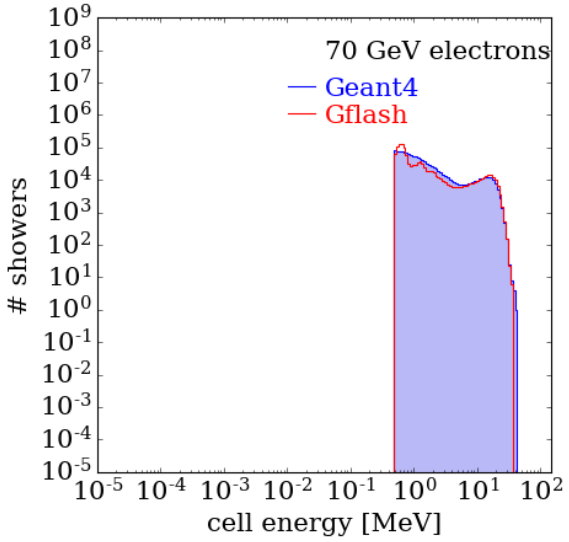


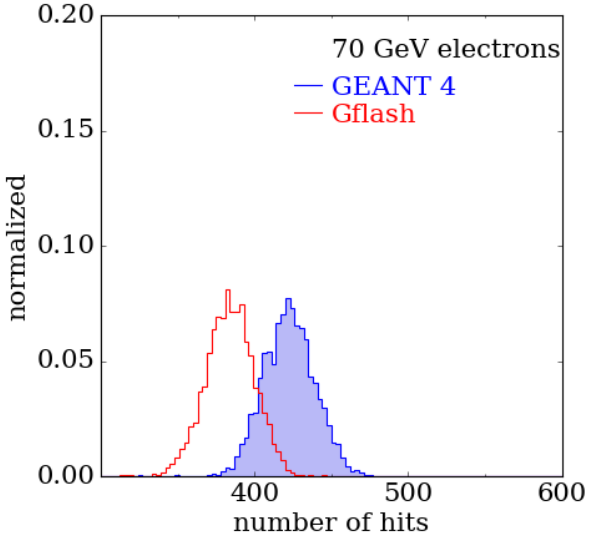


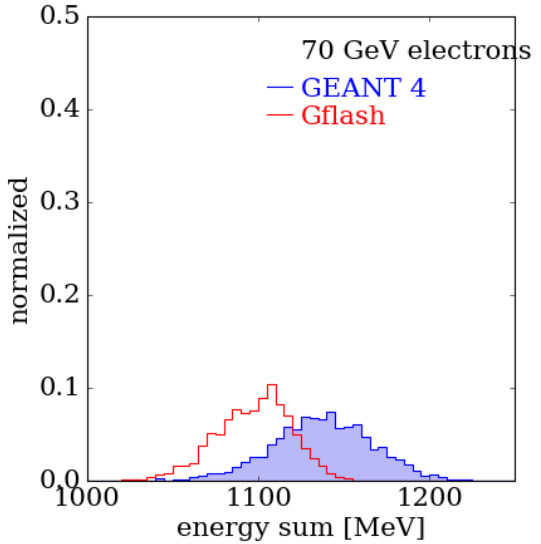


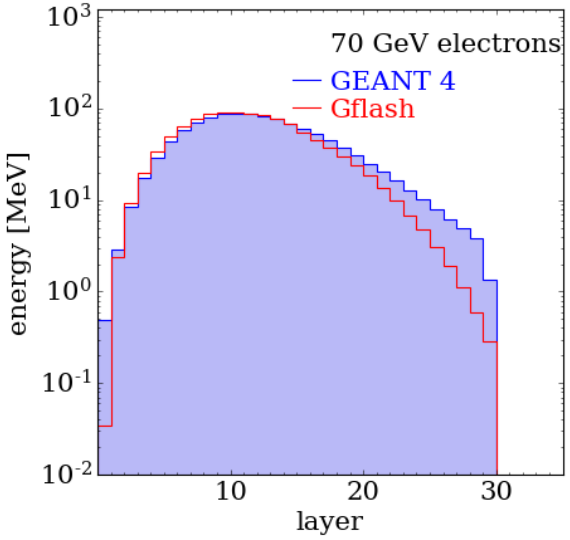


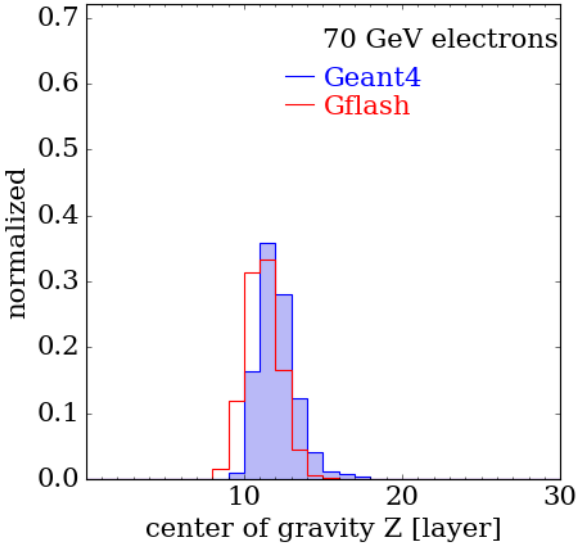
Energy Distributions 70 GeV Electrons with Cut at 0.5 MeV

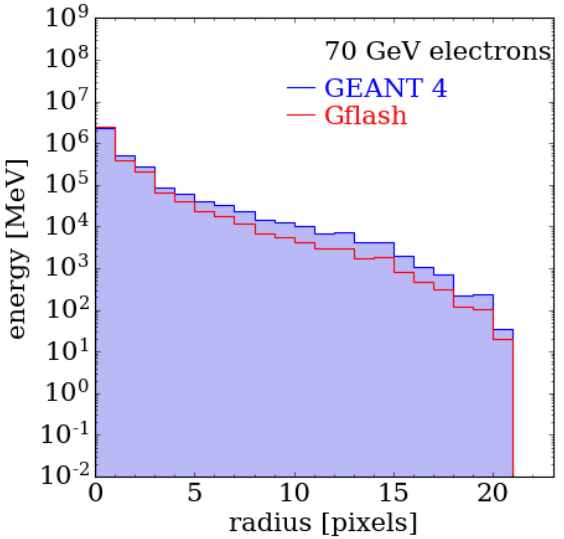




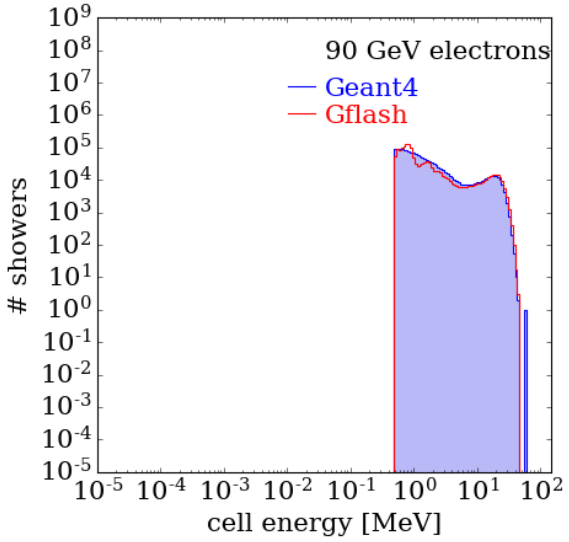


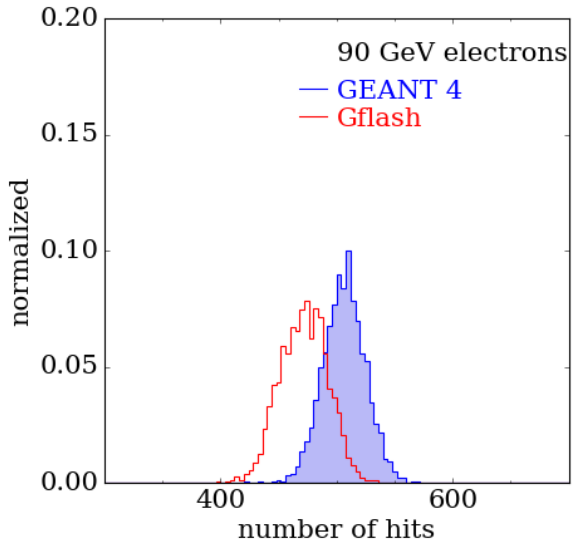


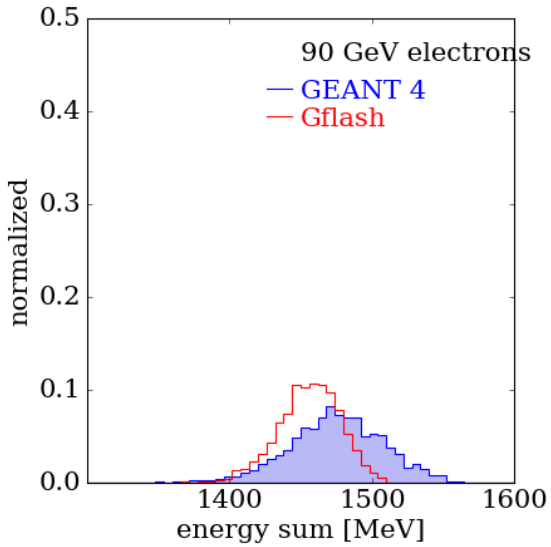


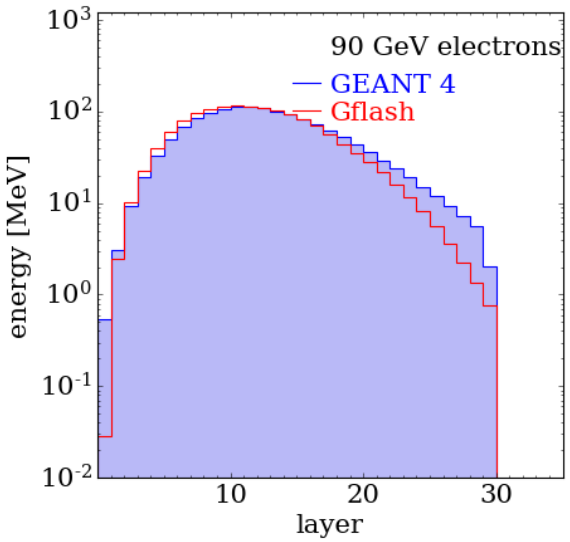


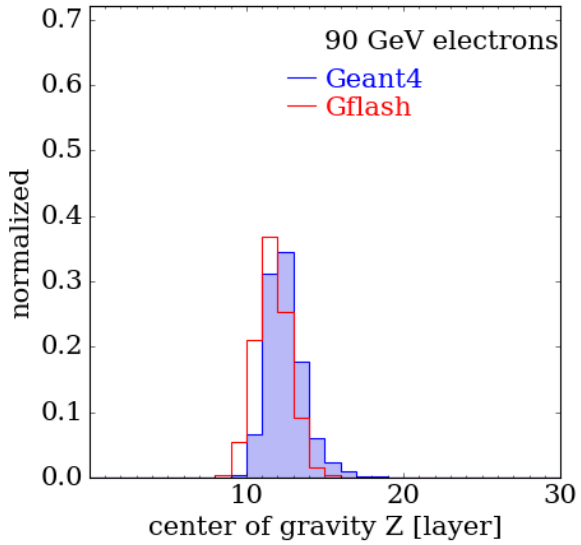
Energy Distributions 90 GeV Electrons with Cut at 0.5 MeV

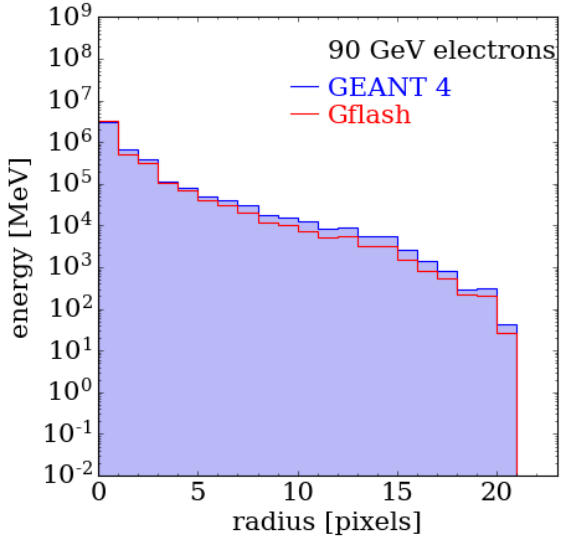












Conclusion

- Higher electron energies are better modelled by the current Gflash set-up
- A Cut at 0.5 MeV gives a closer result o Geant4 than a Cut at 0.1 MeV
- After making a Cut at 0.5 MeV the accuracy of the radial and logitudinal energy distribution decreases for low electron energies