

Angular and Energy conditioning

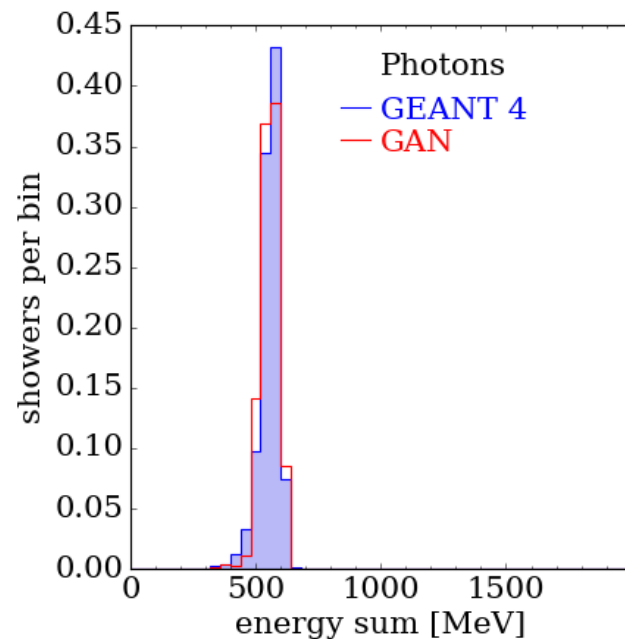
11.11.2021

Looking at additional epochs from constrained GAN

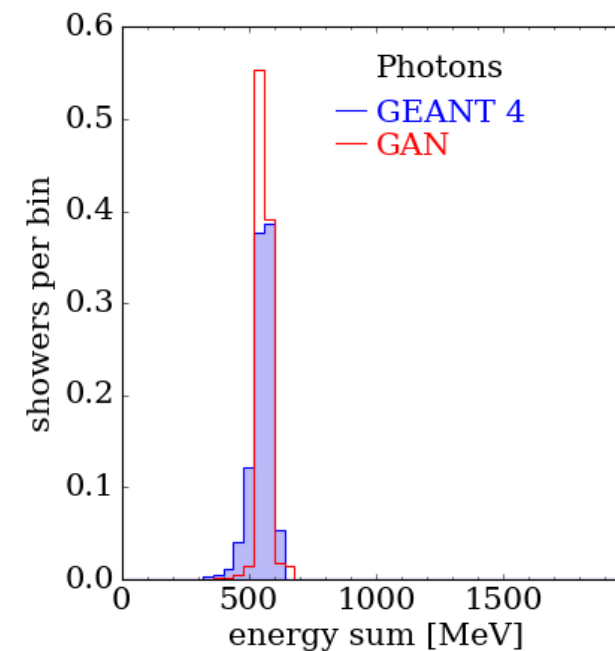
- Add constrainer loss after 5 epochs- have also tried a couple of variations of this..
- Tried several different loss weightings, e.g from Vallercosa et. al.
 - $\text{Kappa_A} = 25$
 - $\text{Kappa_E} = 0.1$
 - $\text{Kappa_adv} = 3$
- Previously epoch 98, now also epoch 137 (added constraint at epoch 50)
- Also training with compressed labels 0-1.

Energy sum

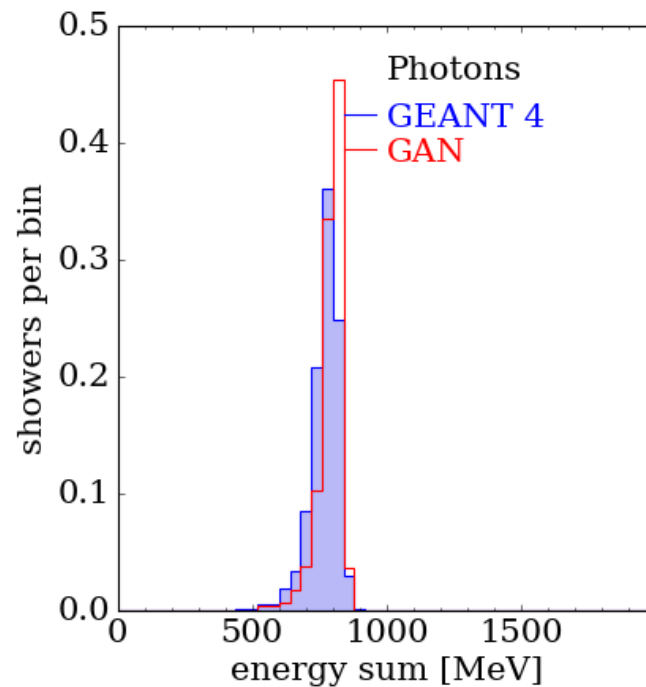
E25 GeV,
A75 deg



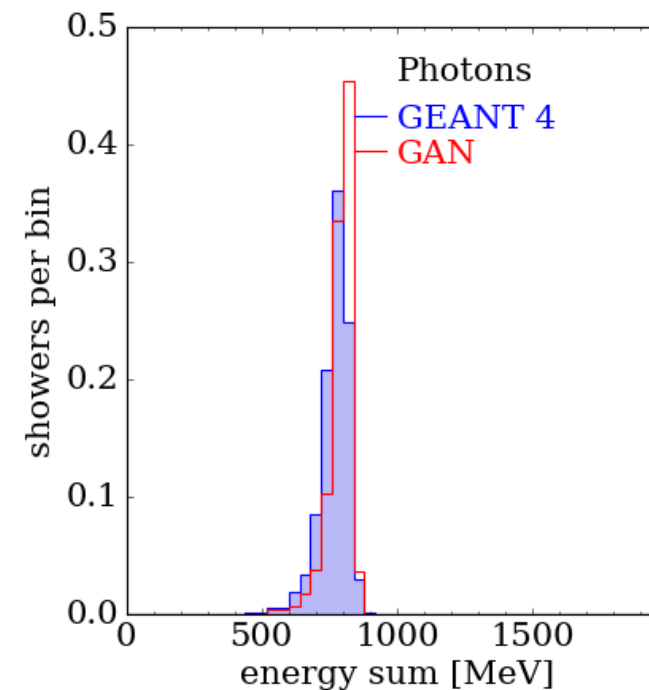
E25 GeV,
A85 deg



E35 GeV,
A75 deg

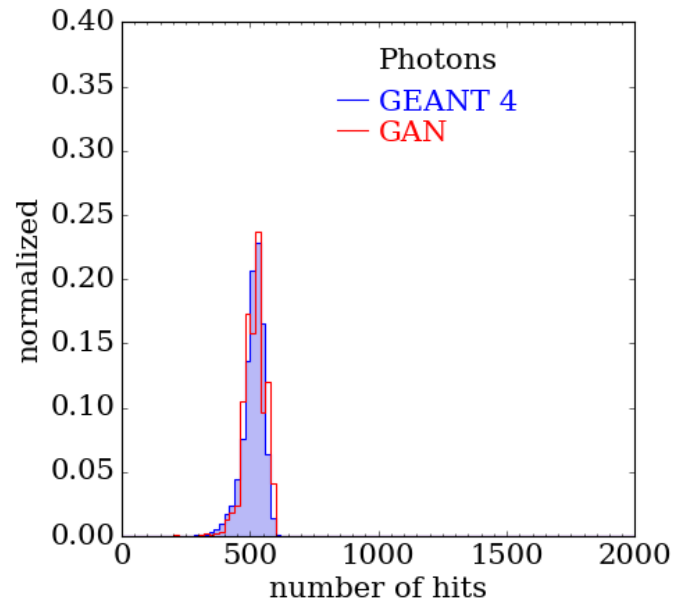


E35 GeV,
A85 deg

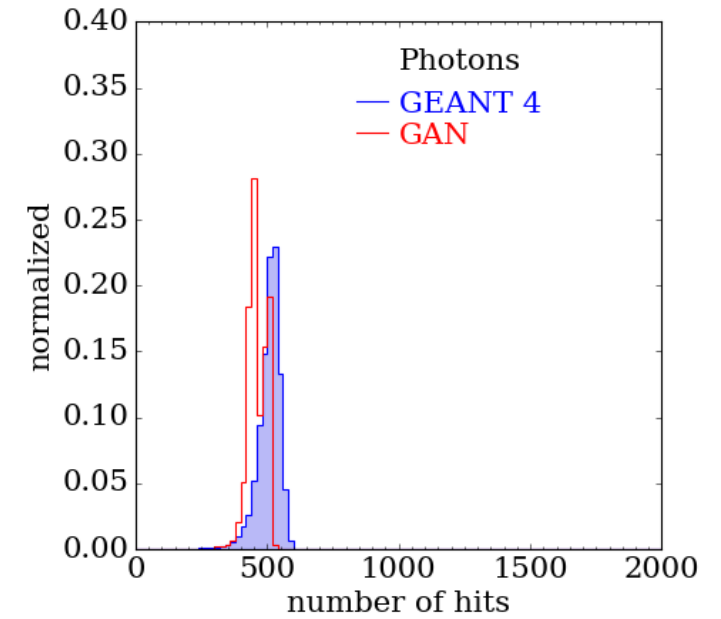


Number of hits

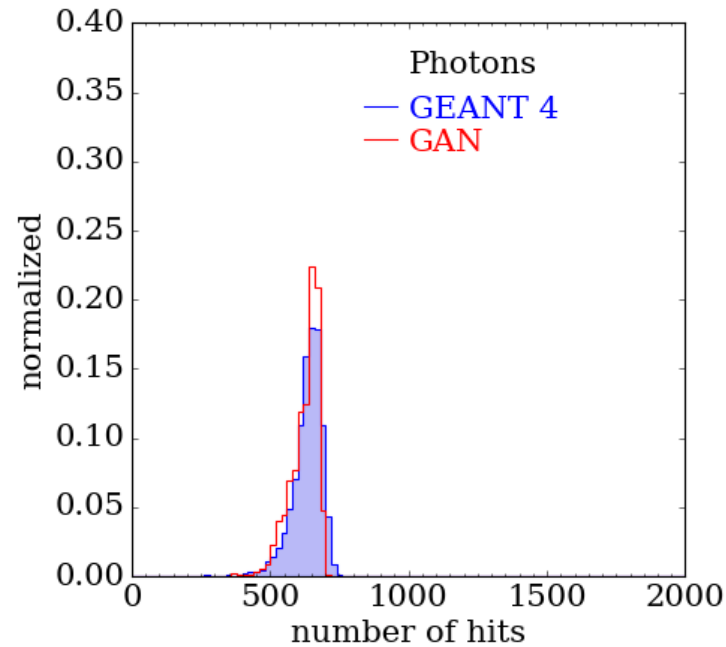
E25 GeV,
A75 deg



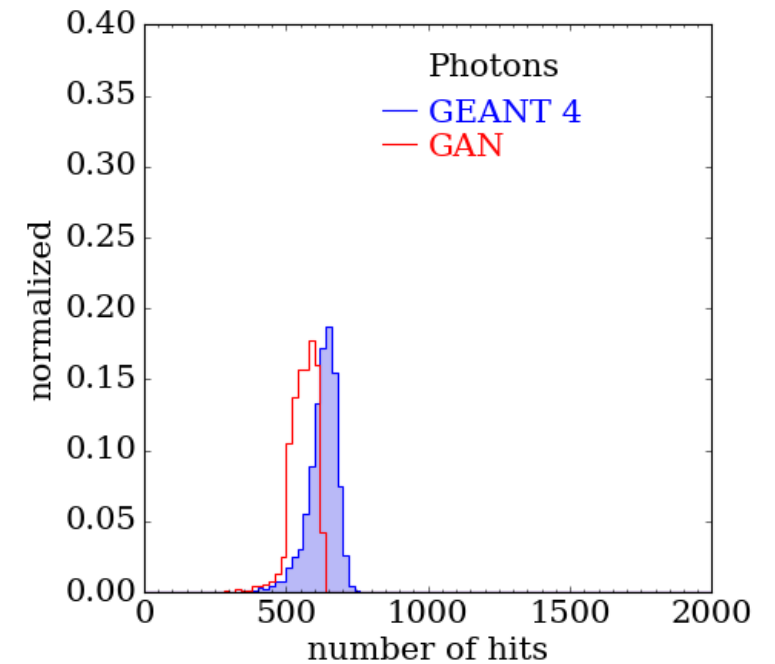
E25 GeV,
A85 deg



E35 GeV,
A75 deg

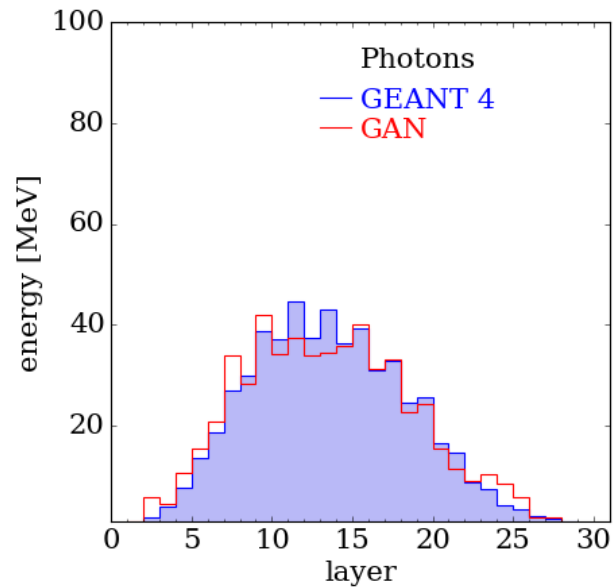


E35 GeV,
A85 deg

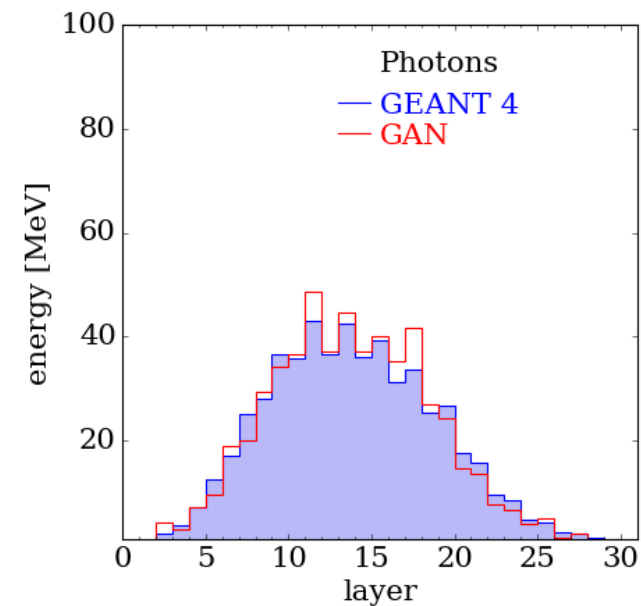


Longitudinal profile

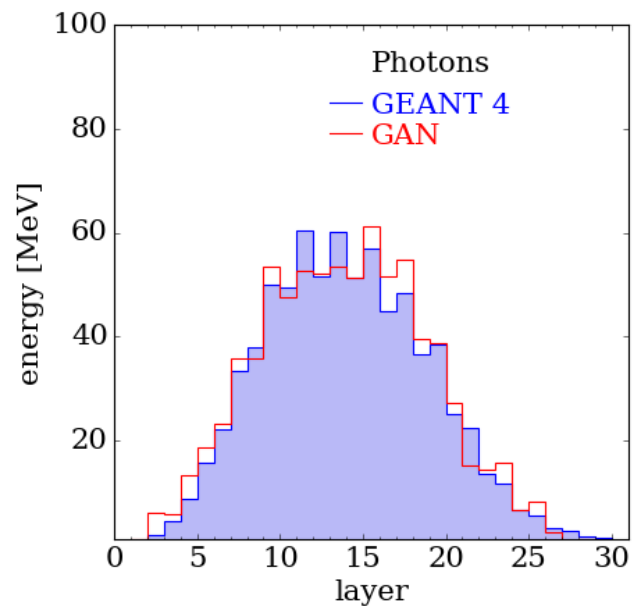
E25 GeV,
A75 deg



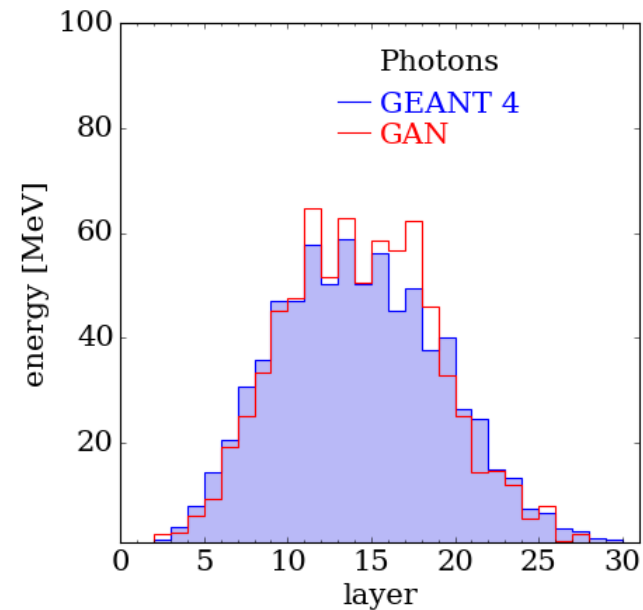
E25 GeV,
A85 deg



E35 GeV,
A75 deg

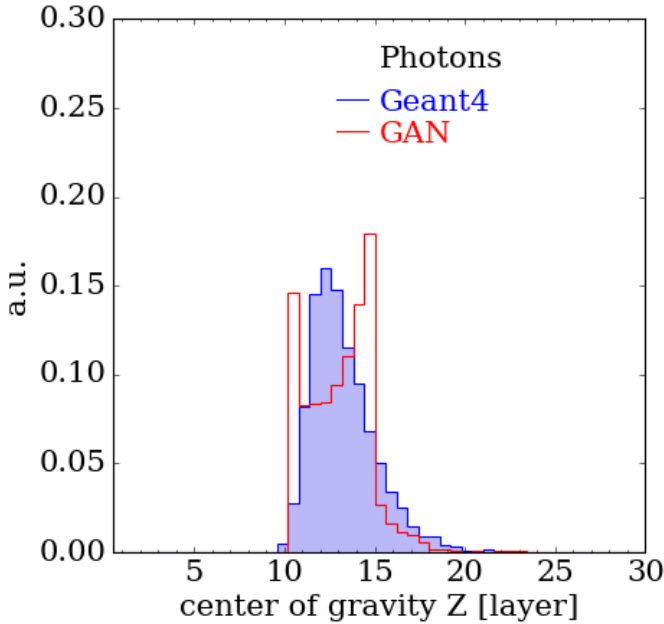


E35 GeV,
A85 deg

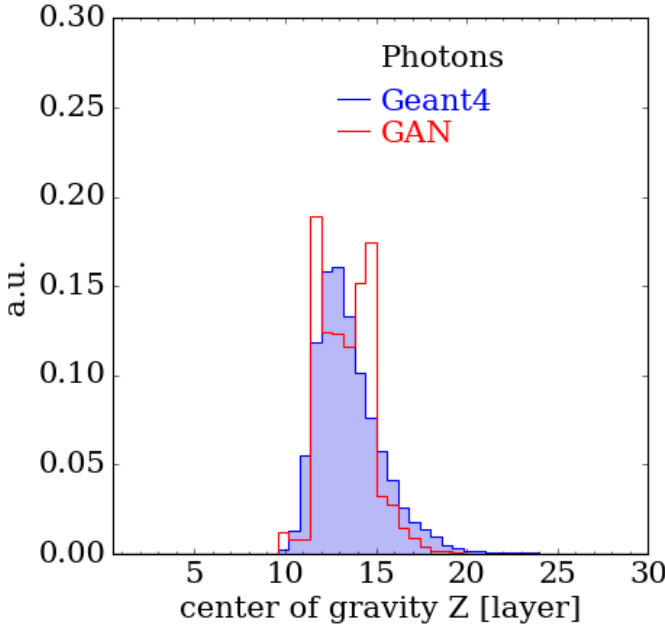


Center of gravity

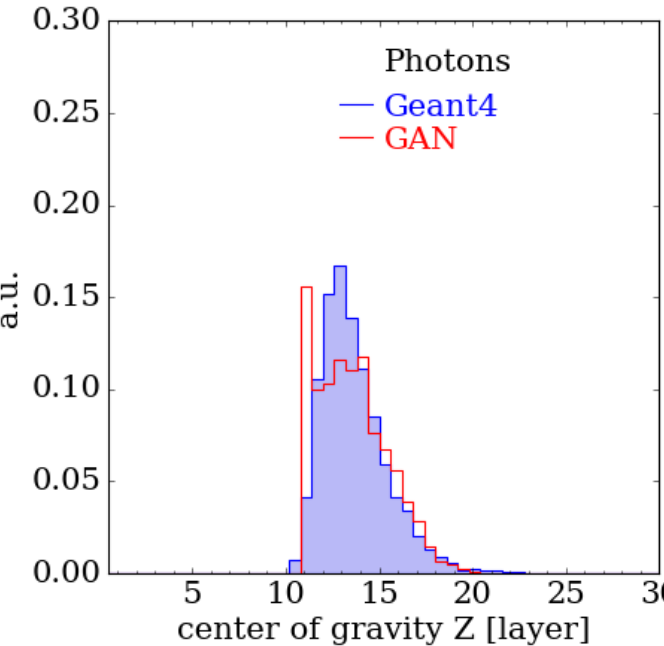
E25 GeV,
A75 deg



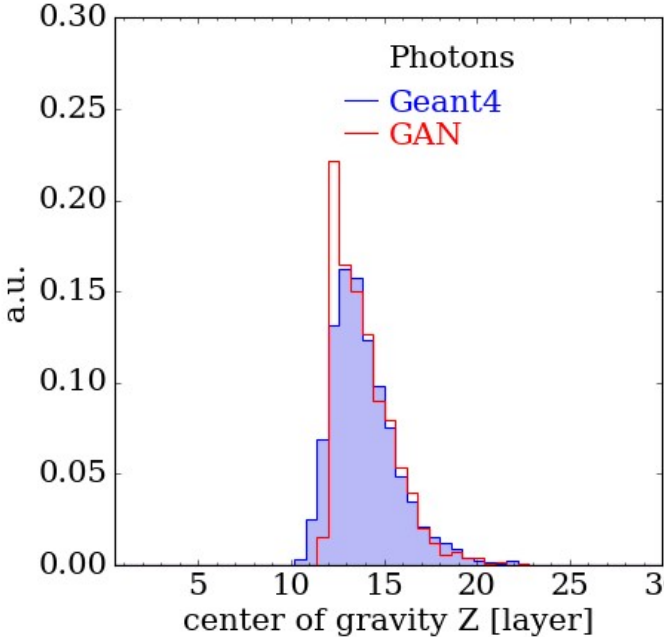
E25 GeV,
A85 deg



E35 GeV,
A75 deg

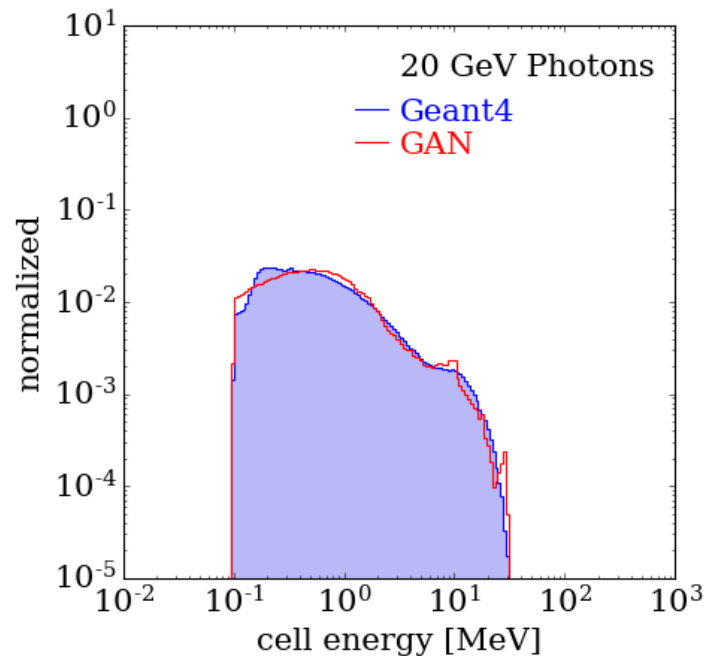


E35 GeV,
A85 deg

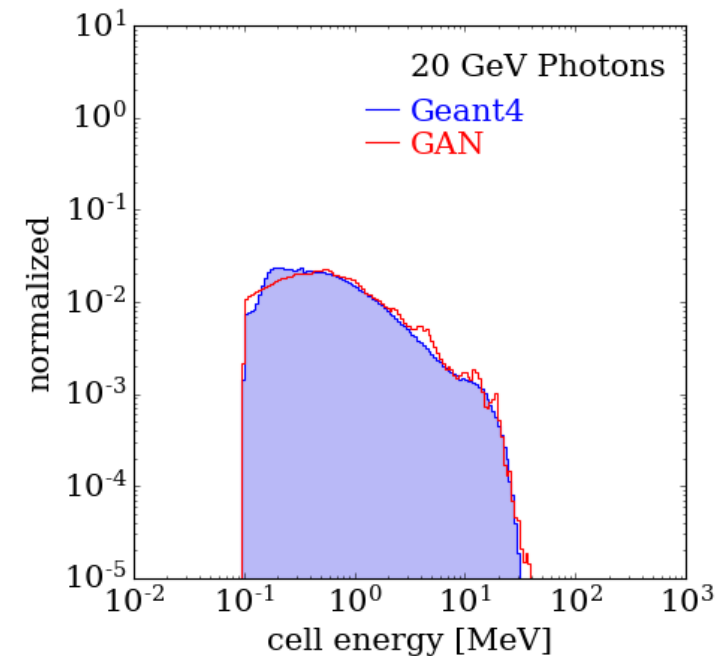


Cell energy

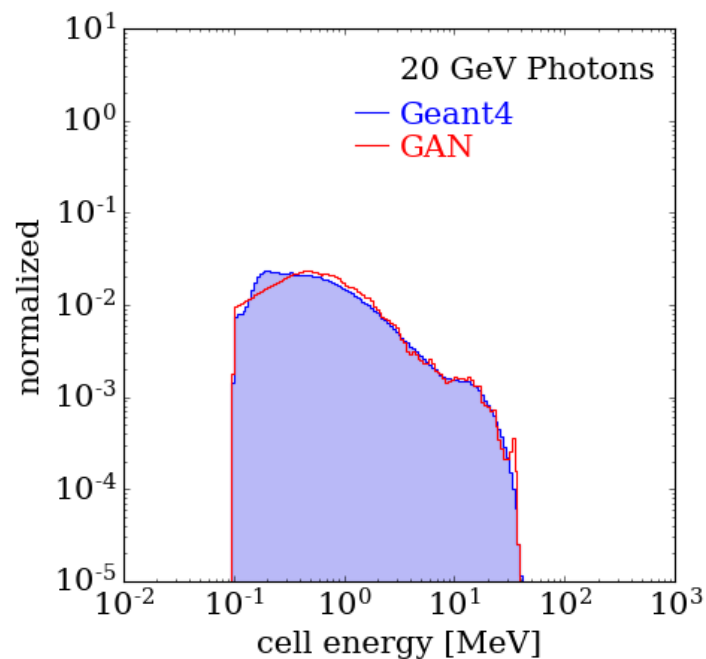
E25 GeV,
A75 deg



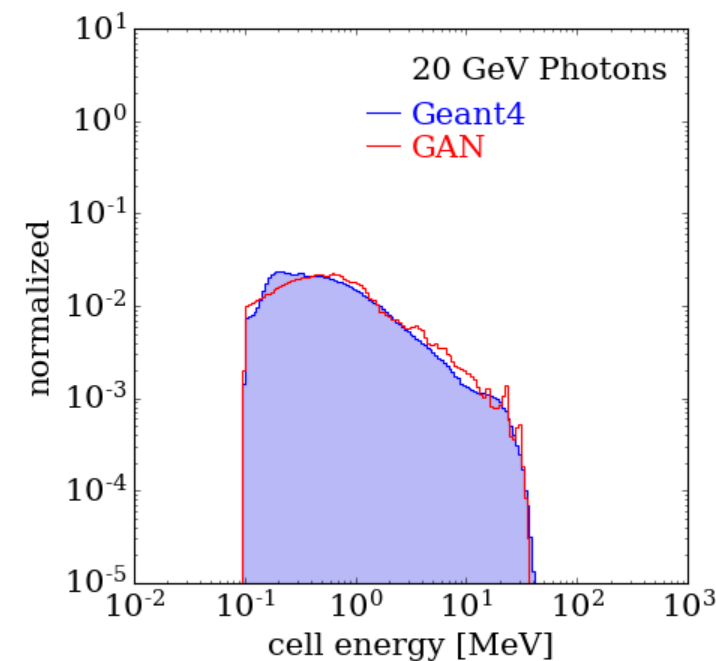
E25 GeV,
A85 deg



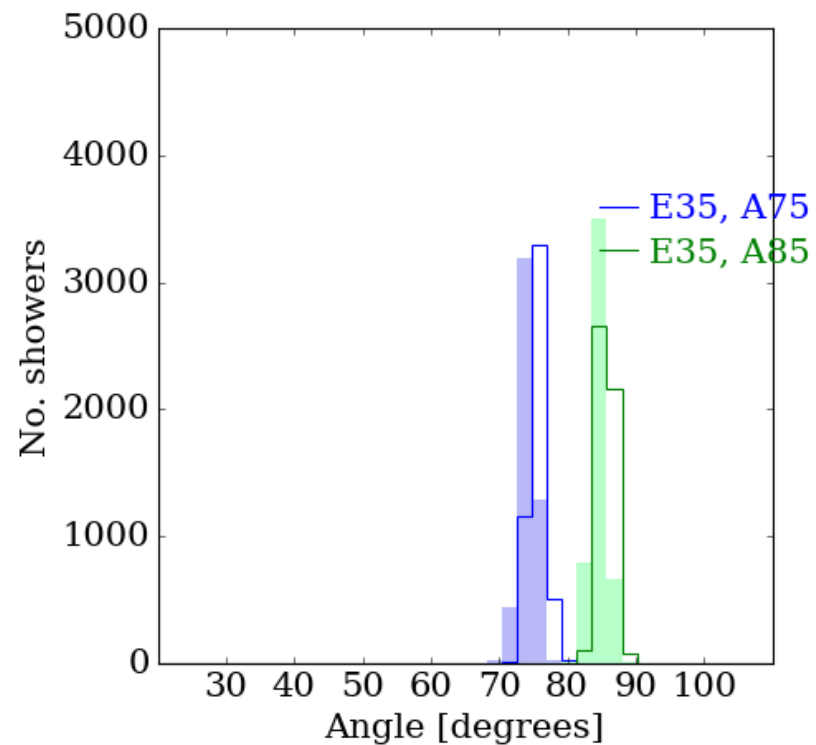
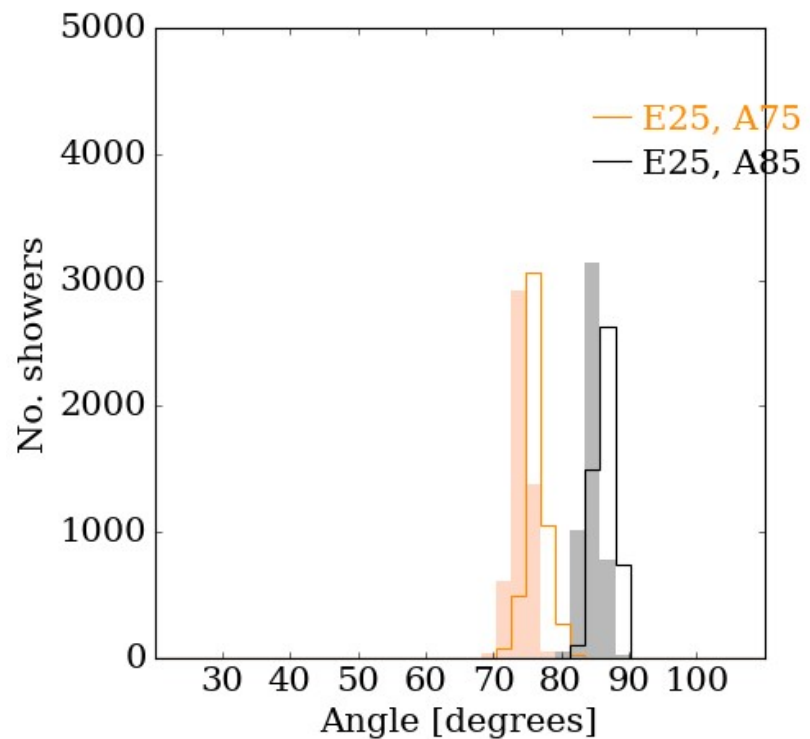
E35 GeV,
A75 deg



E35 GeV,
A85 deg



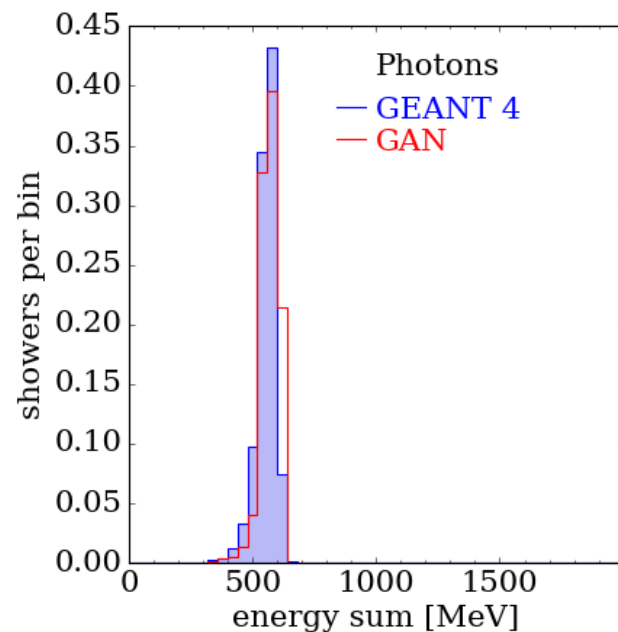
Adding constrainers



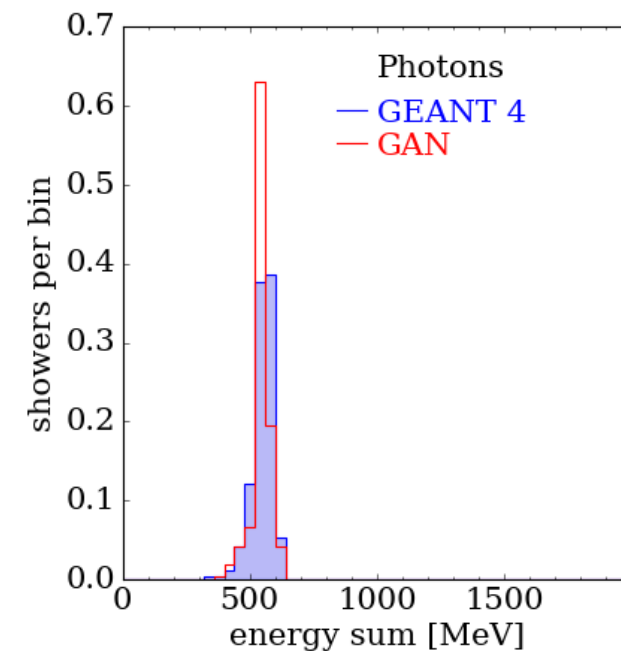
Now epoch 137

Energy sum

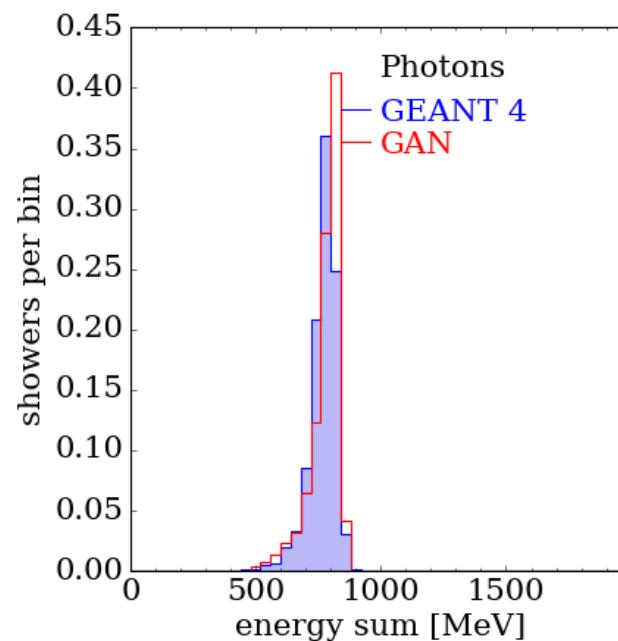
E25 GeV,
A75 deg



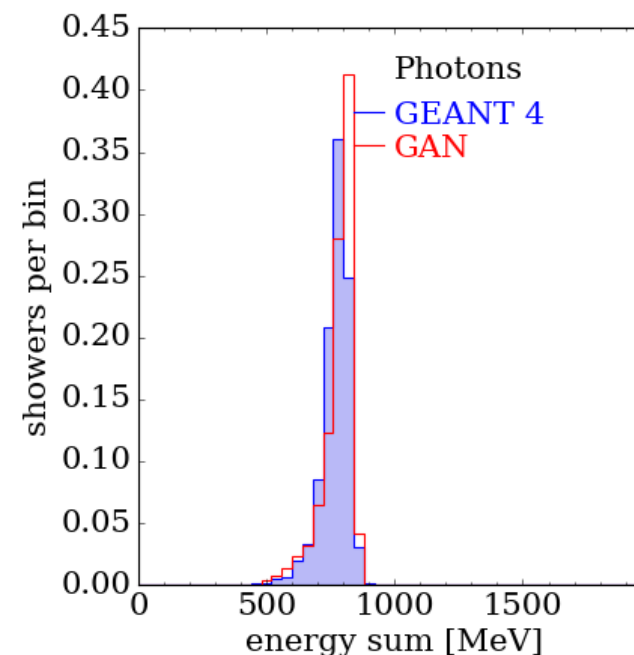
E25 GeV,
A85 deg



E35 GeV,
A75 deg

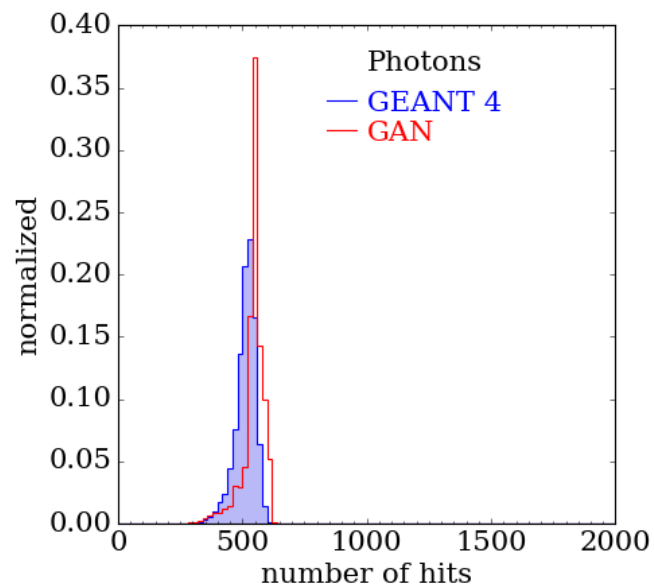


E35 GeV,
A85 deg

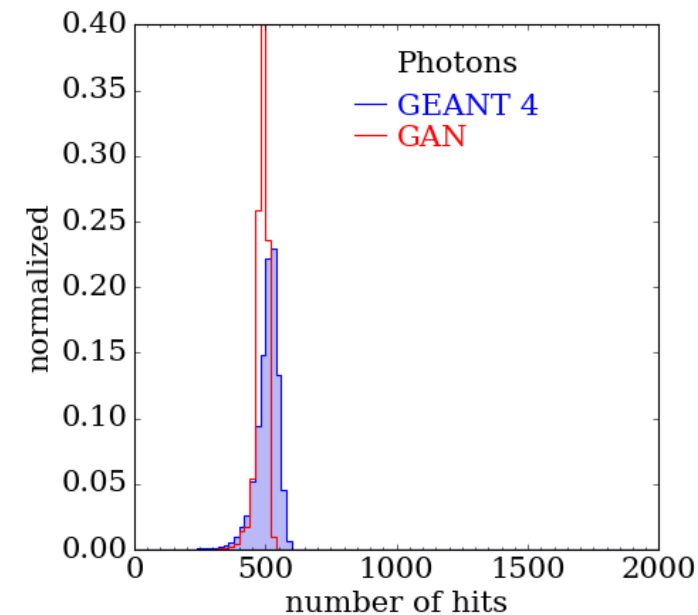


Number of hits

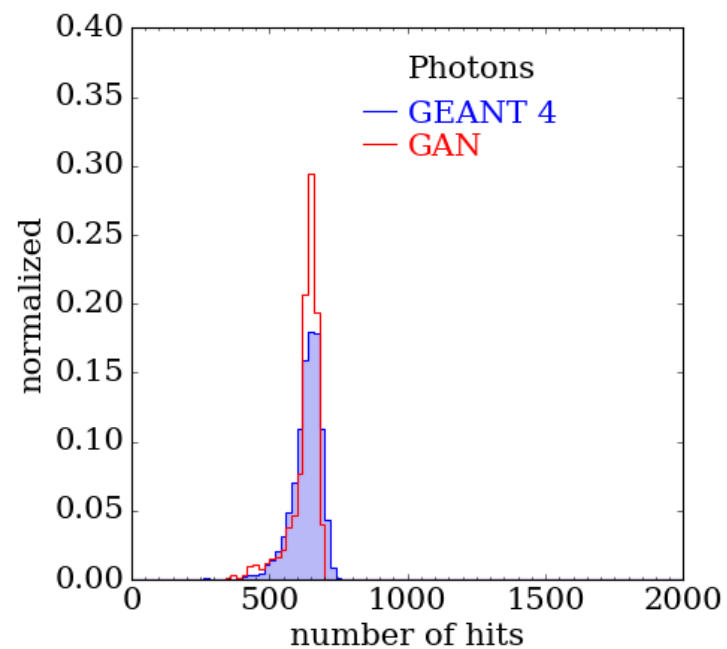
E25 GeV,
A75 deg



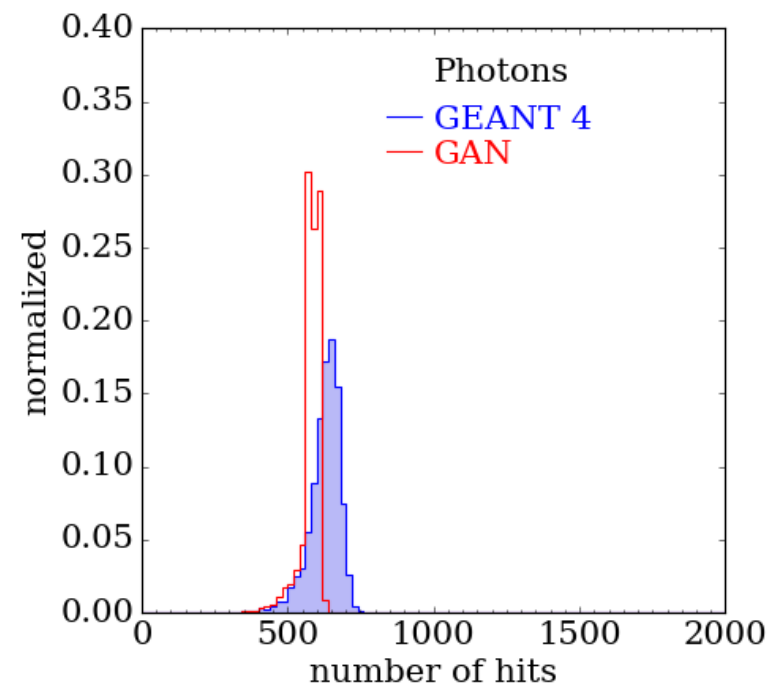
E25 GeV,
A85 deg



E35 GeV,
A75 deg

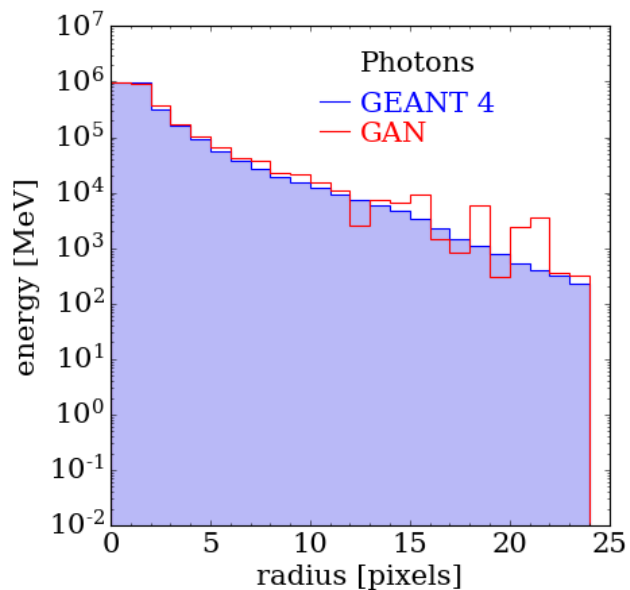


E35 GeV,
A85 deg

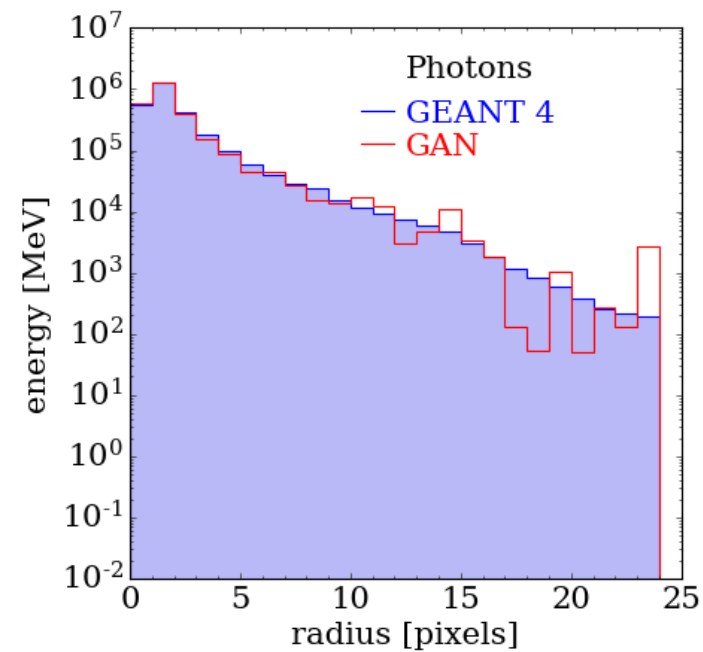


Radial profile- NOT YET VERIFIED!!!

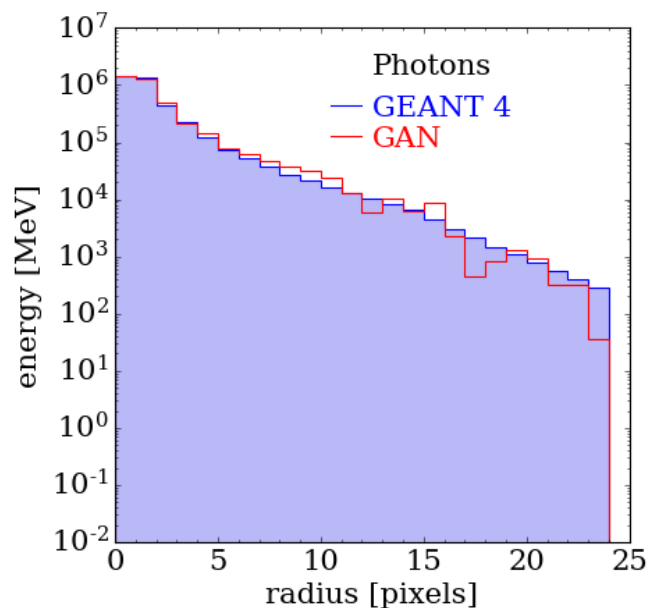
E25 GeV,
A75 deg



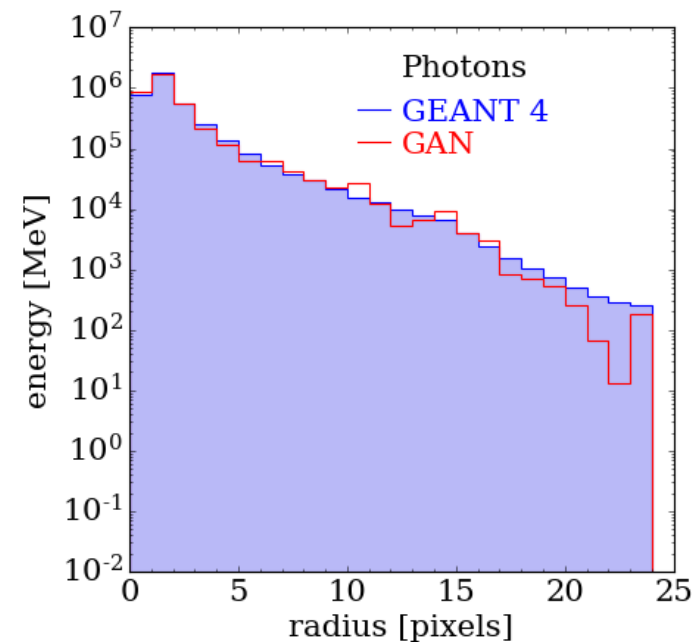
E25 GeV,
A85 deg



E35 GeV,
A75 deg

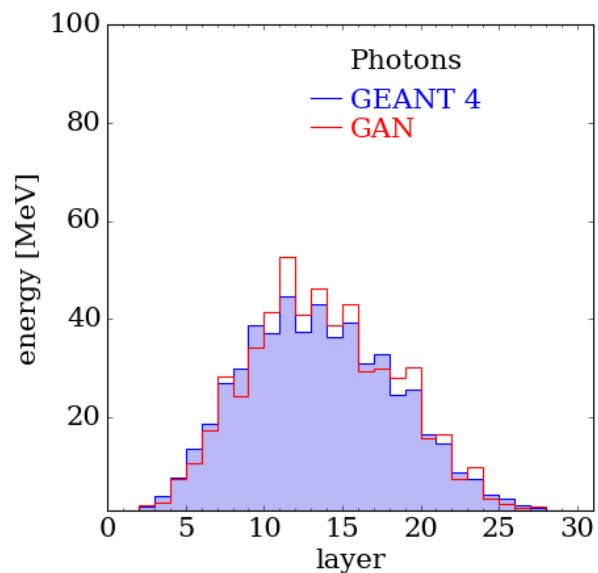


E35 GeV,
A85 deg

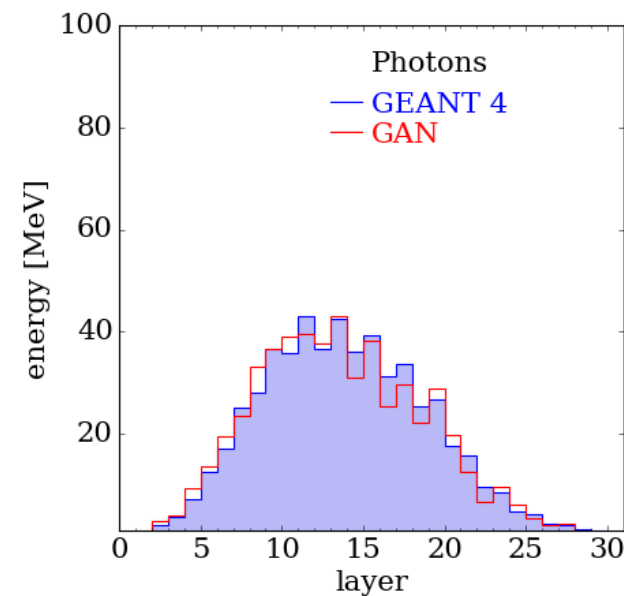


Longitudinal profile

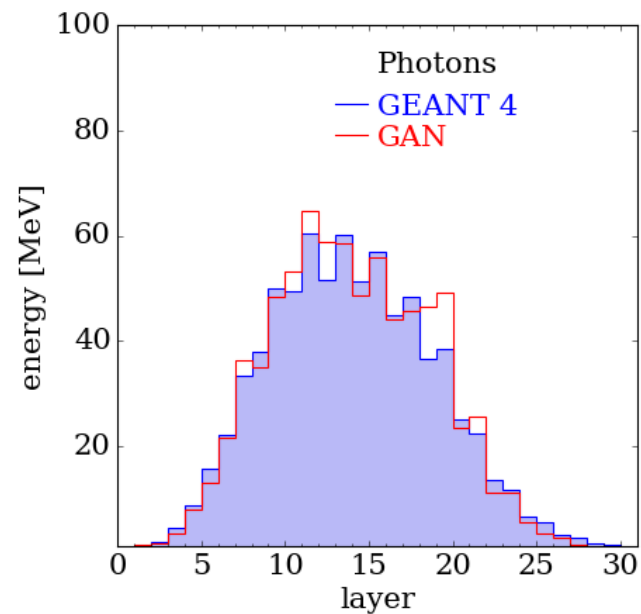
E25 GeV,
A75 deg



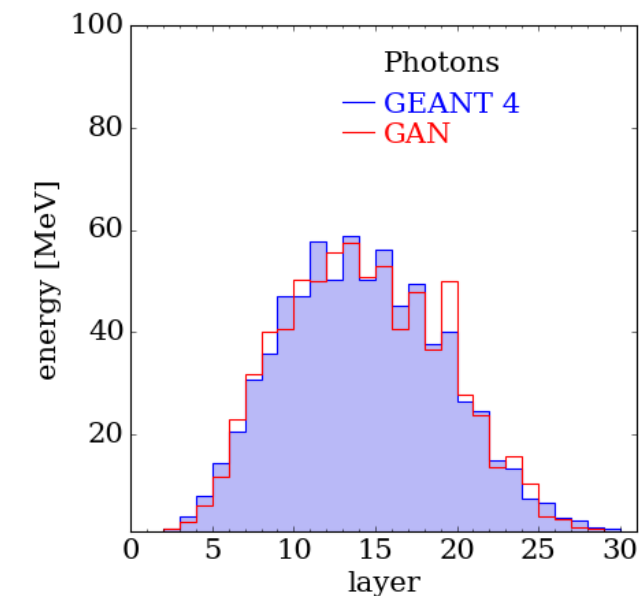
E25 GeV,
A85 deg



E35 GeV,
A75 deg

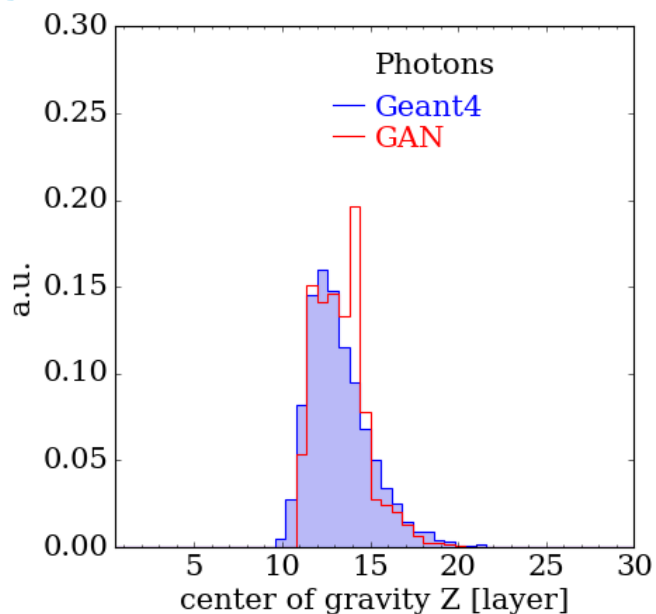


E35 GeV,
A85 deg

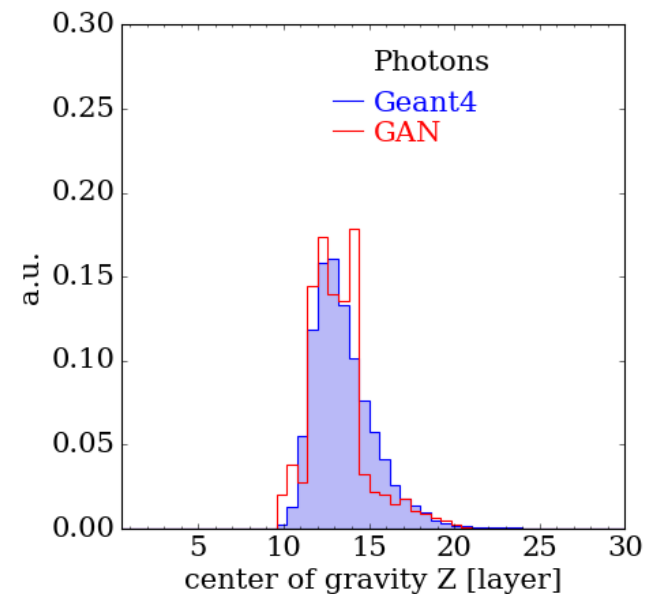


Center of gravity

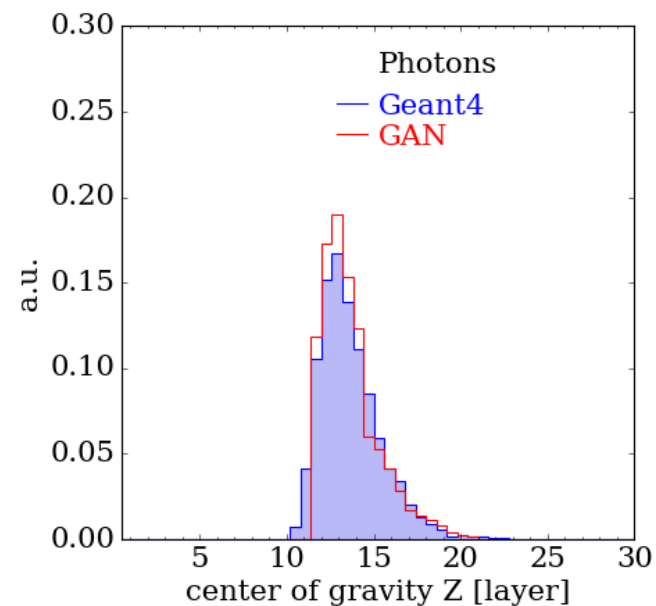
E25 GeV,
A75 deg



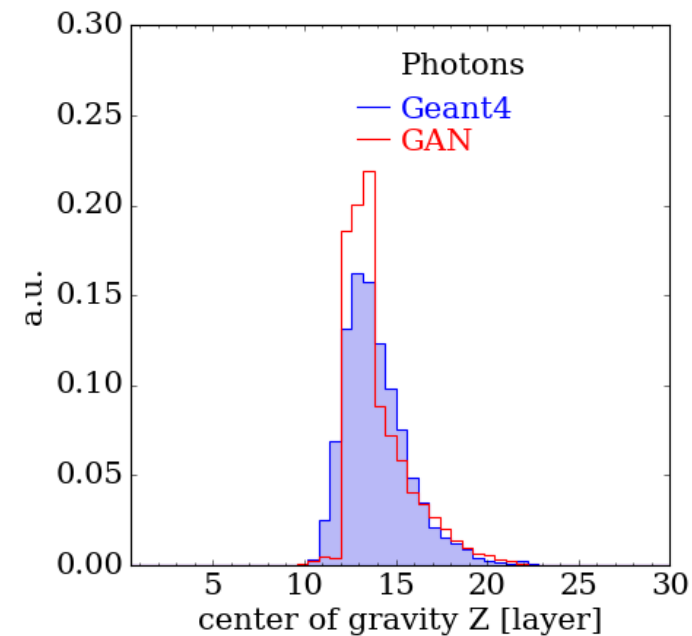
E25 GeV,
A85 deg



E35 GeV,
A75 deg

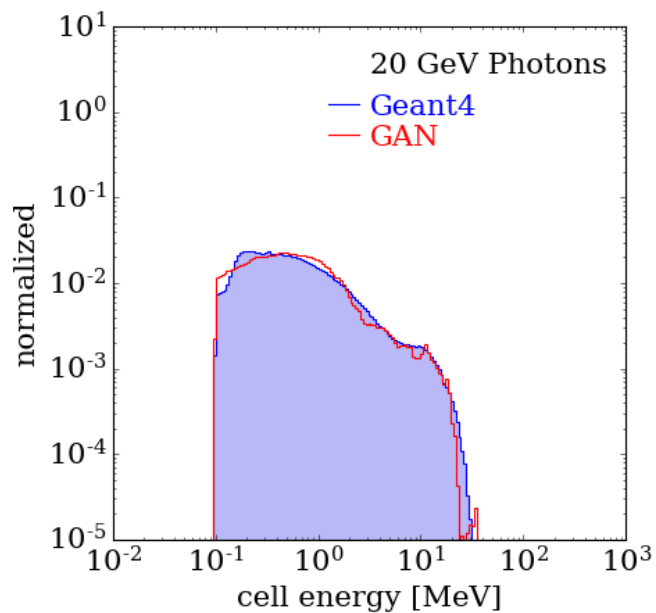


E35 GeV,
A85 deg

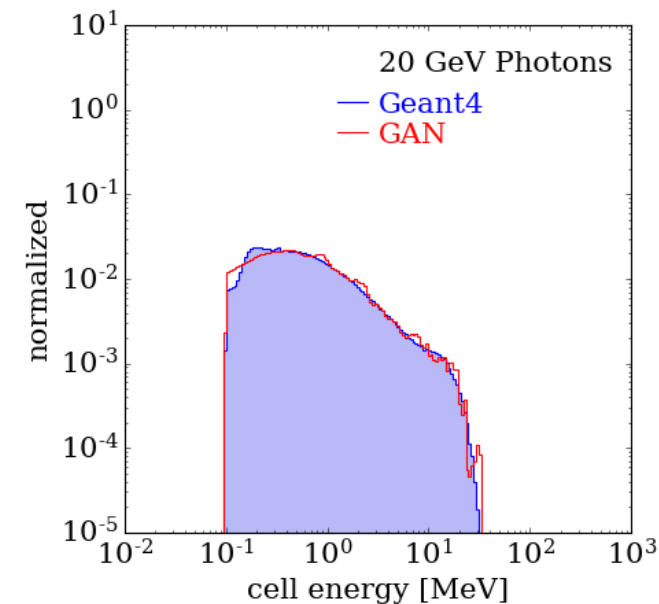


Cell energy

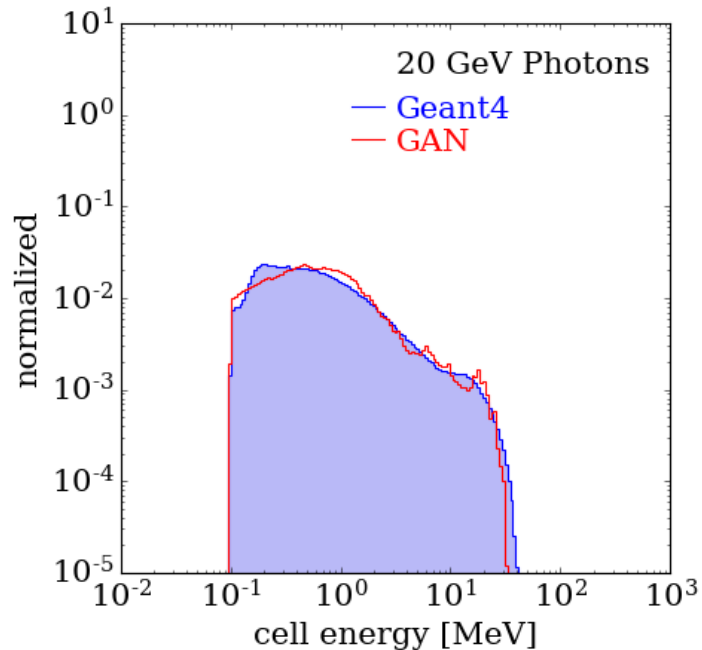
E25 GeV,
A75 deg



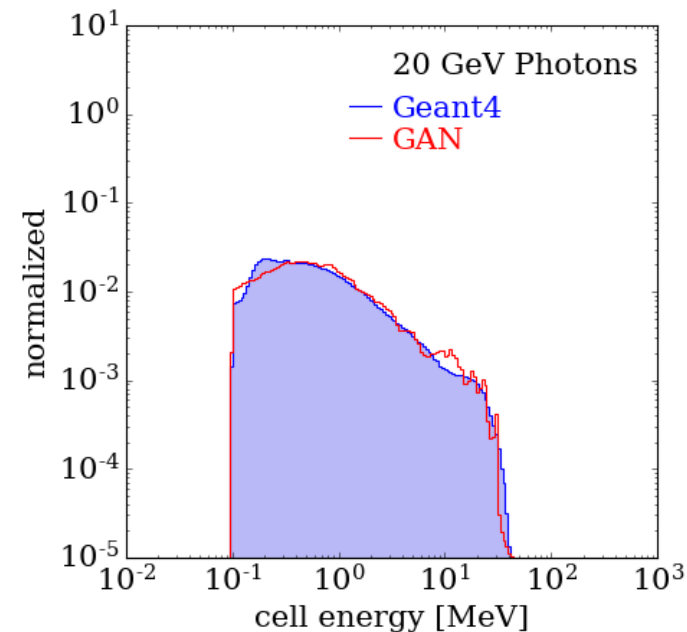
E25 GeV,
A85 deg



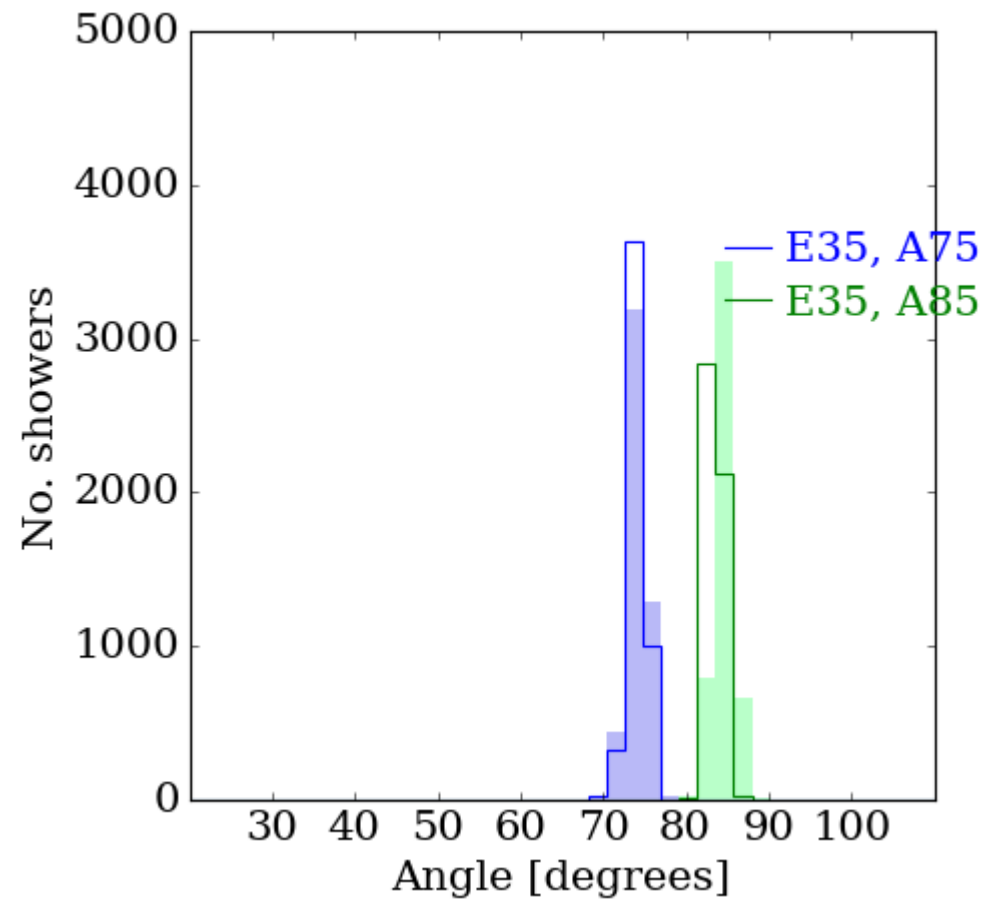
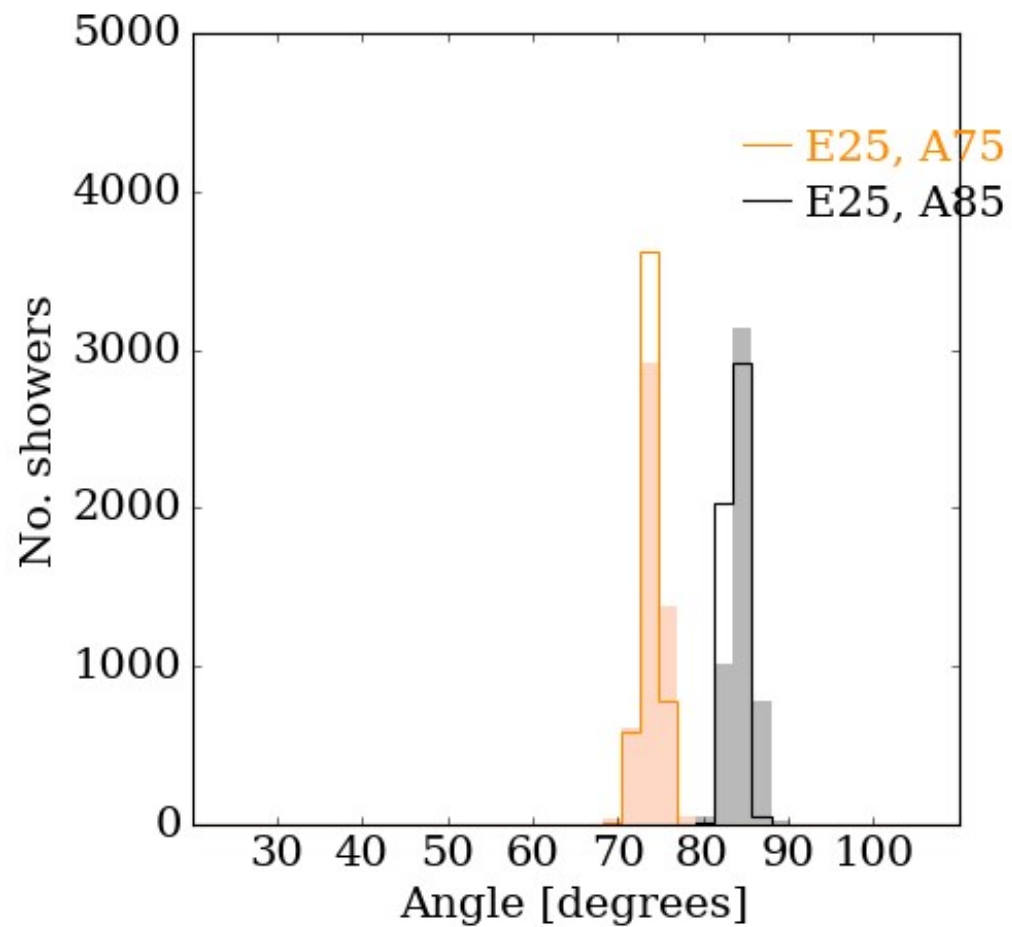
E35 GeV,
A75 deg



E35 GeV,
A85 deg



Angular distribution



BIBAE

- Comet integration
- Training ongoing

