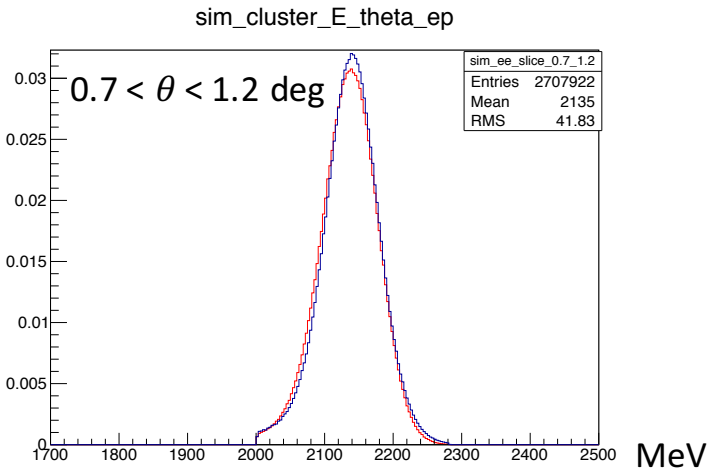
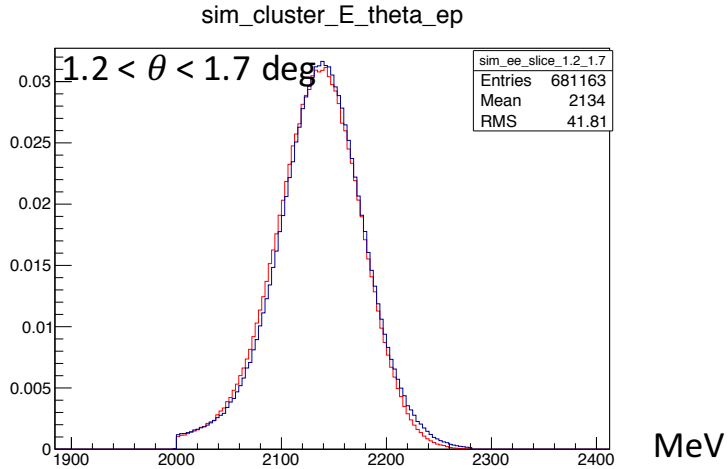
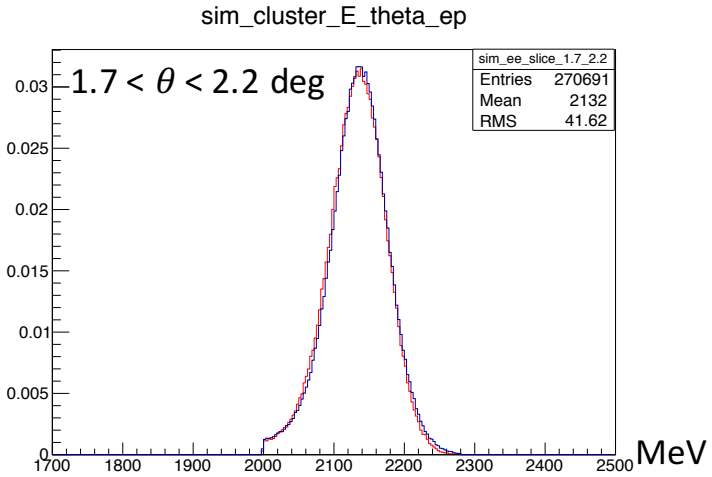
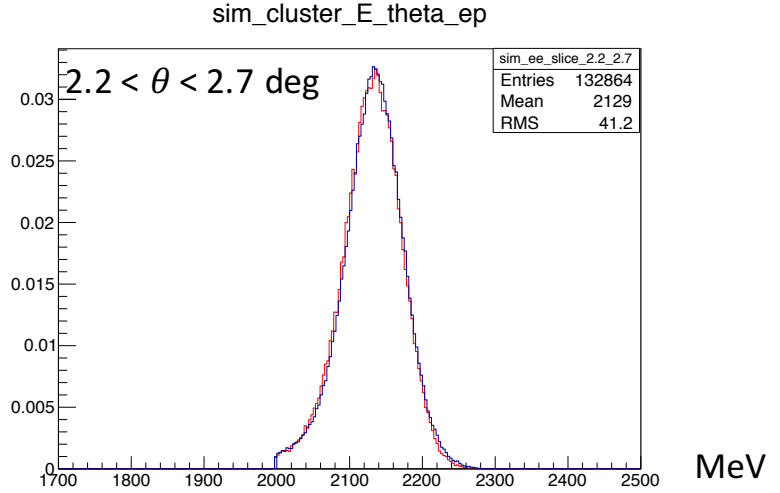
# MC calibration result -- ep

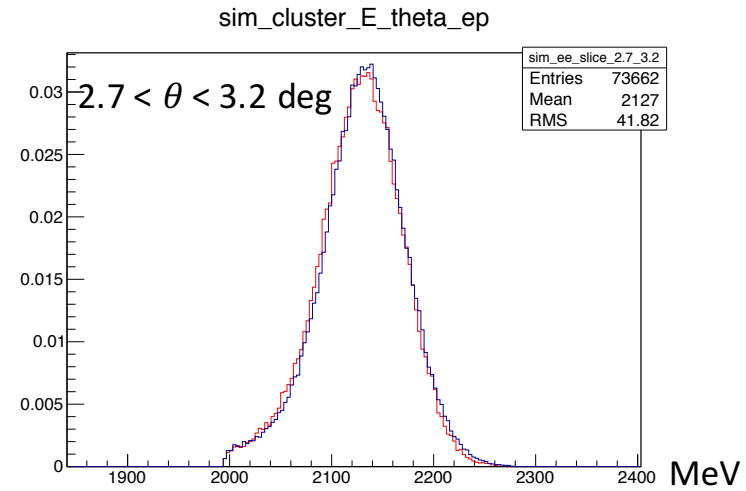


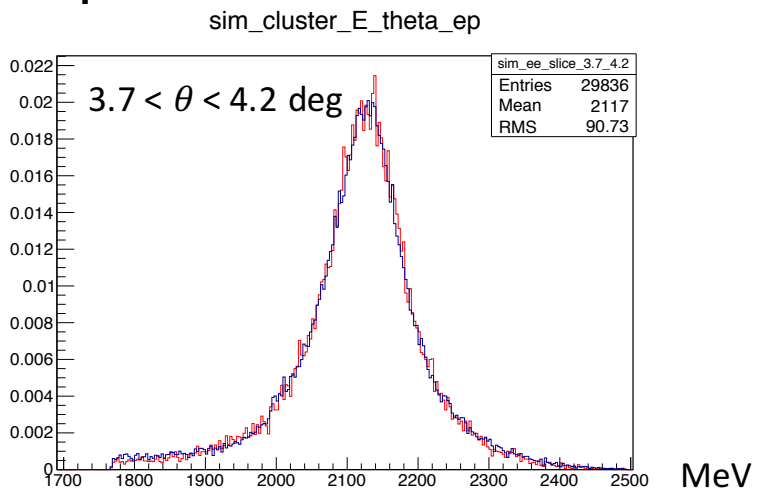



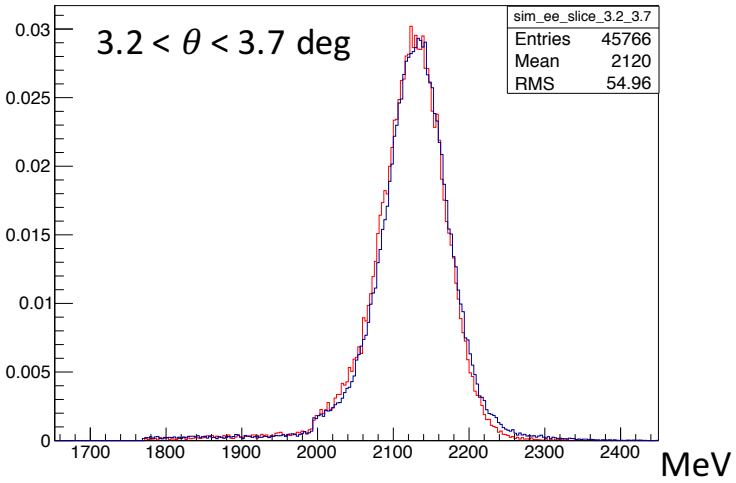



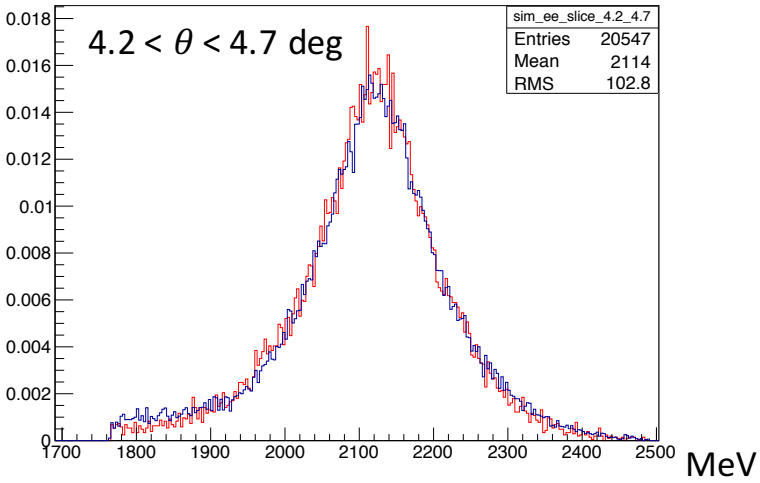



# MC calibration result -- ep

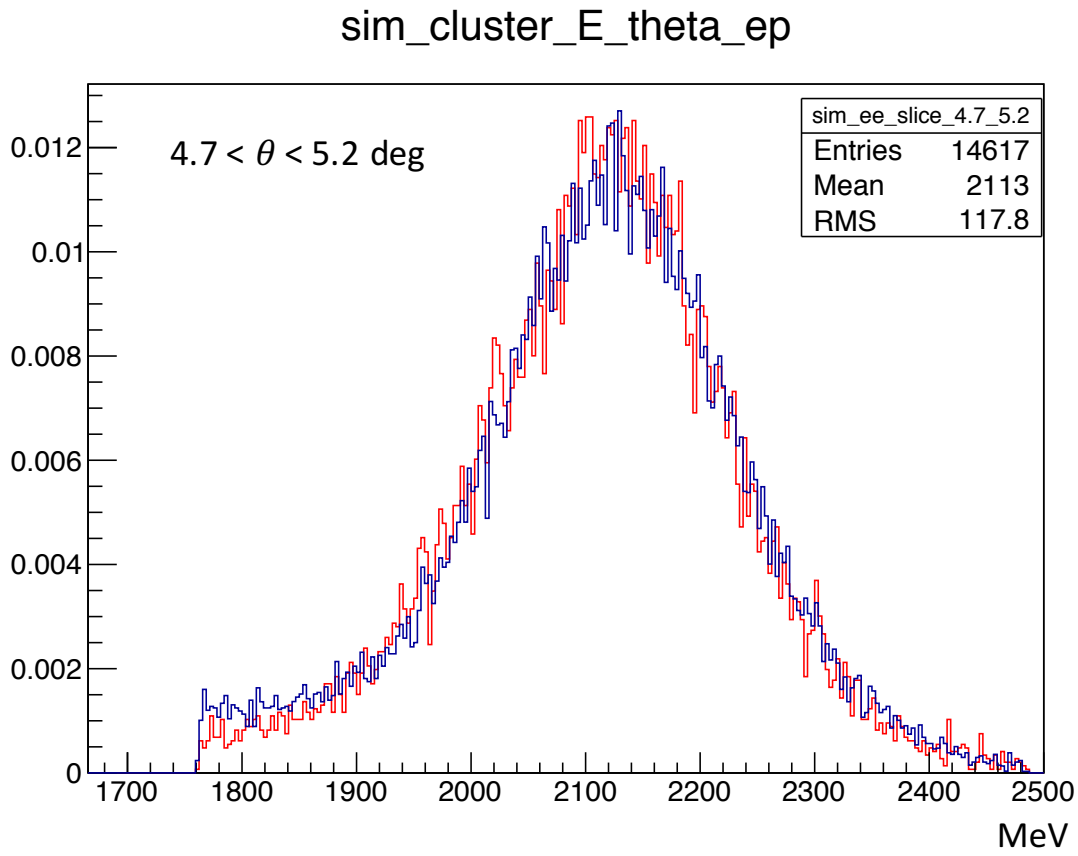


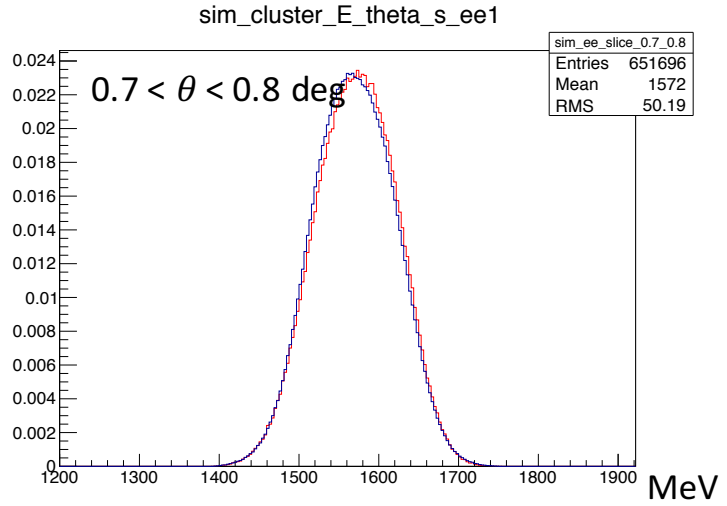



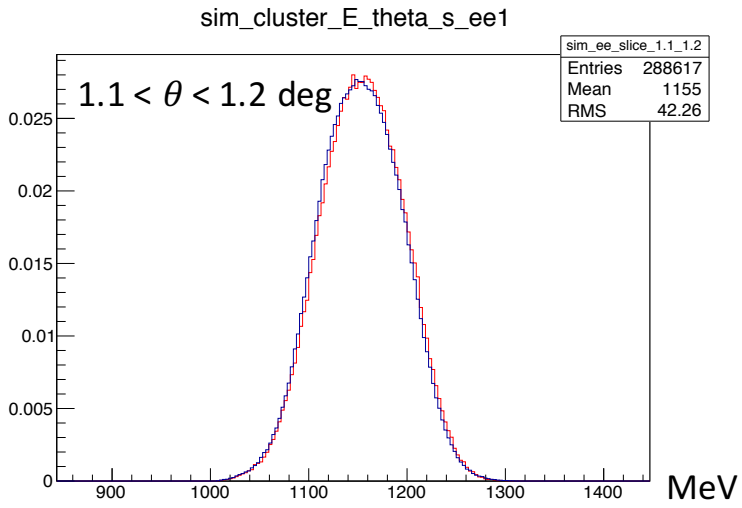



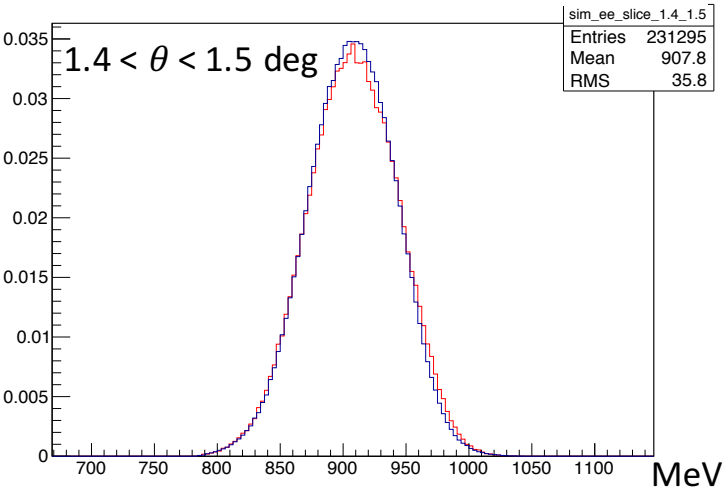
# MC calibration result -- ep

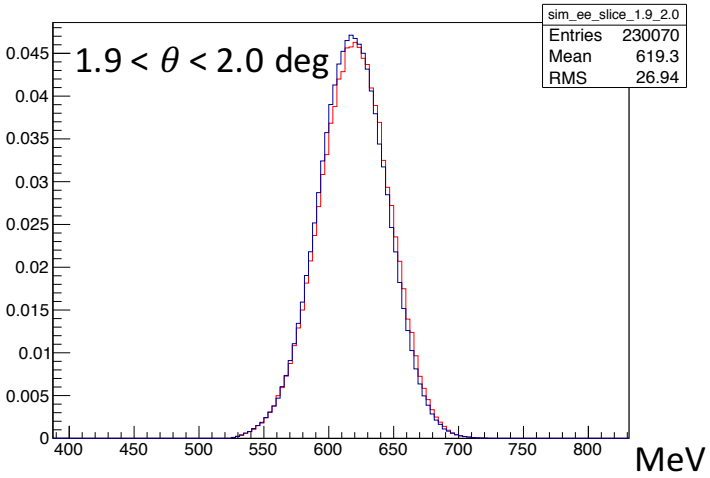


# MC calibration result -- ee



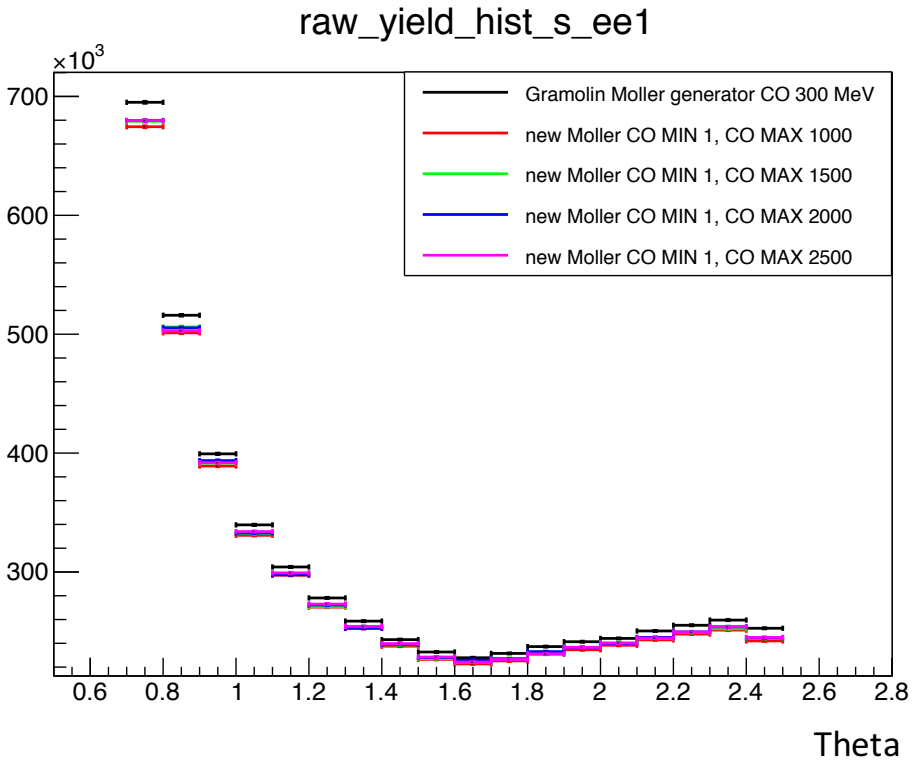



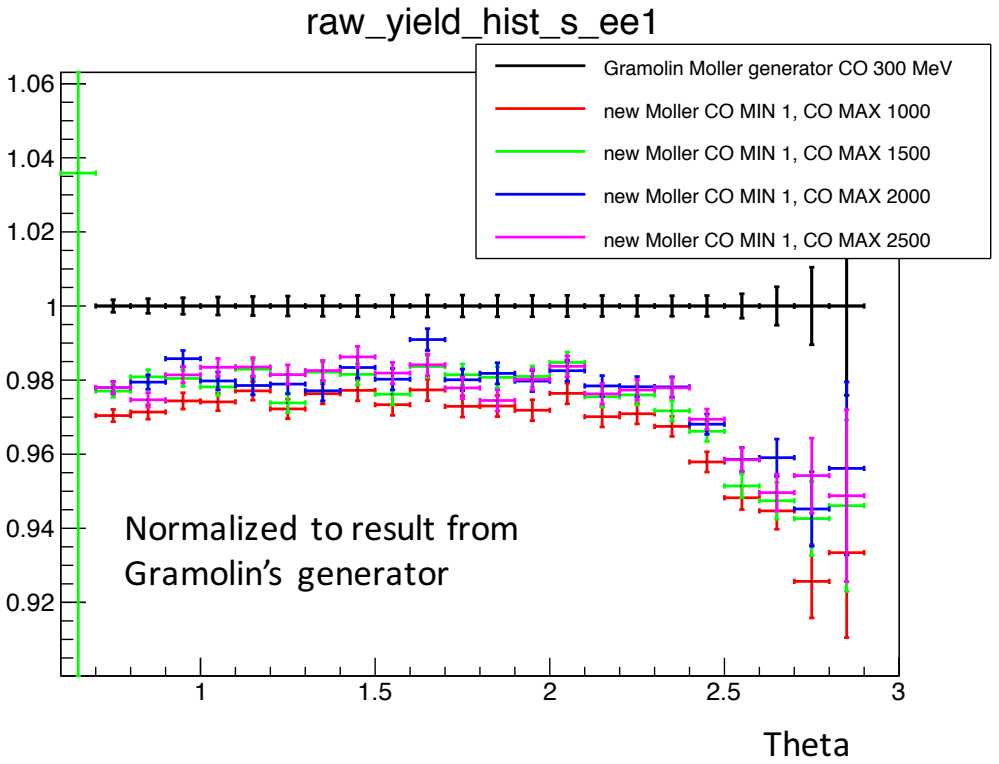



# Testing the new Moller generator

- New Moller generator developed by Chao Peng and Chao Gu, based on Mehdi and Igor Akushevich's work
- Test the new generator and compare with Gramolin's Moller generator
- Cuts are based on $v$ (≈s+t), instead of the radiative photon energy as in the Gramolin's generator

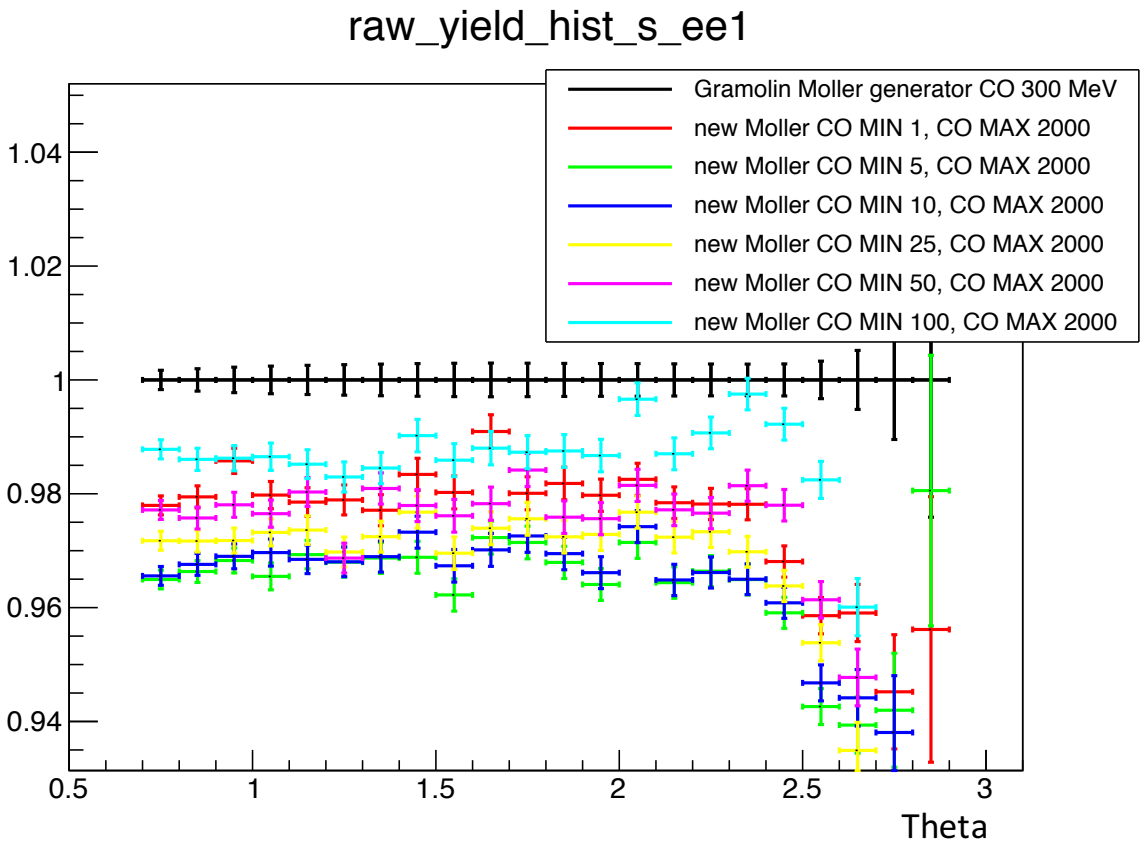


# Testing the new Moller generator

Large fluctuation observed in the yields when changing $v$ min, possibly due to the precision of numerical integration

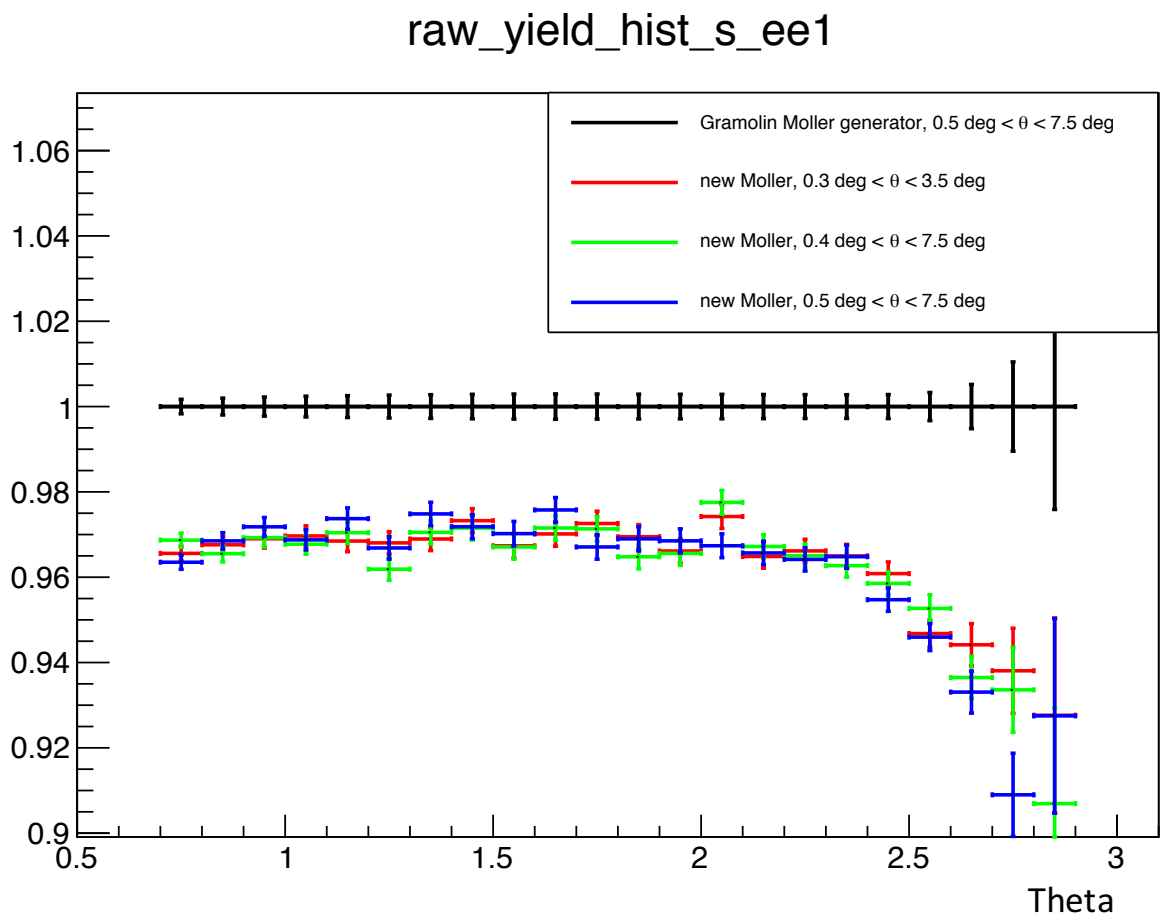
Code has been modified to address this, will get test result later this afternoon



# Testing the new Moller generator

Statistically consistent result when changing theta range for the generated events

Region of interest: 0.7 ~ 2.0 deg



# Summary

- the width and mean value of the elastic peak from simulation agree with the data within around 0.2~0.3%

- Testing the new generator is on-going:
  - So far gives consistently lower yield compared to the Gramolin's generator

- Plan for the cross section from 2 ~ 6 degree
  - Data has been corrected by GEM efficiency (my result), will need to update the efficiency by from Xinzhan's result
  - The corrected data will be compared to the simulation to extract correction factor for RC
  - Check the result against the one obtained using Hybrid double arm selection method (0.7 ~ 2.0 deg)