ECAL Update 3
Energy Resolution Simulation

- Input flat distribution: electrons
- No radiative effects in the target
- Setup only include ECAL and sensitive detector replacing last GEM in vacuum medium.
- Use ecal cluster energy and input momentum to get energy resolution for shower only and pre-shower + shower combination
- Previous simulation included target geometry, last 2 GEMs, and ECAL in air medium
- Energy deposit in the scintillator material is sum of ionization + non-ionization
Input Flat Distribution at Last GEM

Input Momentum

Input Angle

Input Radius
Background due to Radiative Effects

Simulation included empty target geometry, last 2 GEMs, and ECAL in air medium
Background due to Radiative Effects

Simulation only include ECAL and sensitive detector replacing last GEM in vacuum medium
edep over $P_f$ Ratio in Shower
Shower Energy Resolution

Based on total energy deposit in the Ecal
edep over P$_f$ Ratio in PS + Shower
Pre Shower + Shower Energy Resolution

Using total energy deposit in the pre-shower and shower
Jin's Energy Resolution (with No Phot. Elec.)

- Jin's estimation was based on ecal energy deposition
  - No Photo-Electron (PE) contributions