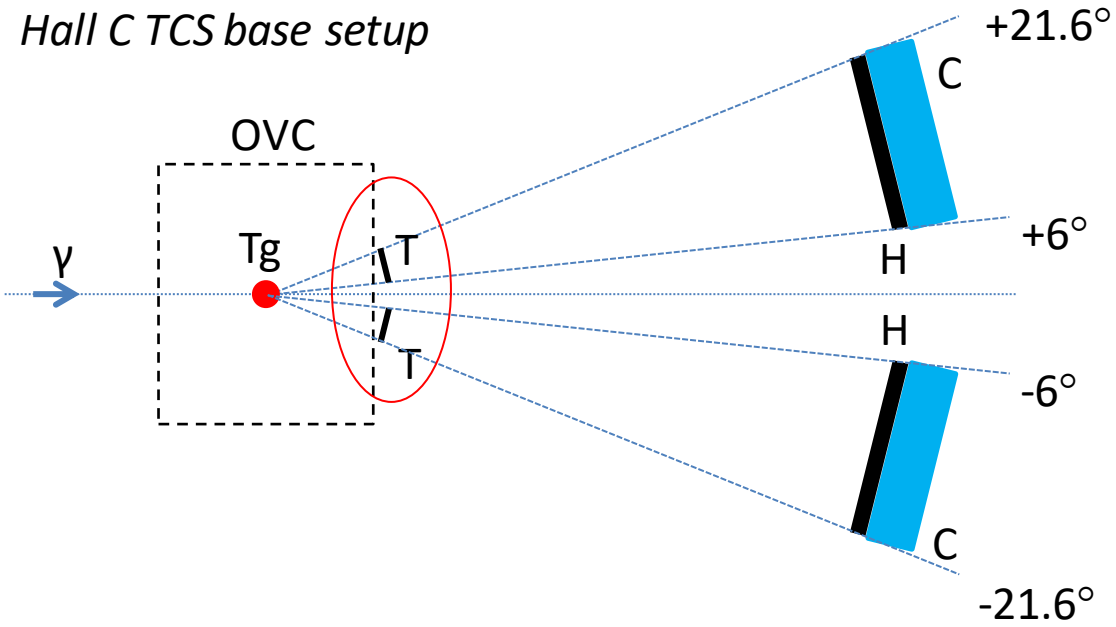
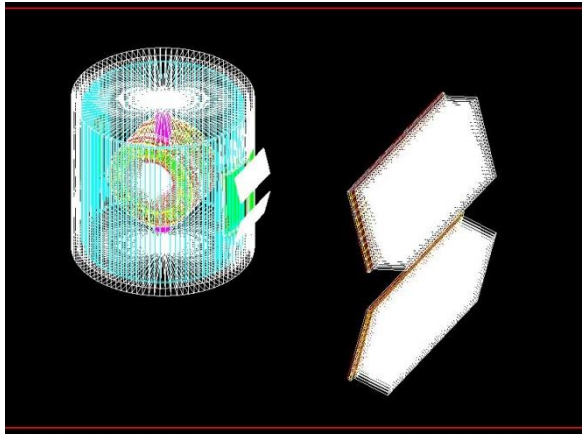
# Gamma conversion backgrounds from target in Hall C TCS setup

Status, results

V.Tadevosyan

*Hall C TCS base setup*



Geant4 rendering

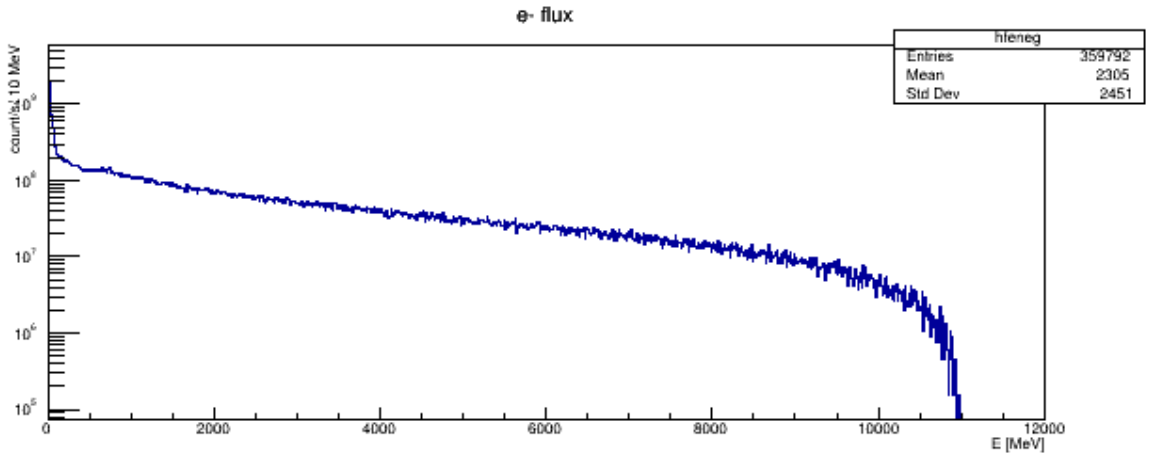
In these calculations:

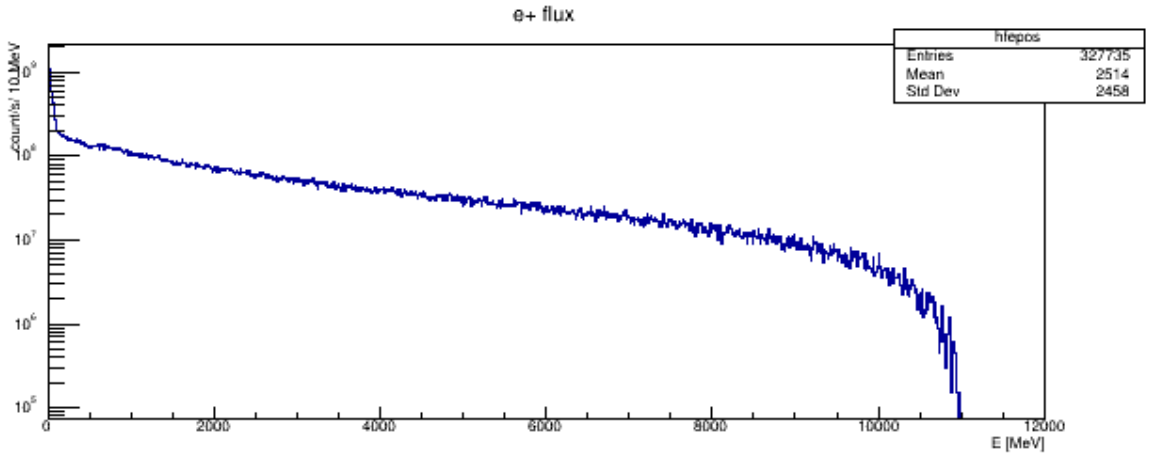
- 11 GeV photon beam, $1.5 \times 10^{12}\ s^{-1}$ CPS intensity
- UVA polarized ammonia target
- 36.5 mil Al before Trackers

TrackerX: 332 1 mm thick, 15 cm long scint-s

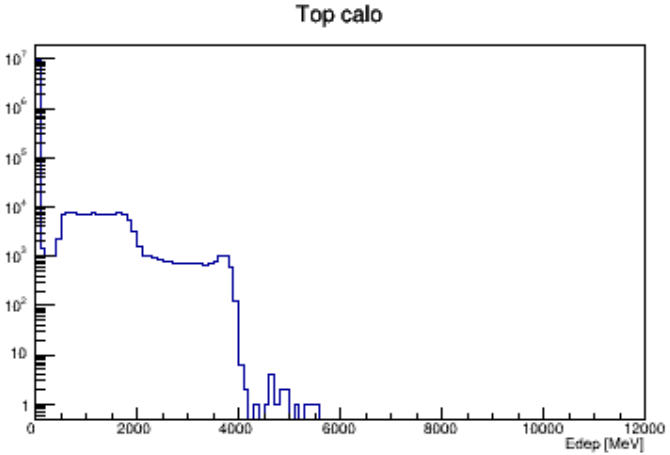
TrackerY: 150 1 mm thick, 33.2 cm long scint-s

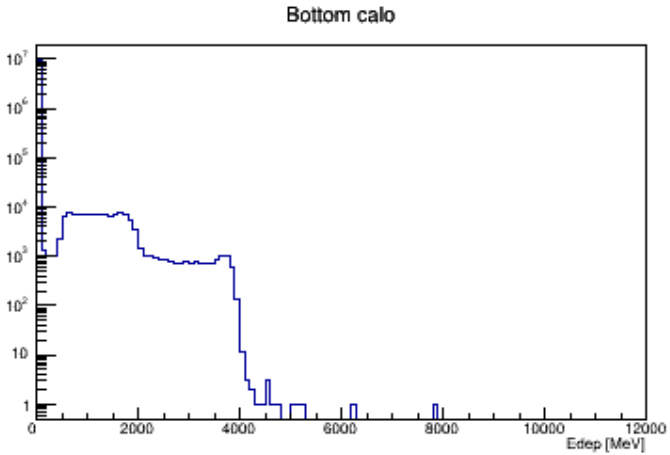
# CPS photon beam on UVA target, e- & e+ fluxes from target

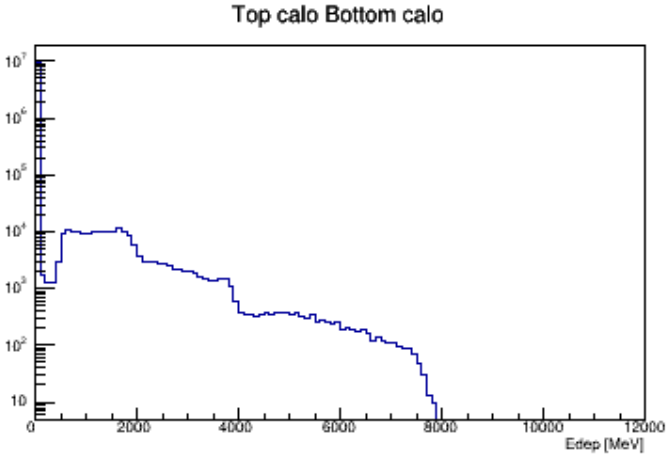


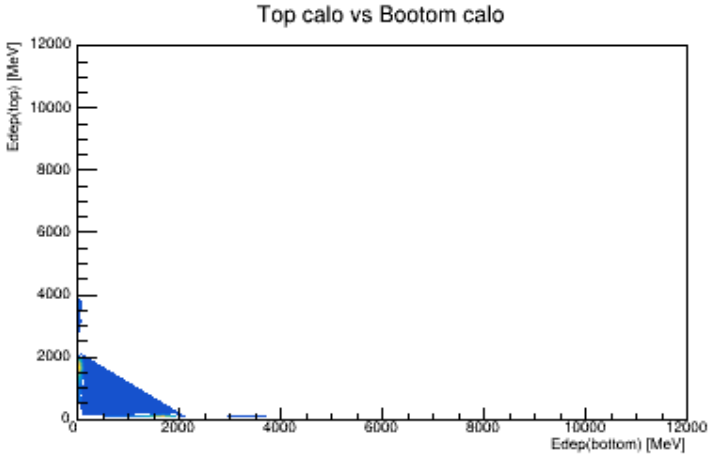



# CPS photon beam on UVA target, Edep in calorimeters

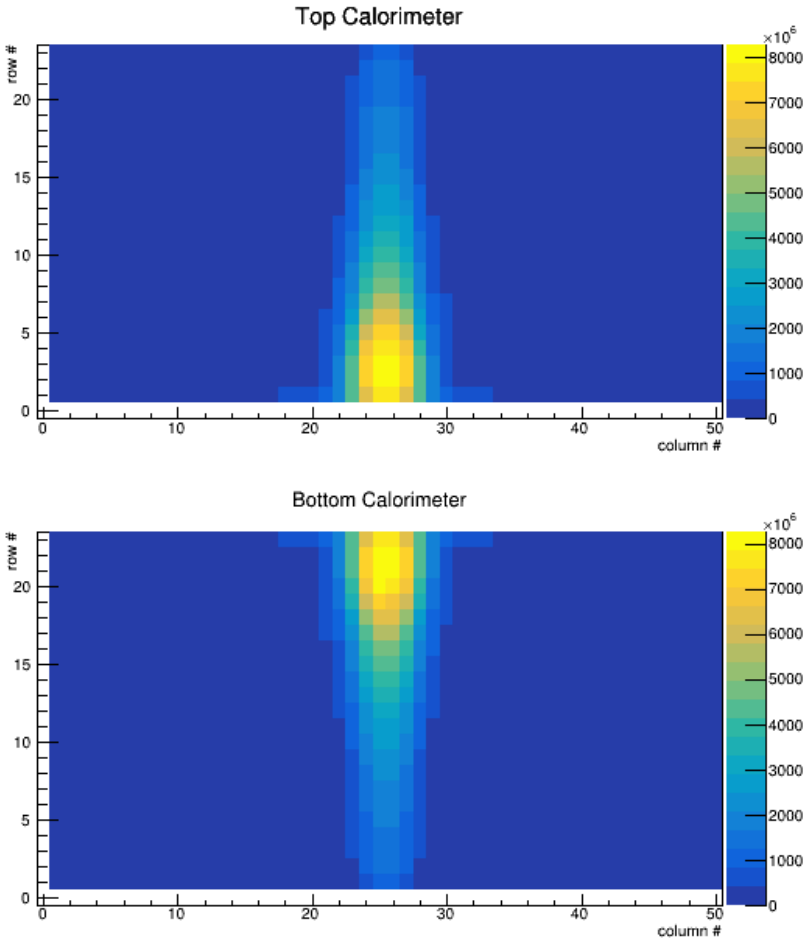


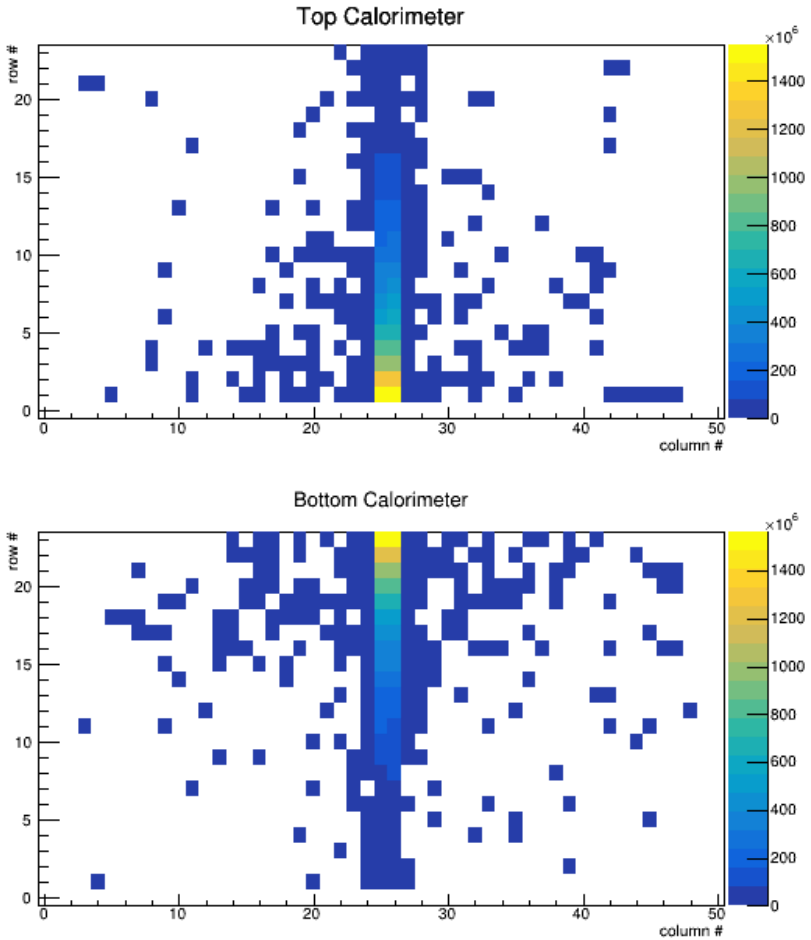



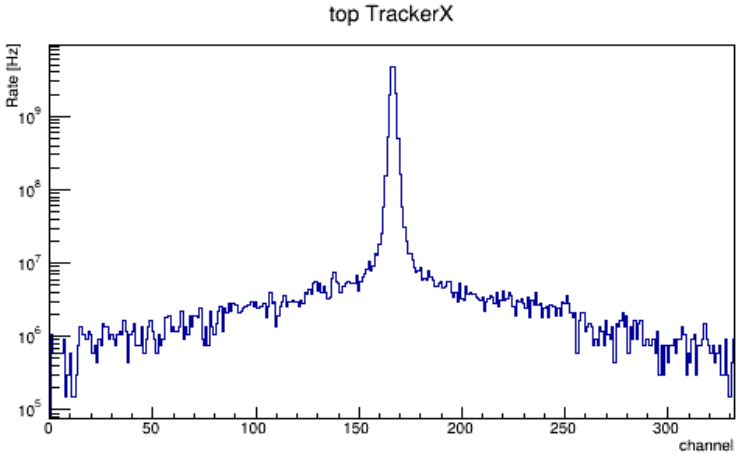
CPS brem. photn beam on UVA trans. pol. target, Edep > 1 MeV, rates [Hz]

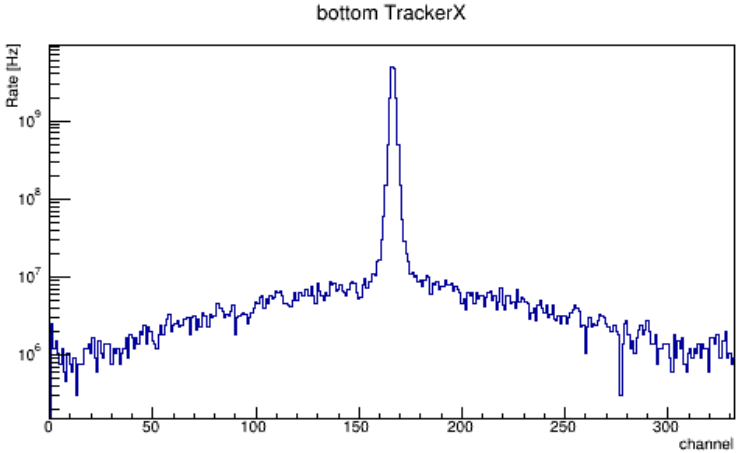



CPS brem. photn beam on UVA trans. pol. target, Edep > 500 MeV, rates [Hz]

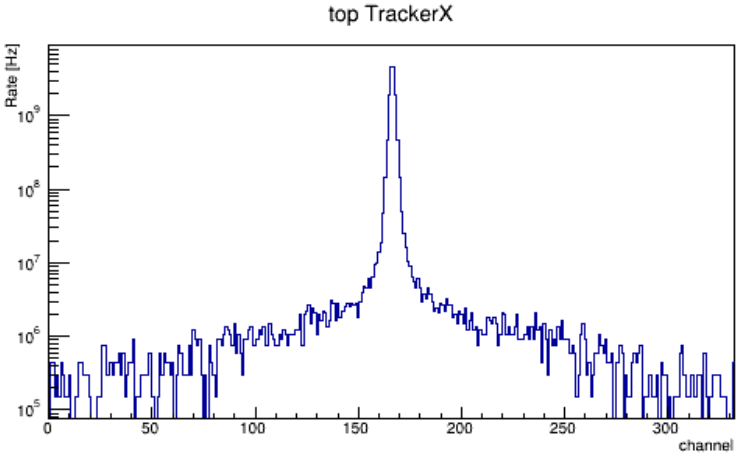


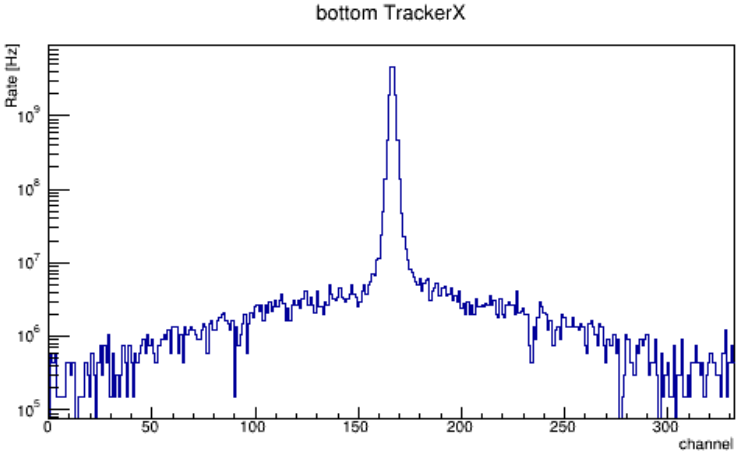
**CPS brem. photn beam on UVA trans. pol. target, Edep > 0.1 MeV, rates [Hz]**



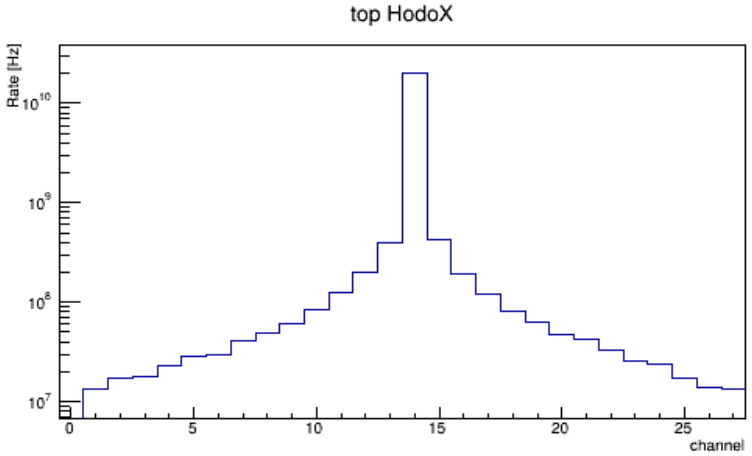




**CPS brem. photn beam on UVA trans. pol. target, Ecalo > 500 MeV, rates [Hz]**

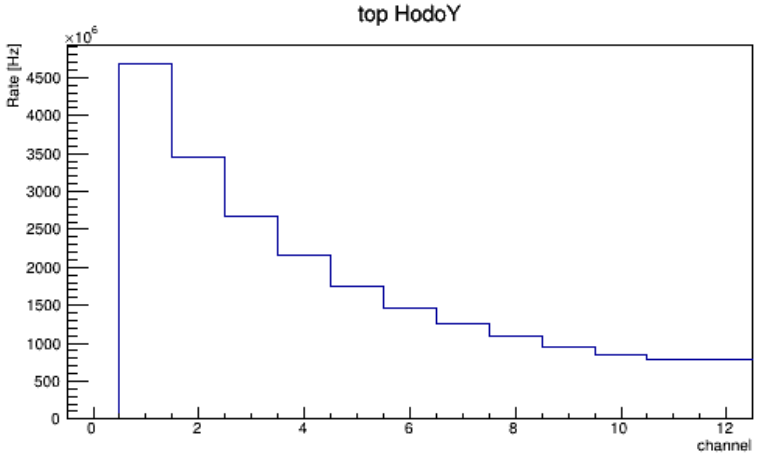


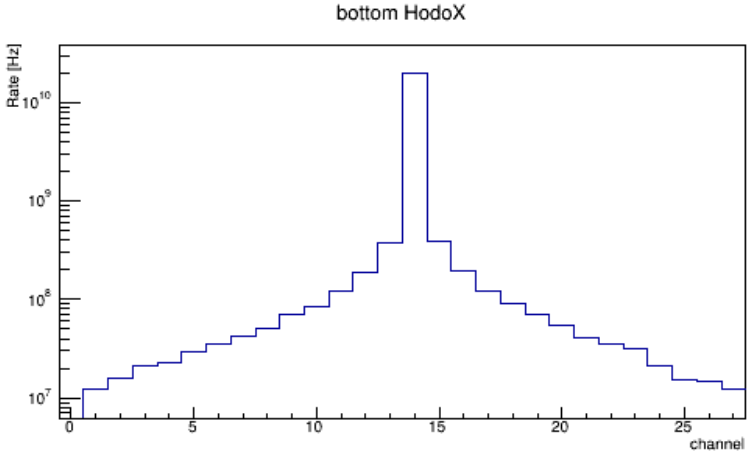



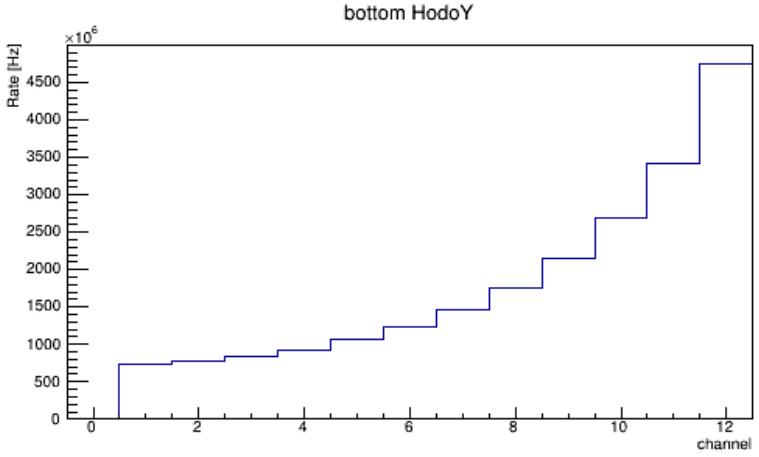
CPS brem. photn beam on UVA trans. pol. target, Edep > 1. MeV, rates [Hz]




CPS brem. photn beam on UVA trans. pol. target, Edep > 1. MeV, rates [Hz]

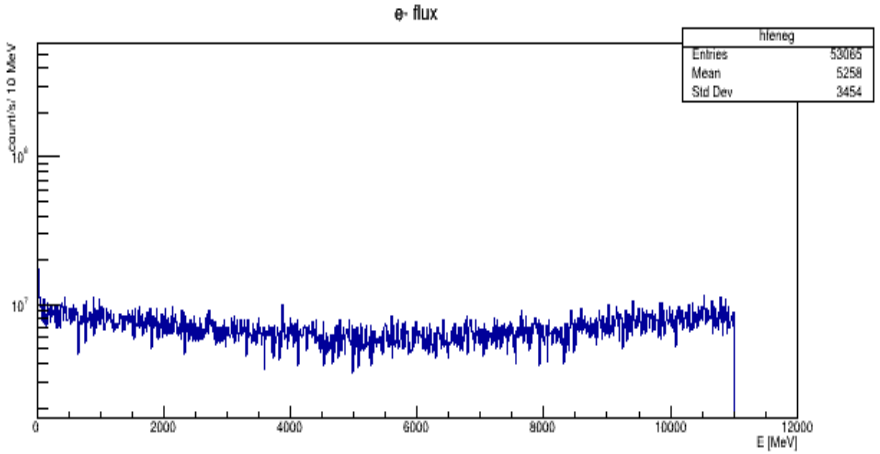


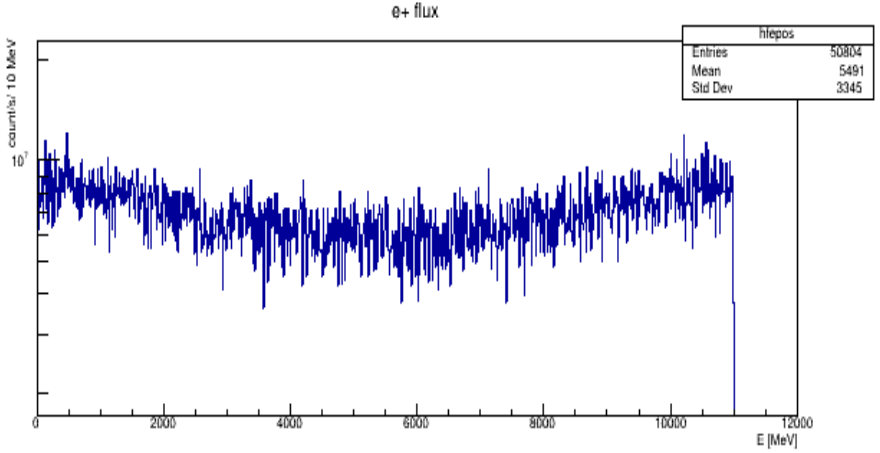



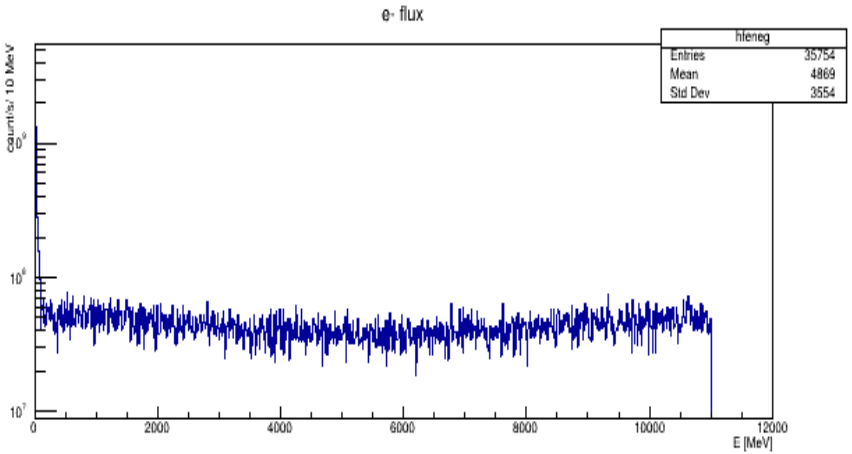
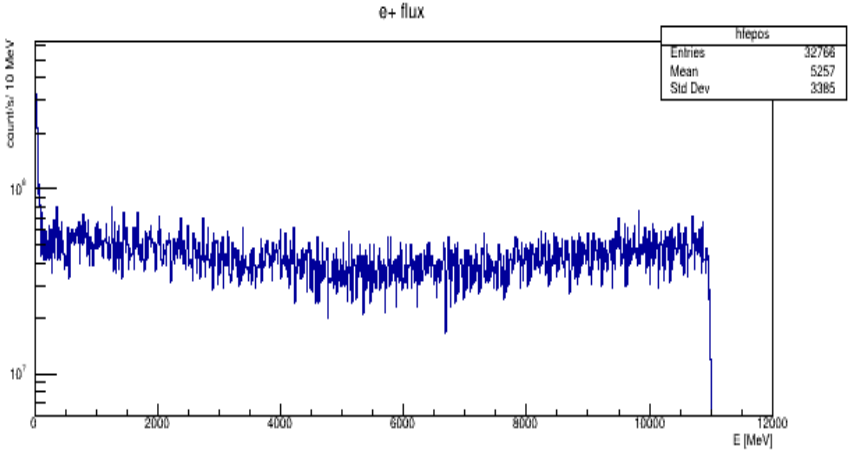



# Backup slides

## 11 GeV photon beam on 1 mm C target, e- and e+ fluxes




## 11 GeV photon beam on UVA target, no coils