

Summary plots

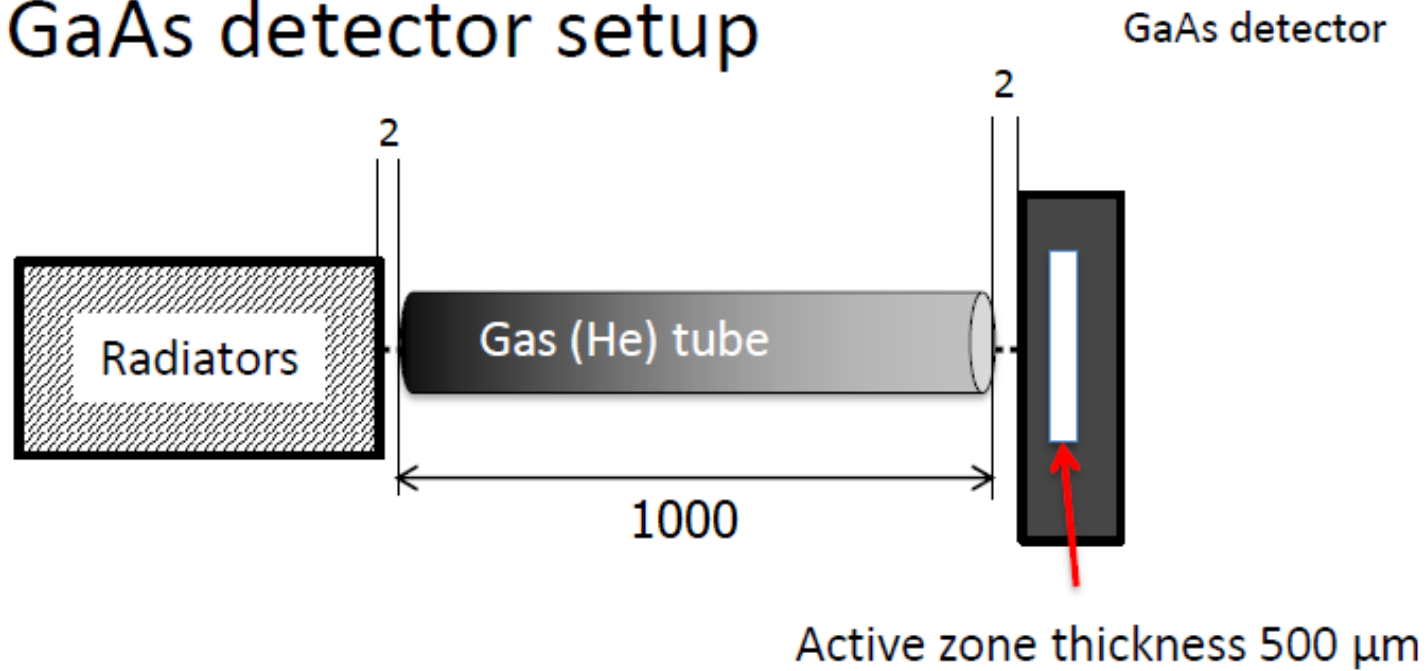
Foil: 25, 27, 30, 33, 35 μm PE film

Spacing: 0.3, 0.4, 0.5, 0.7, 1.0 mm

Number of foils: 100, 200, 300, 400, 500, 600, 700, 800

***Gamma factors: 39139, 24000, 12000, 6000, 3000, 2000, 1500, 1000,
500***

GaAs detector setup



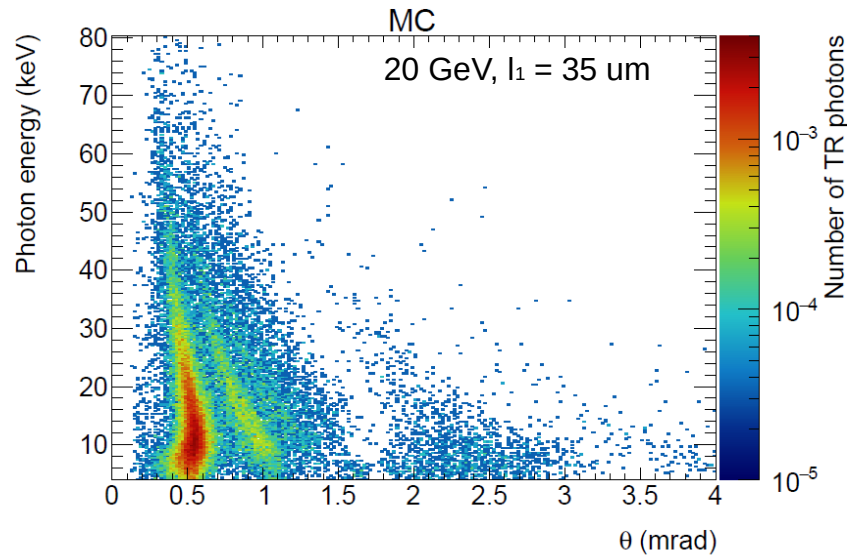
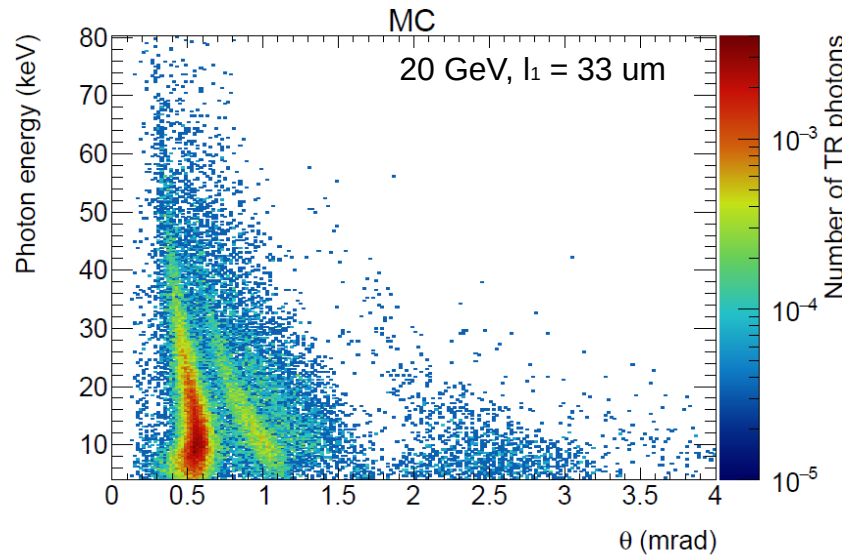
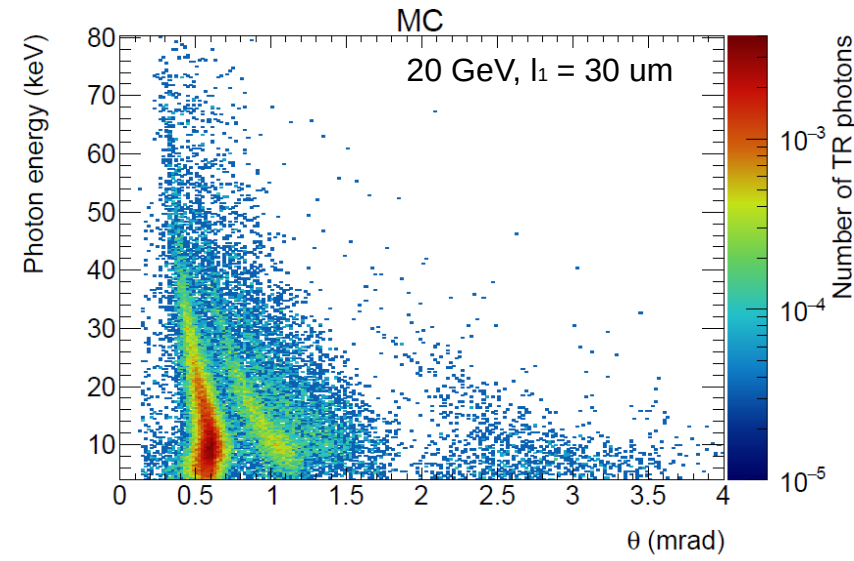
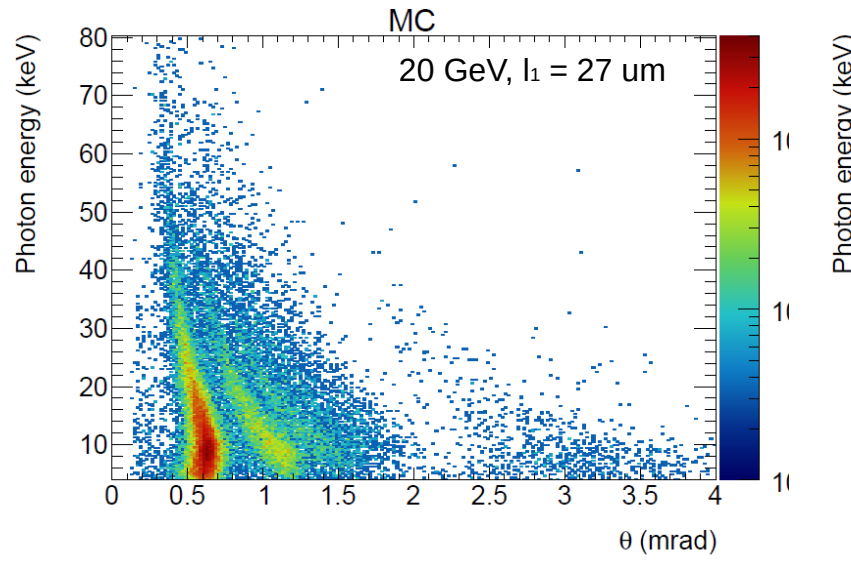
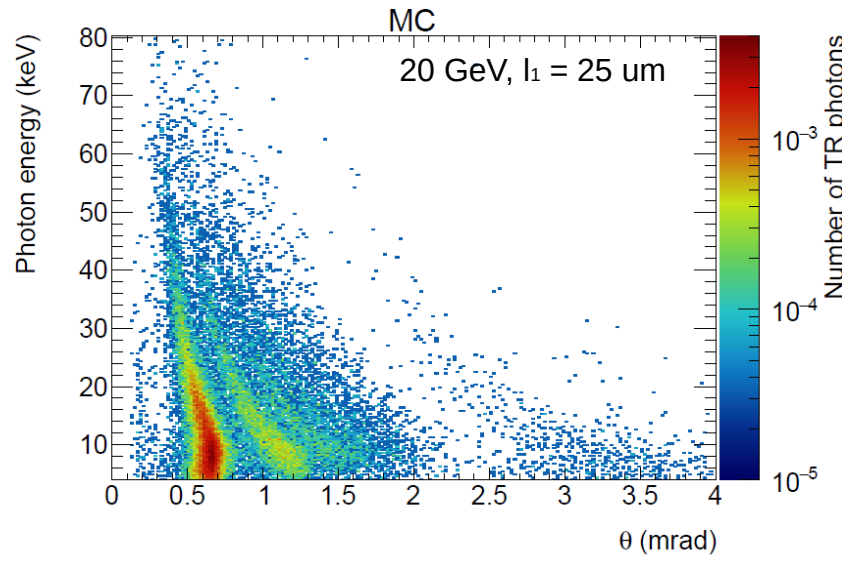
Simulated configuration:

- Foils: 25, 27, 30, 33, 35 μm PE film
- Gas (He) tube: 1000 mm
- Particles: 20GeV electrons
- MC (without dummy radiator)
- Side+corner matching
- No FL cluster merging

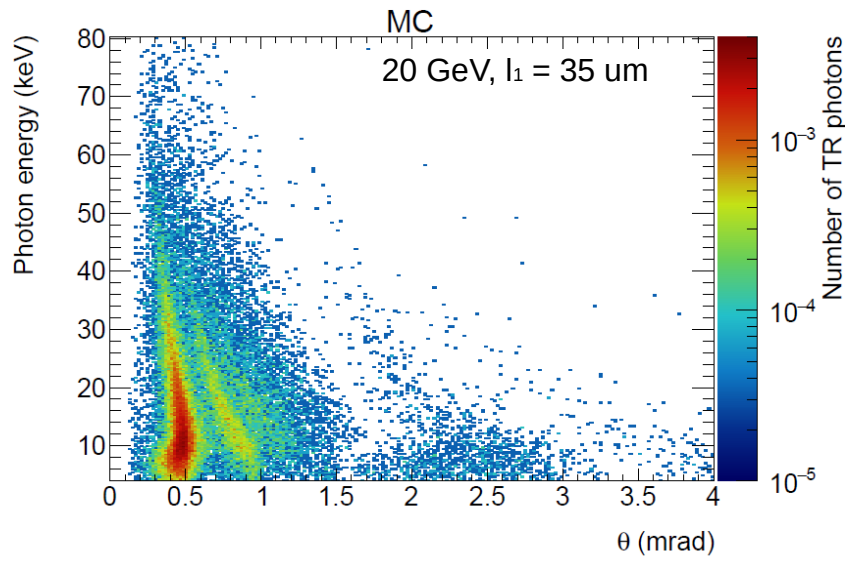
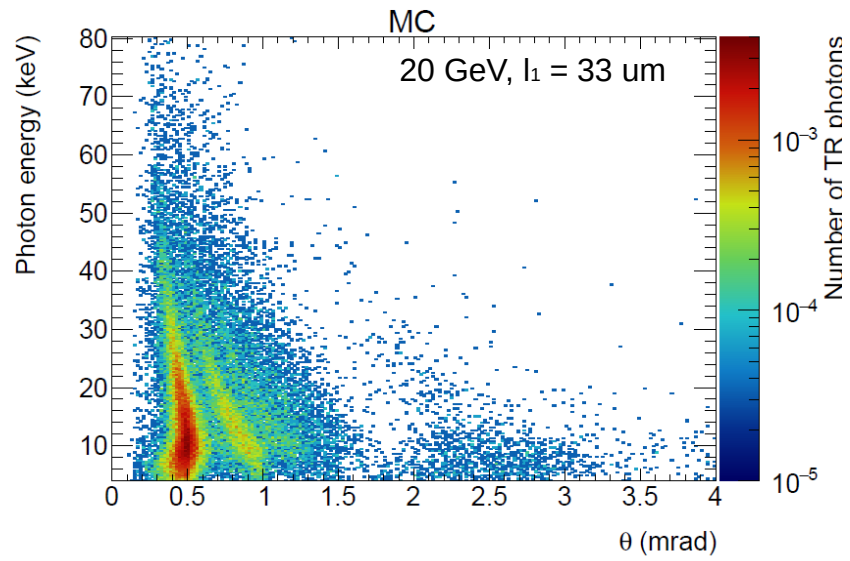
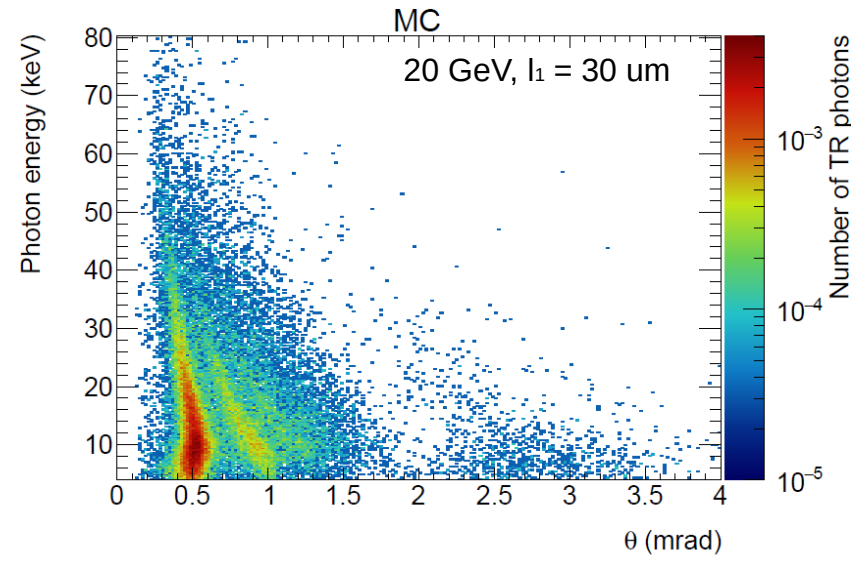
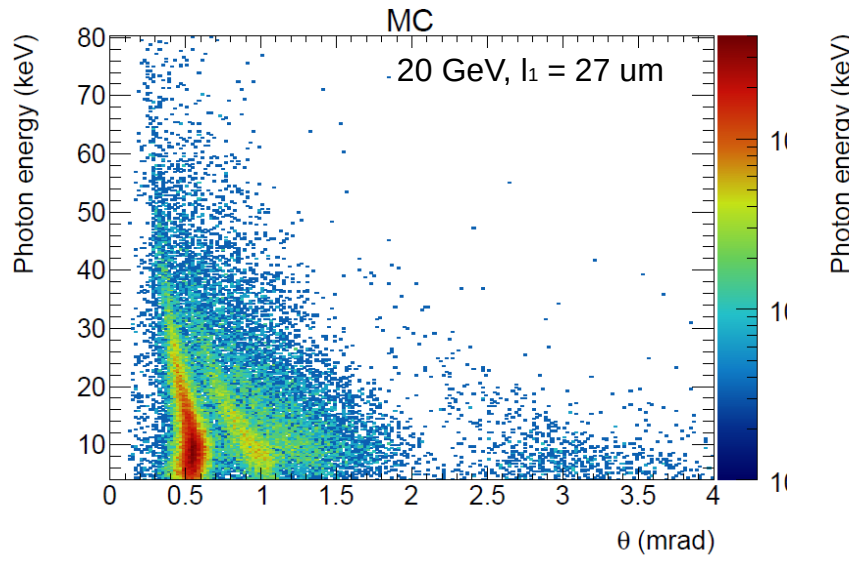
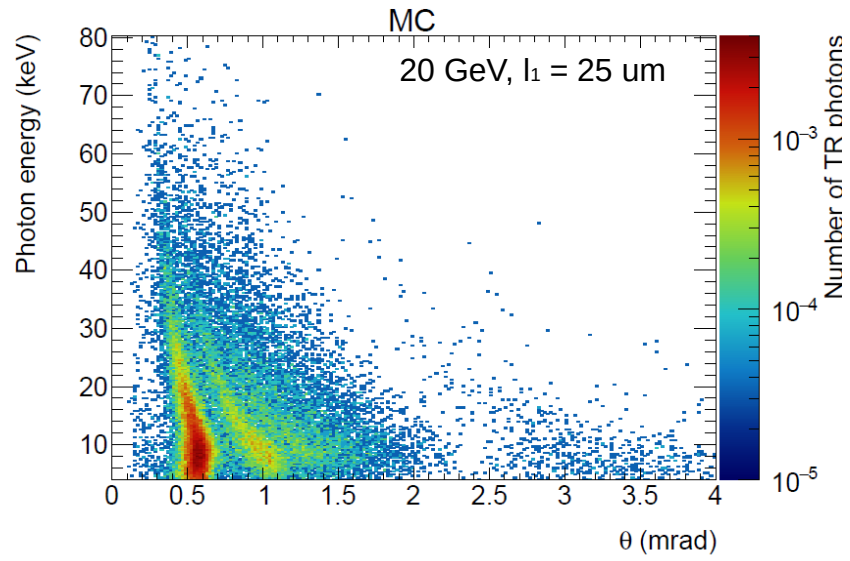
Simulation parameters:

- Ni layer: 1 μm
- Chip (GaAs) thickness: 500 μm
- GaAs dead layer: 3 μm
- Electronics noise level: 426 eV
- Chip energy threshold: 4.2keV
- Diffusion parameter, a_{diff} : 0.014

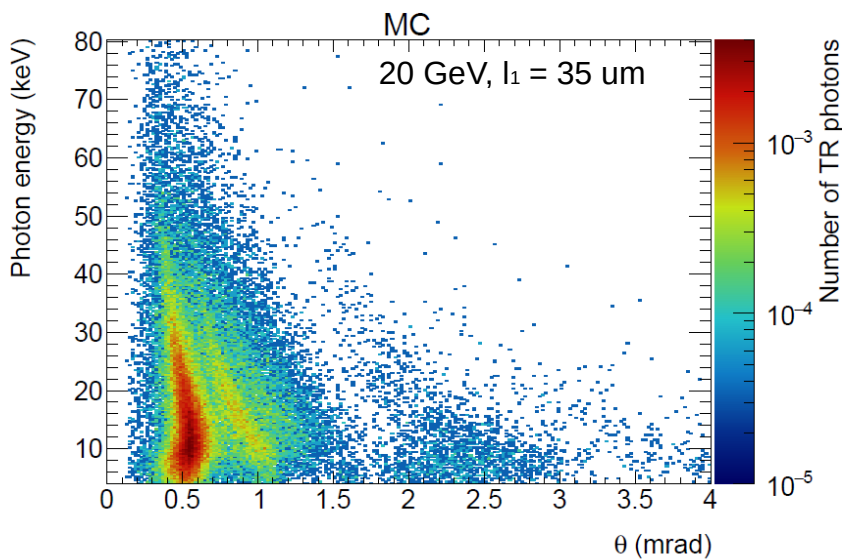
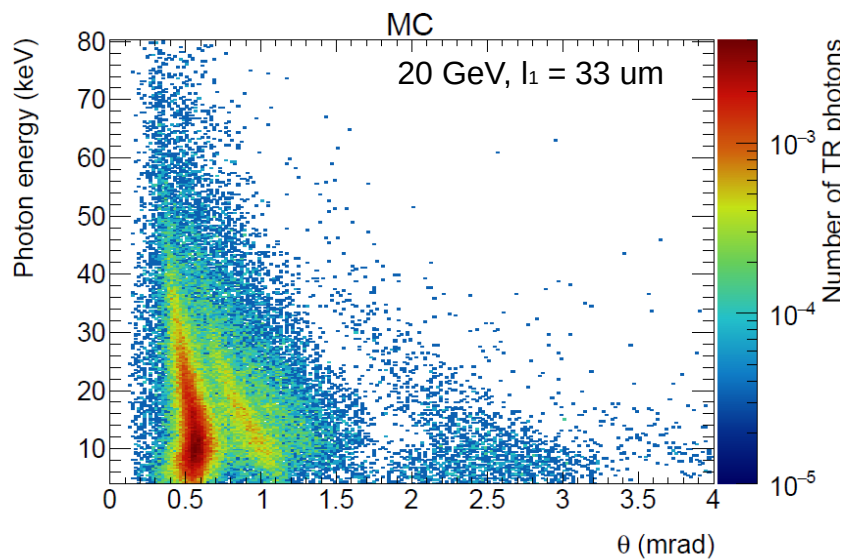
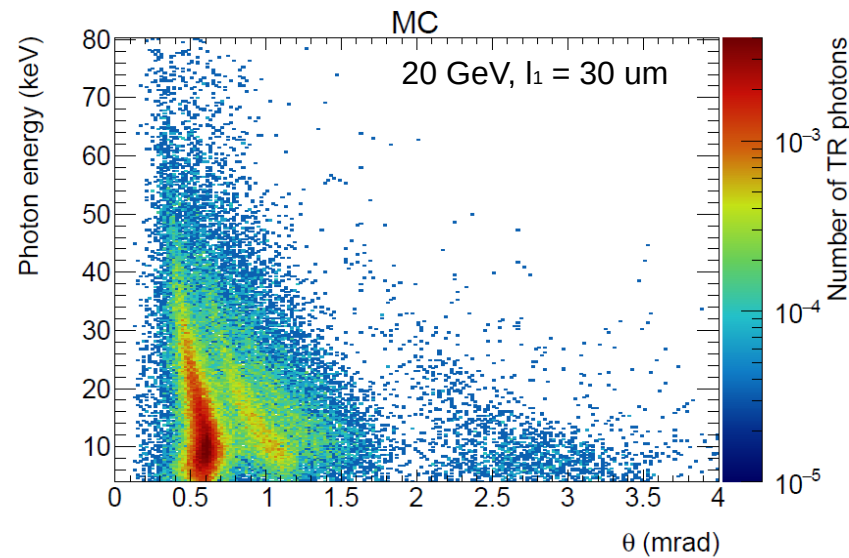
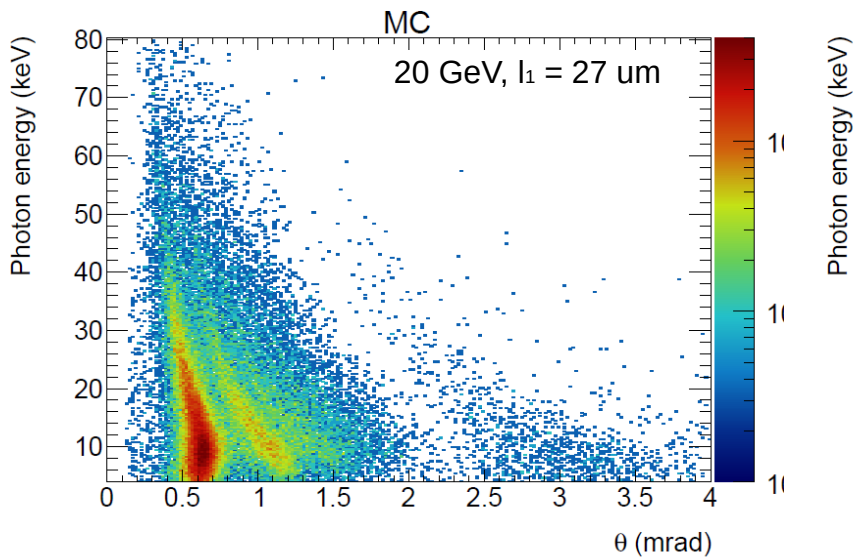
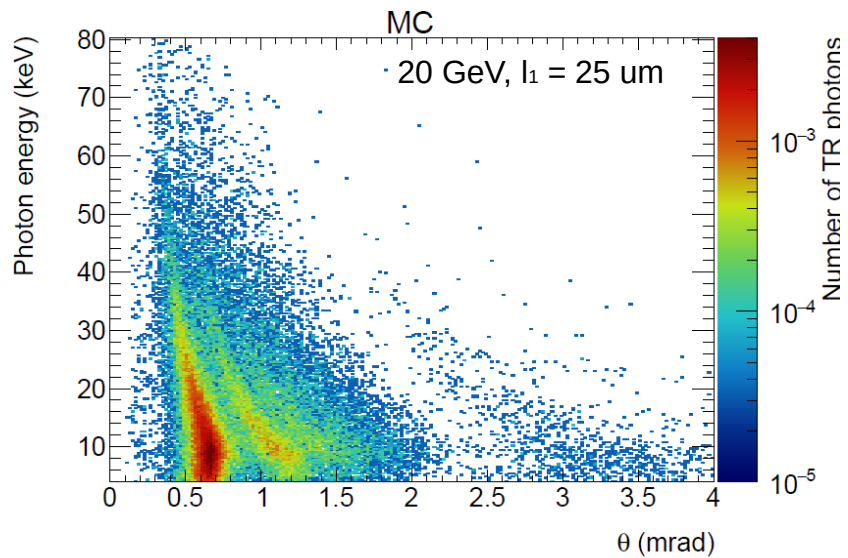
2D spectrum, electrons 20 GeV, L2 = 300 um, Nfoils = 100



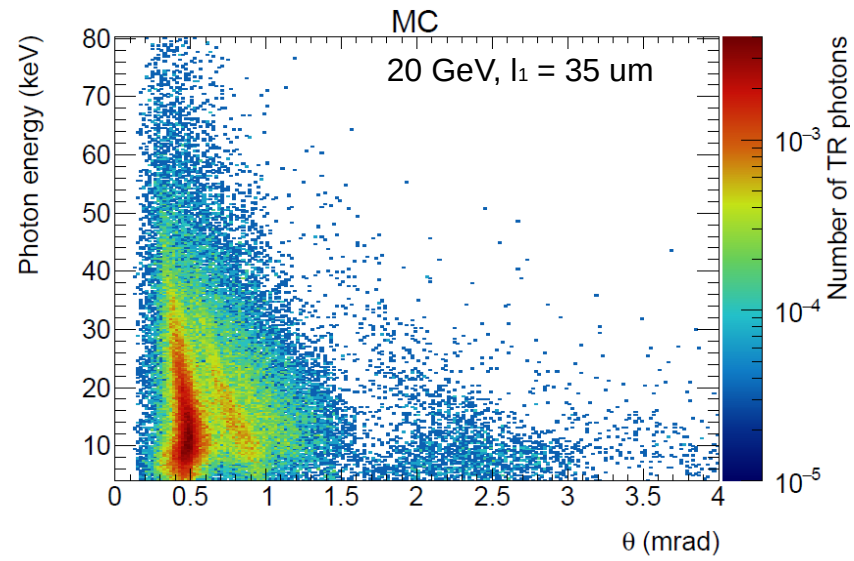
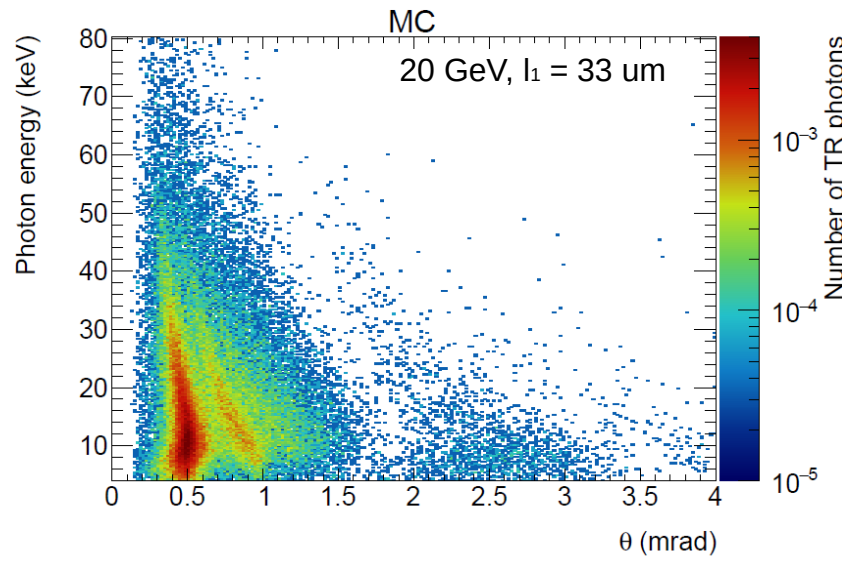
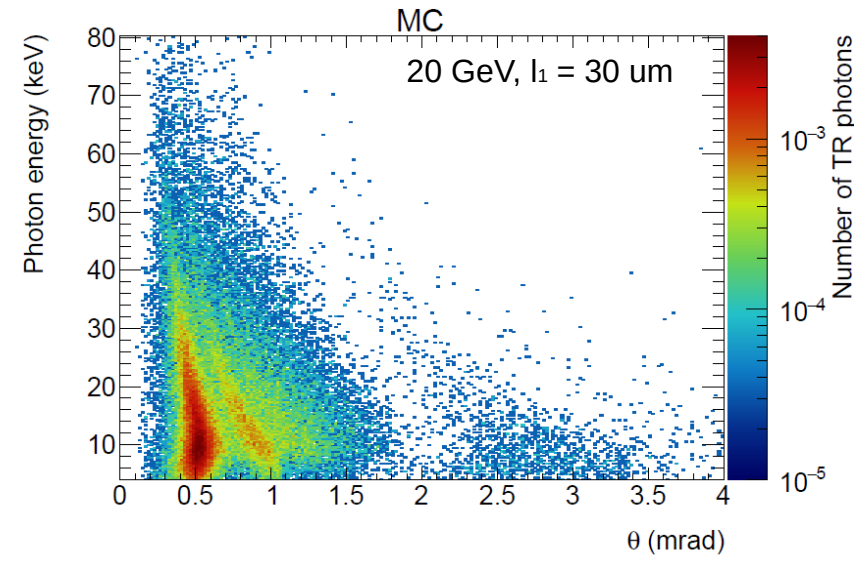
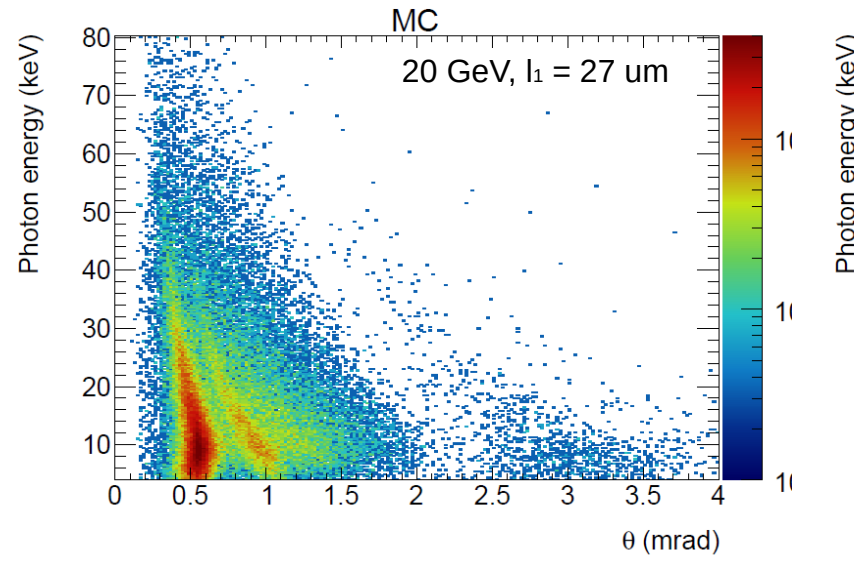
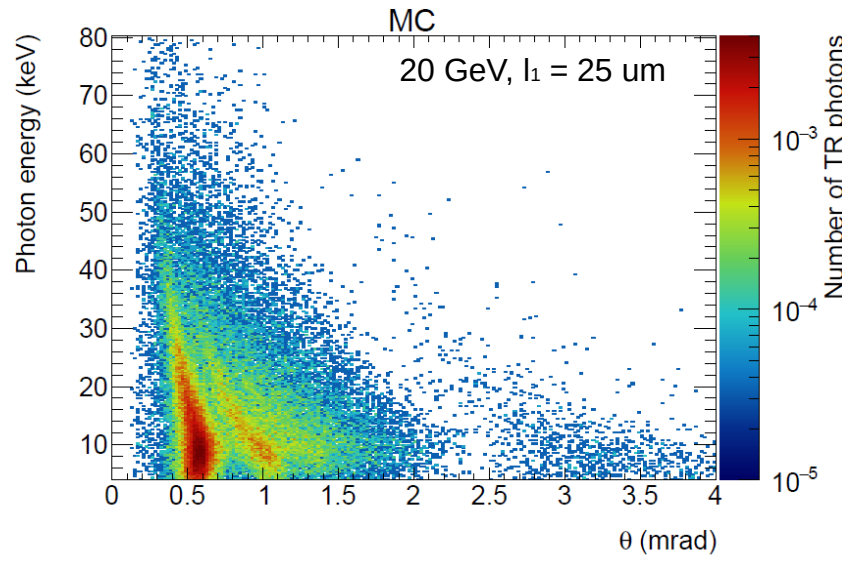
2D spectrum, electrons 20 GeV, L2 = 400 um, Nfoils = 100



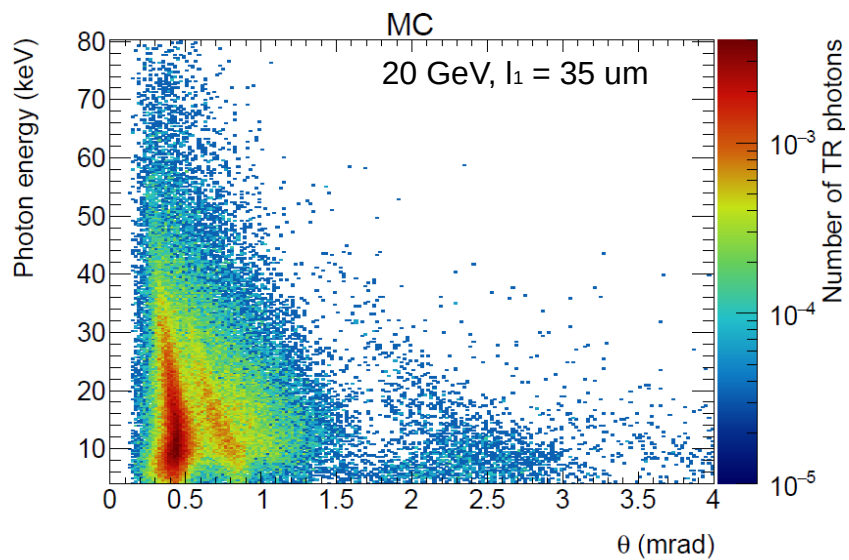
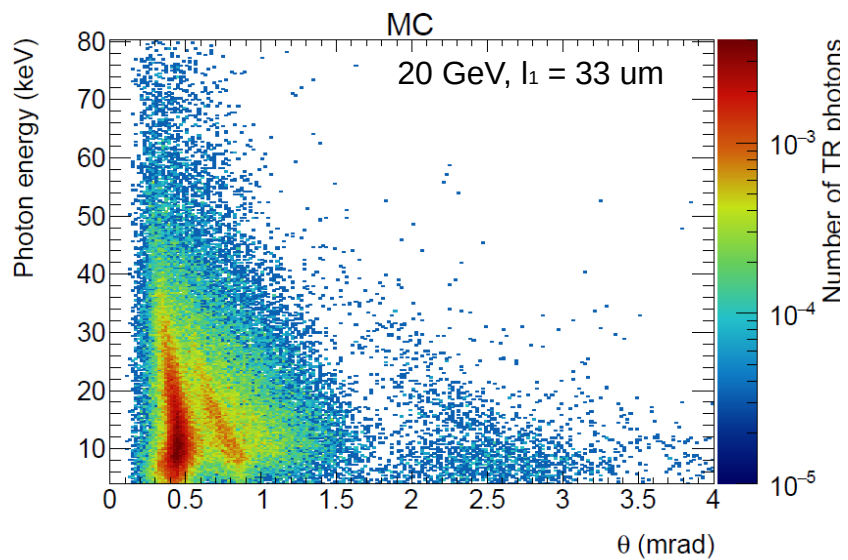
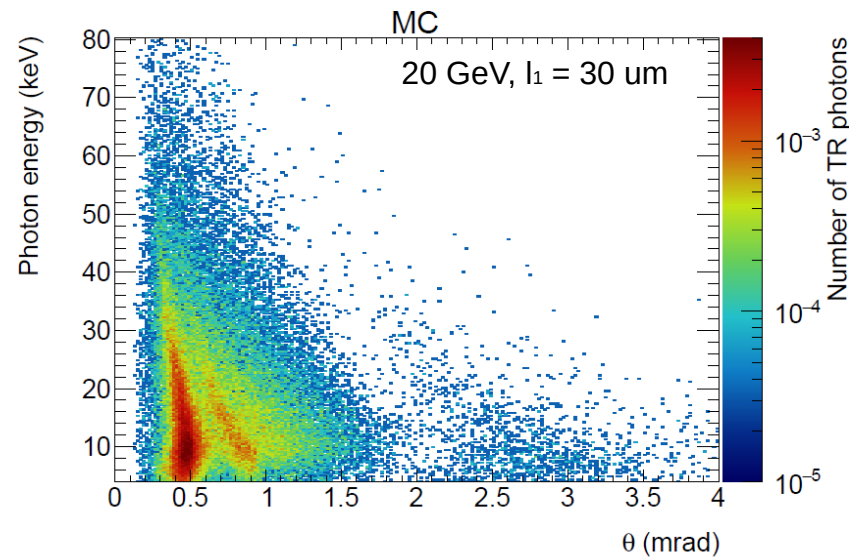
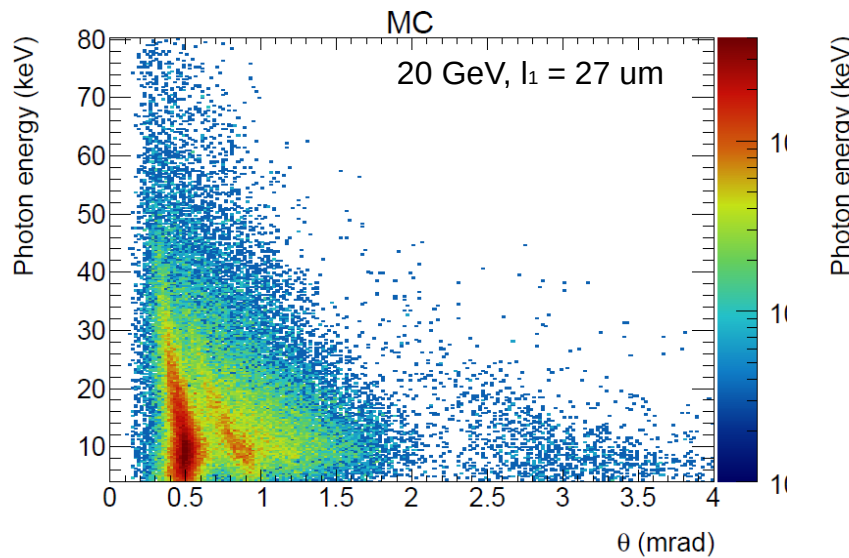
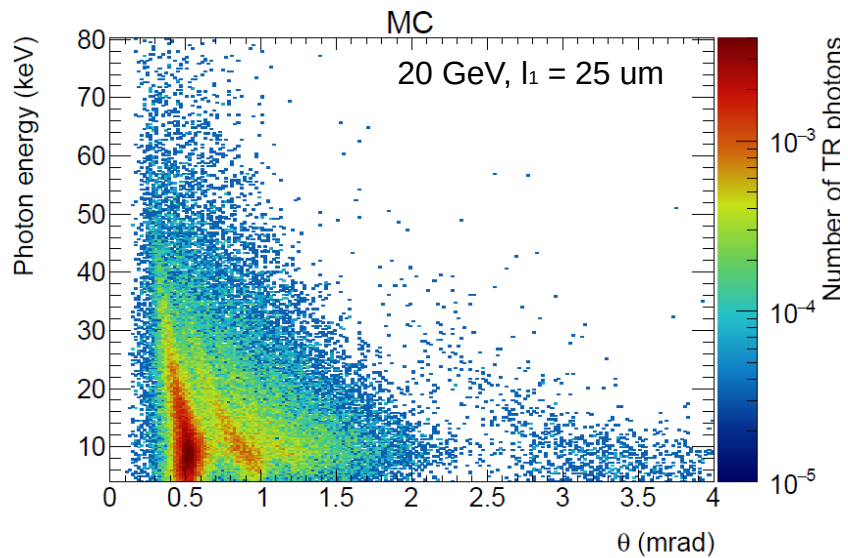
2D spectrum, electrons 20 GeV, L2 = 300 um, Nfoils = 200



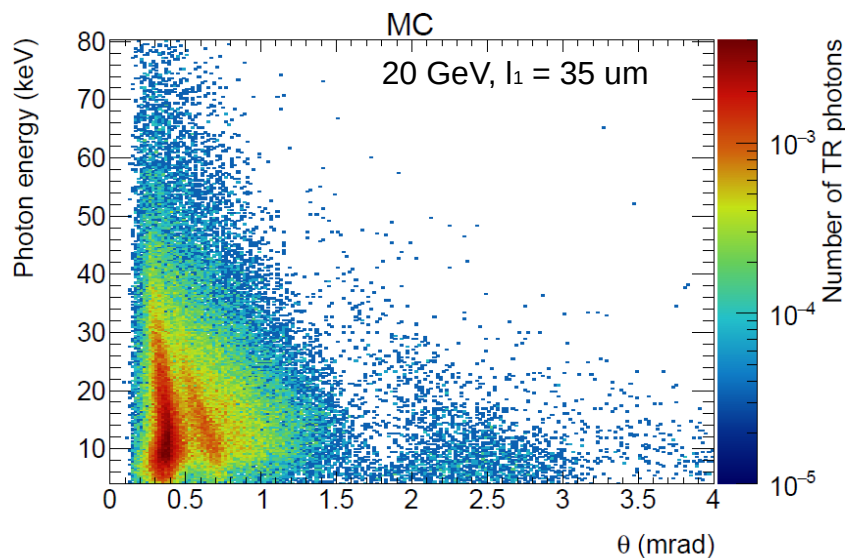
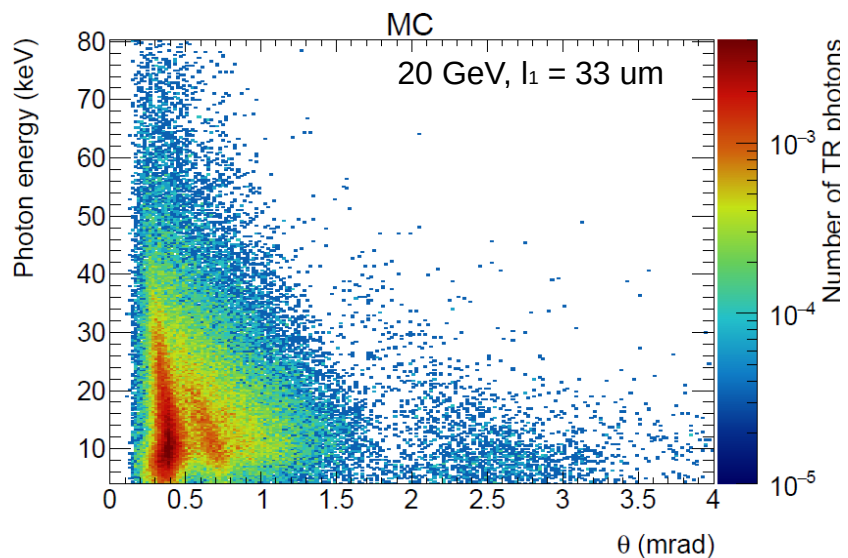
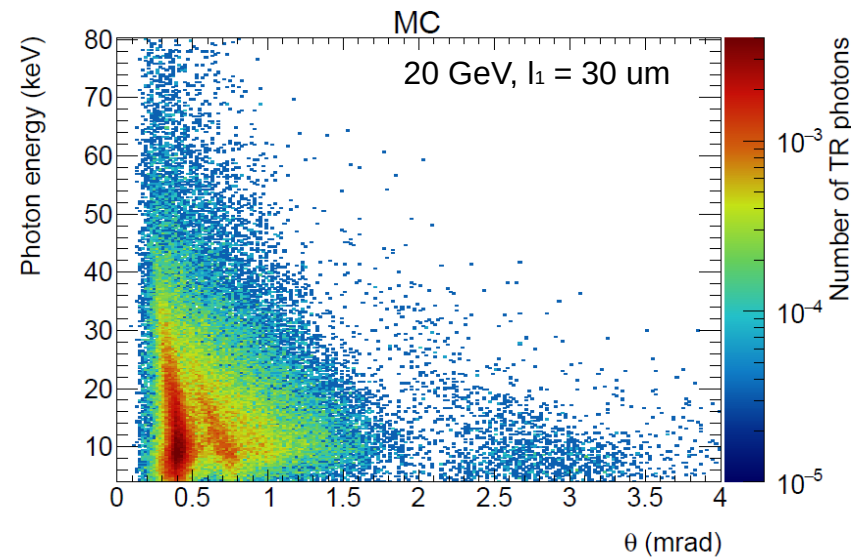
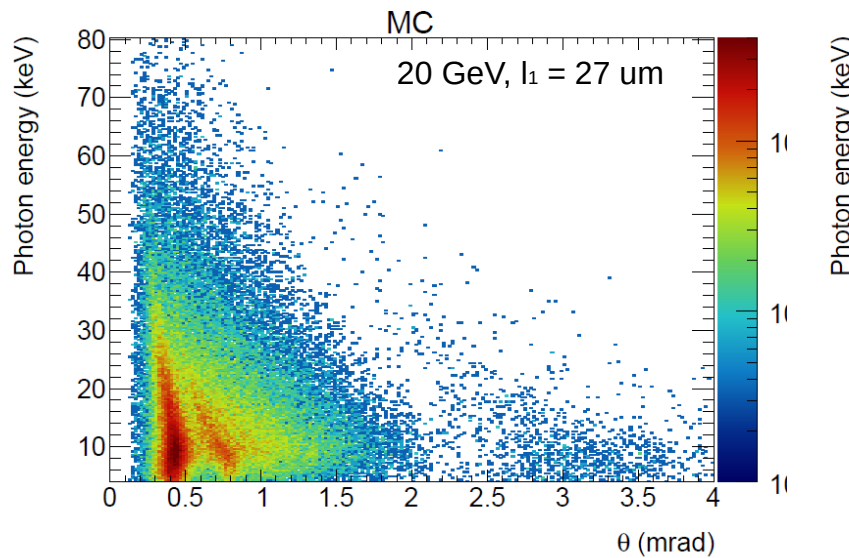
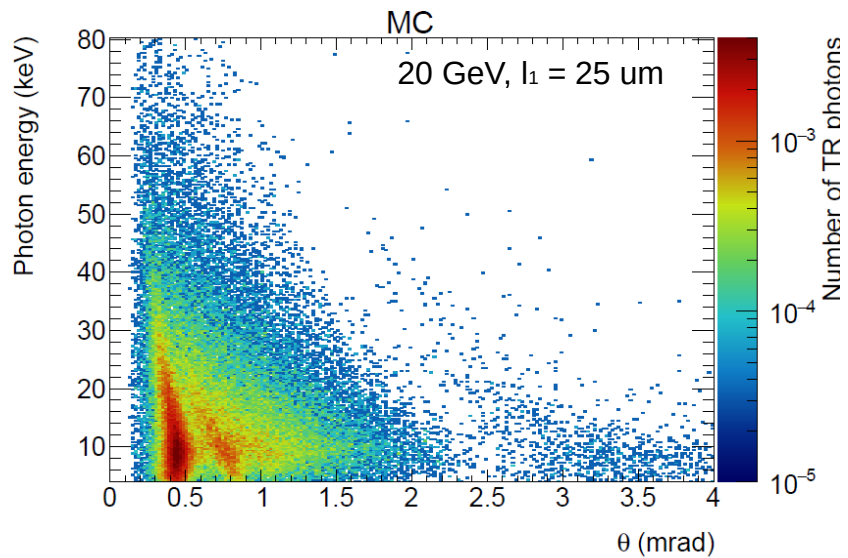
2D spectrum, electrons 20 GeV, L2 = 400 um, Nfoils = 200



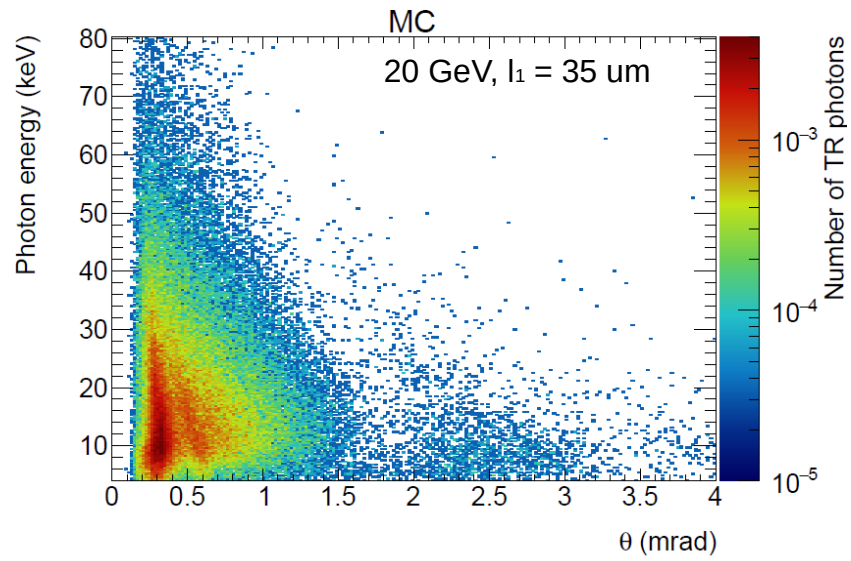
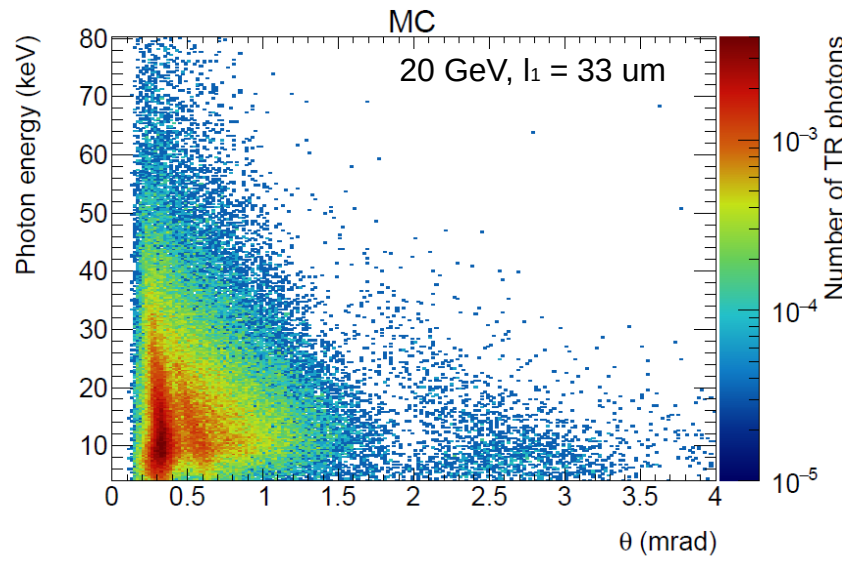
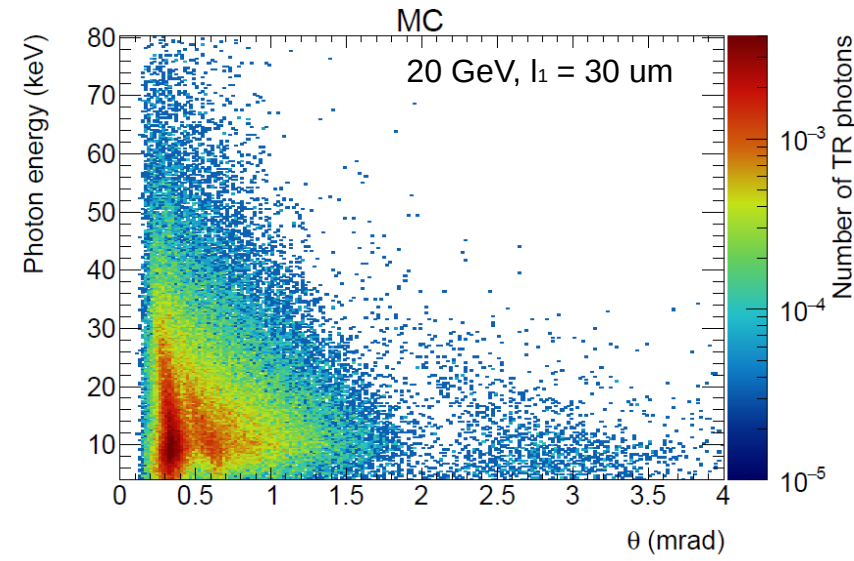
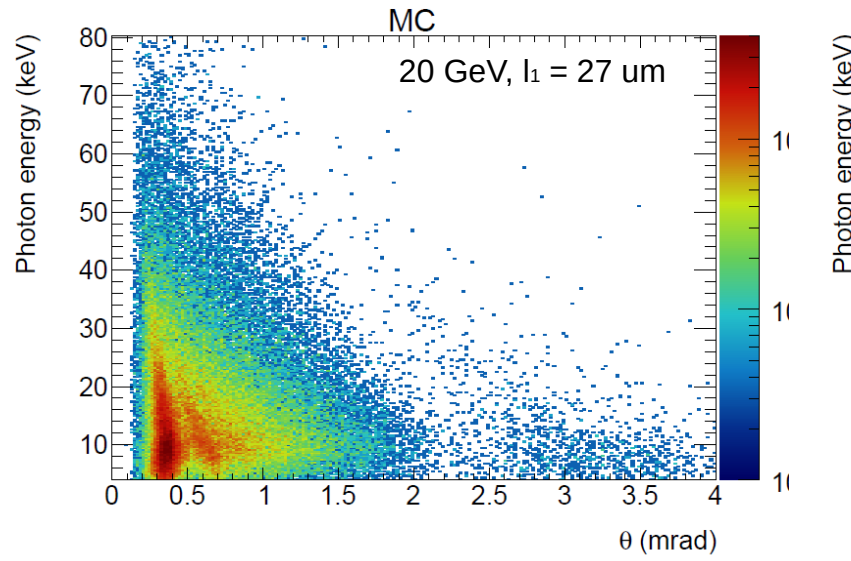
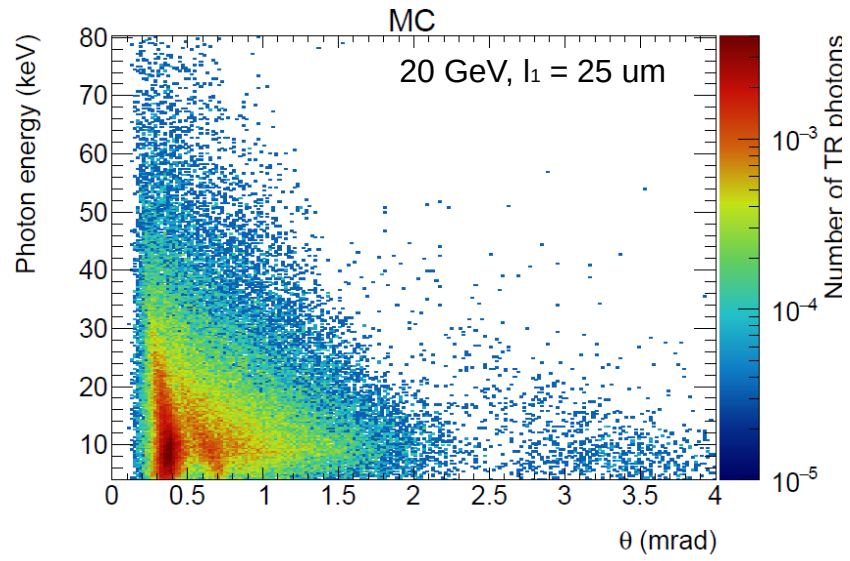
2D spectrum, electrons 20 GeV, L2 = 500 um, Nfoils = 200



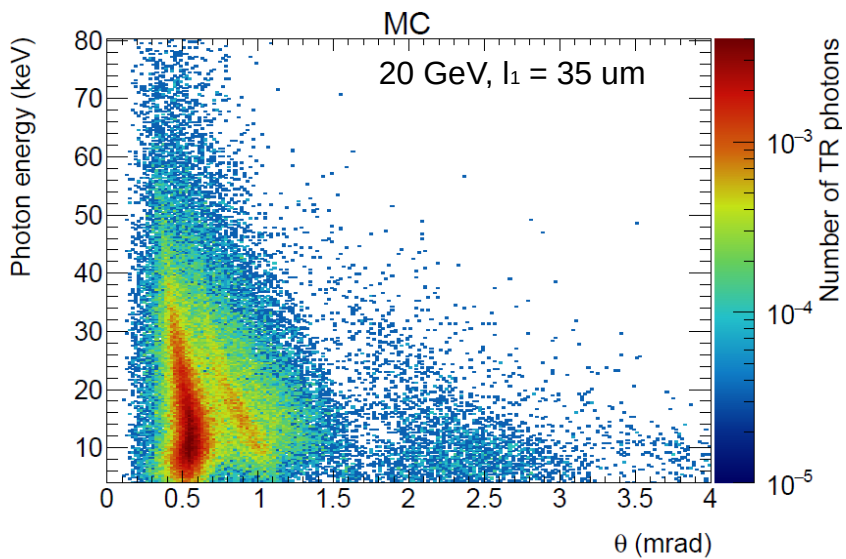
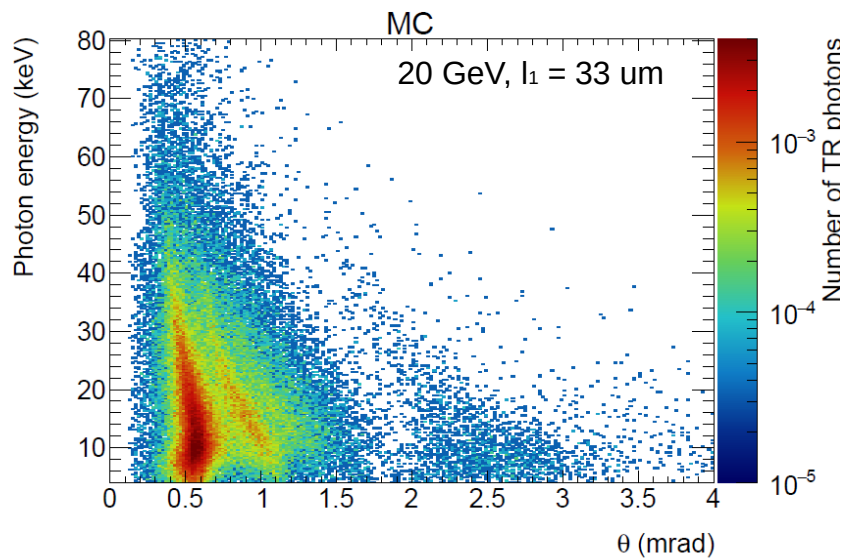
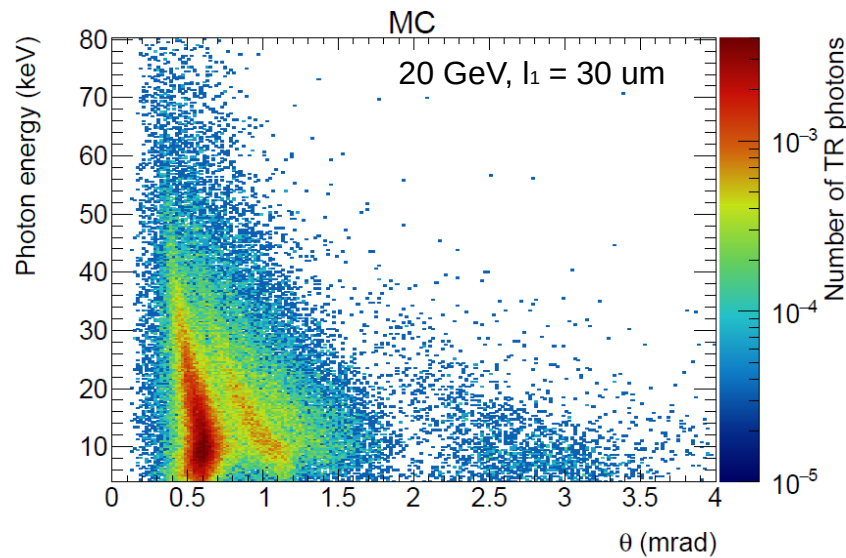
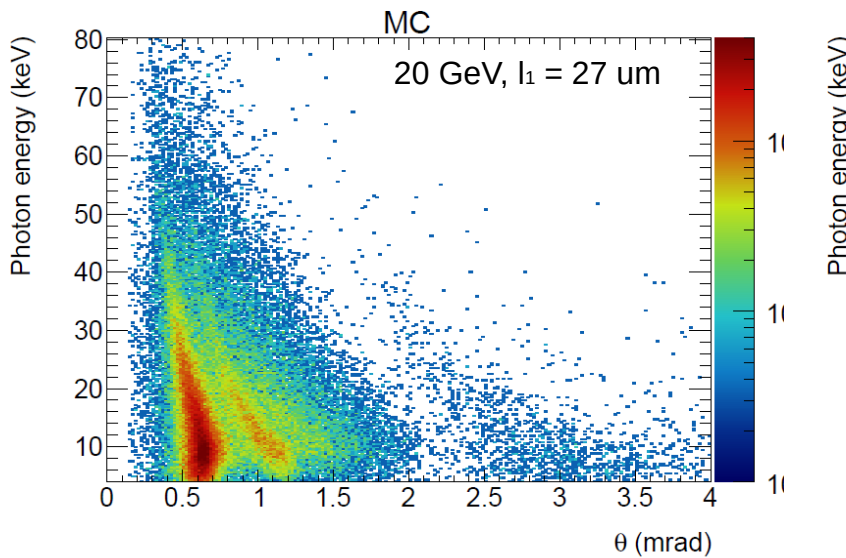
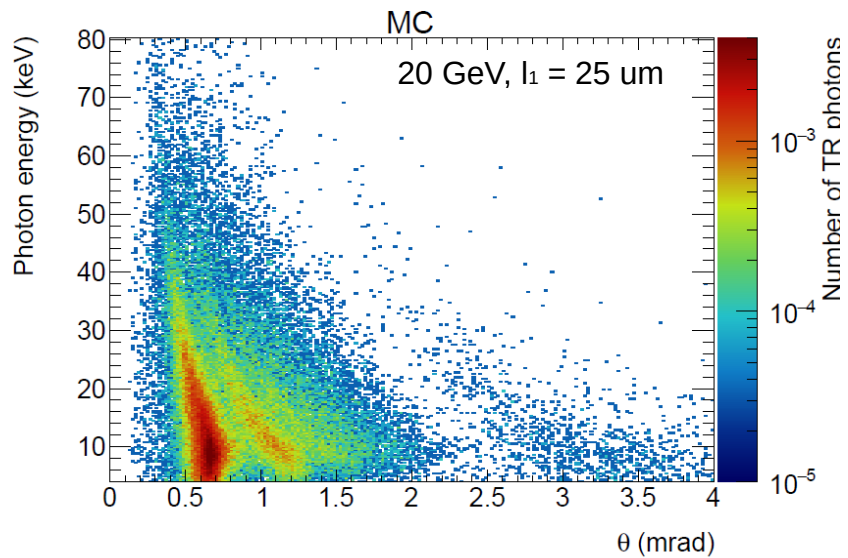
2D spectrum, electrons 20 GeV, L2 = 700 um, Nfoils = 200



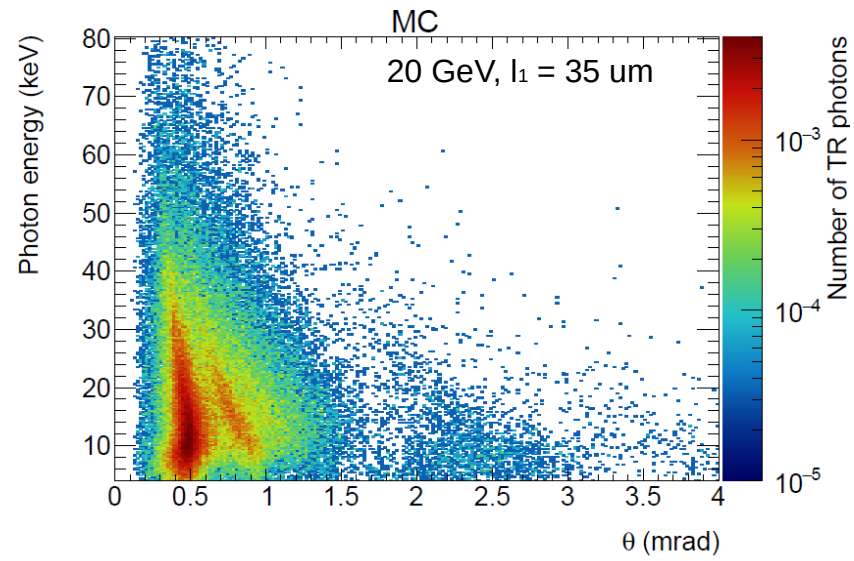
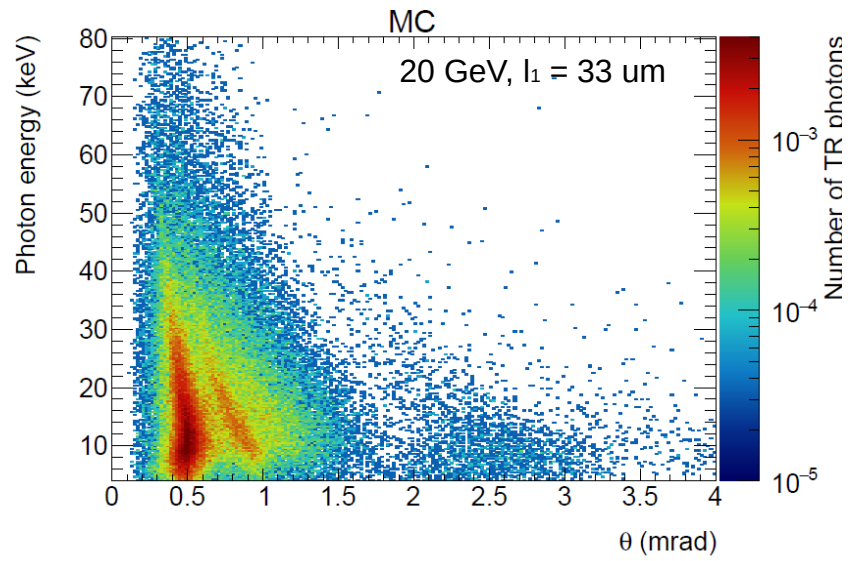
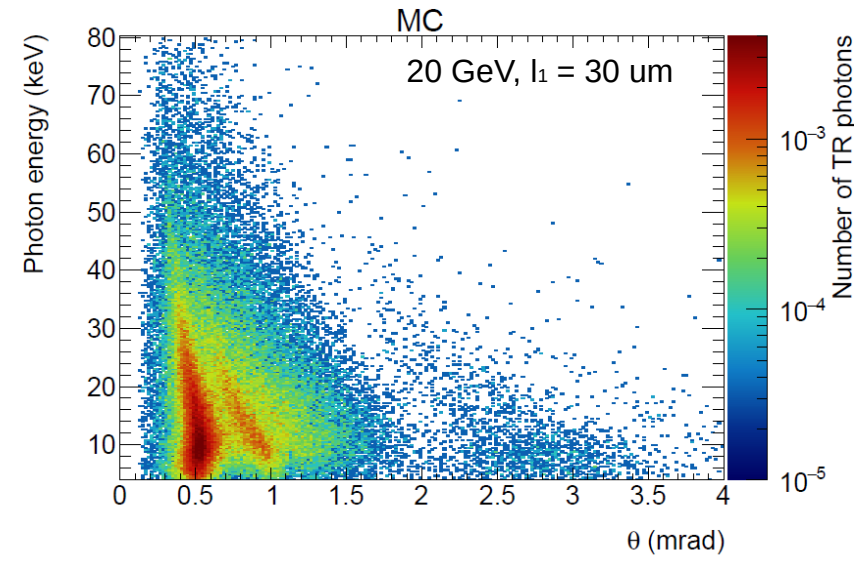
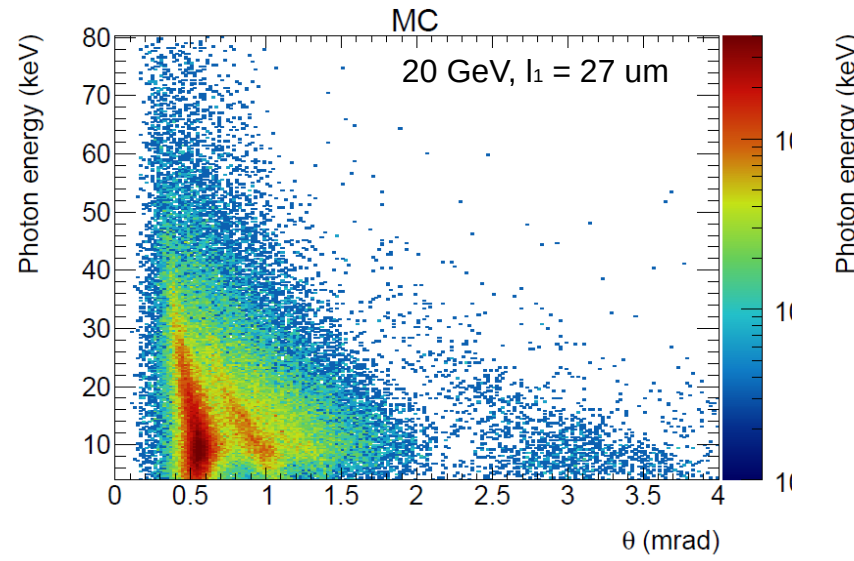
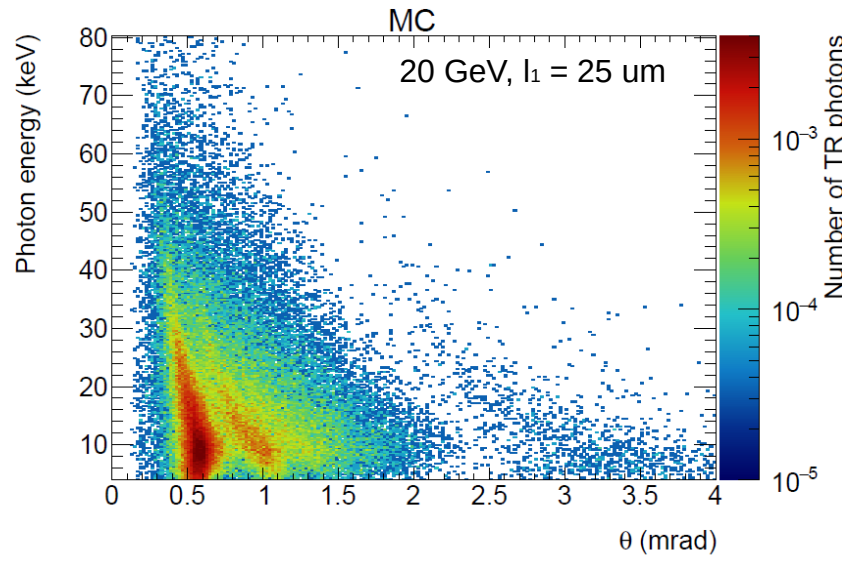
2D spectrum, electrons 20 GeV, L2 = 1000 um, Nfoils = 200



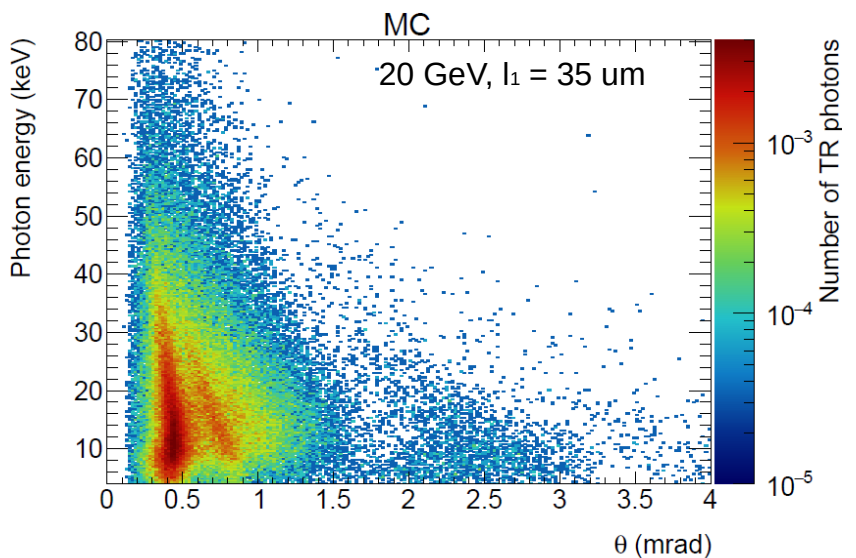
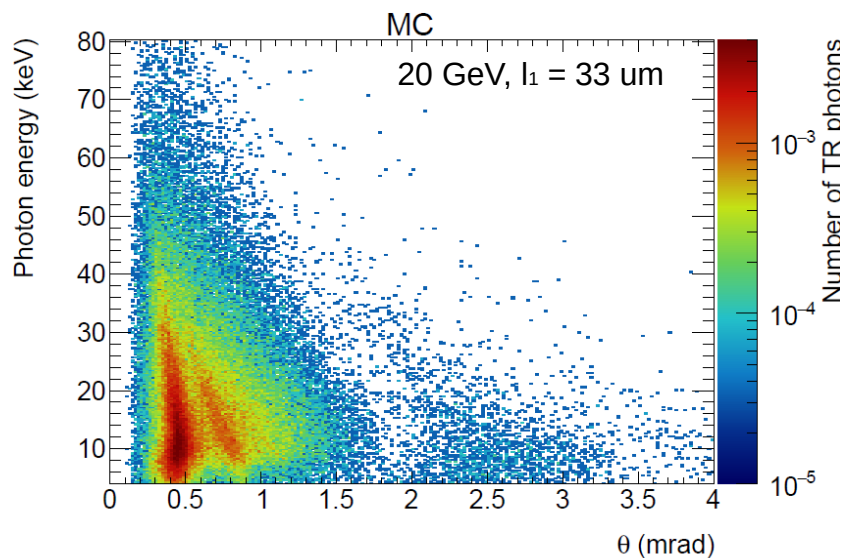
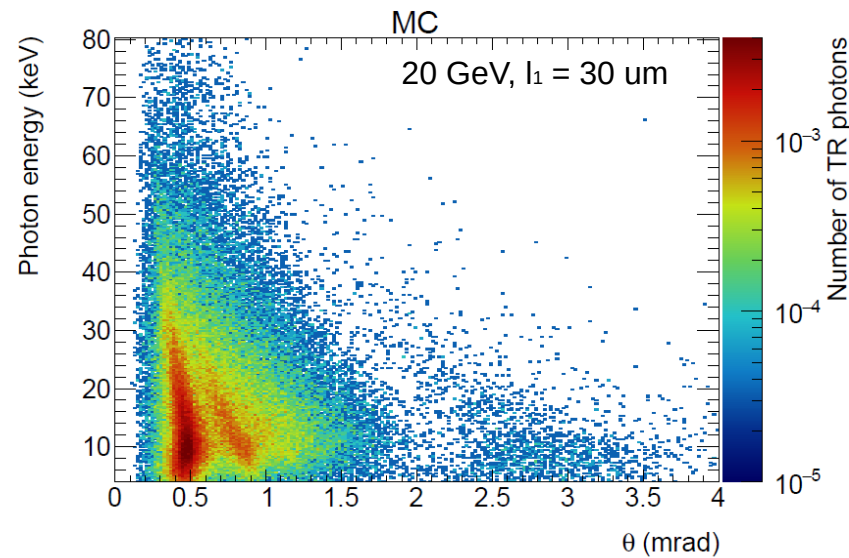
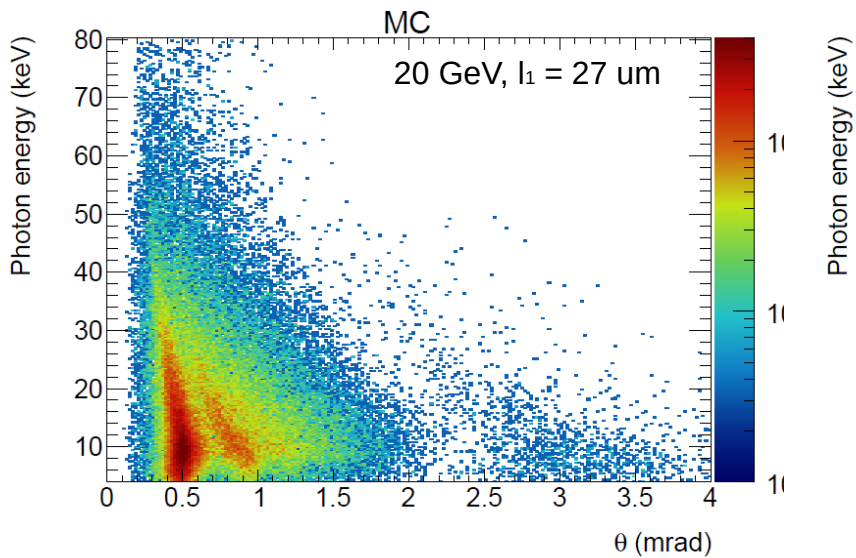
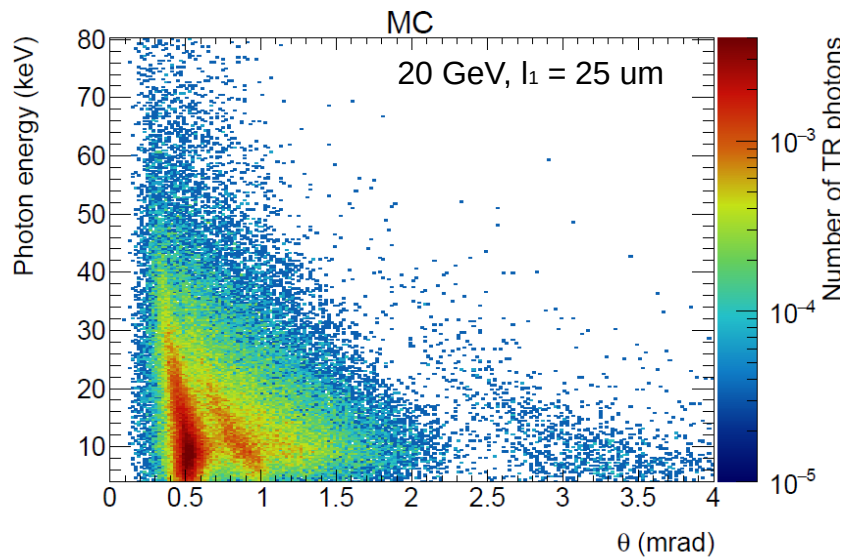
2D spectrum, electrons 20 GeV, L2 = 300 um, Nfoils = 300



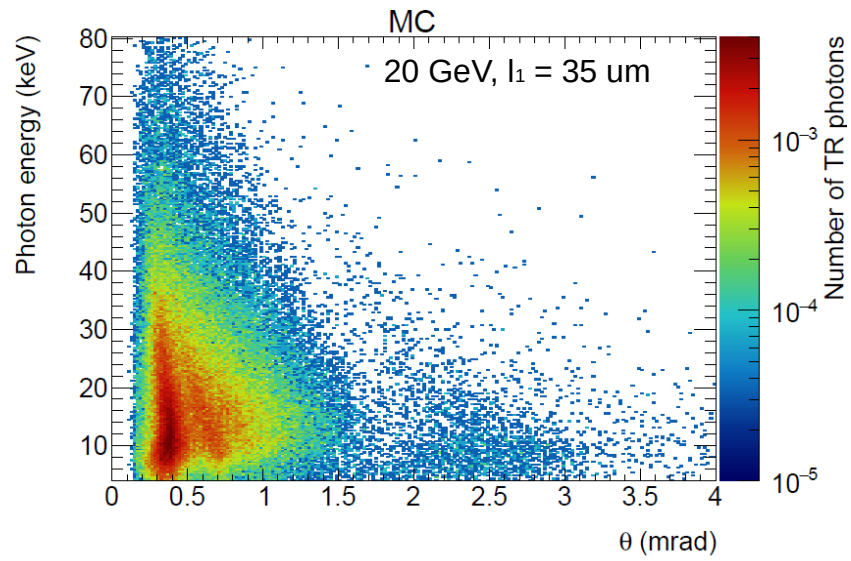
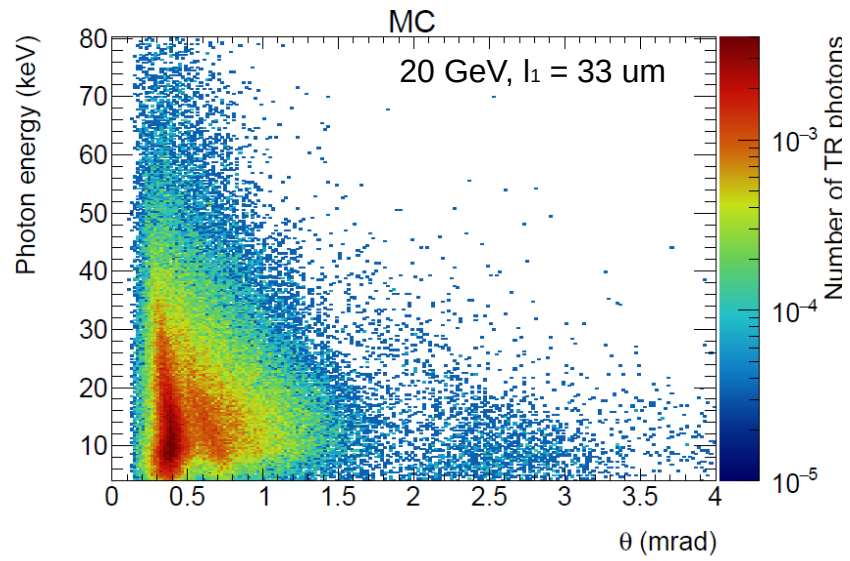
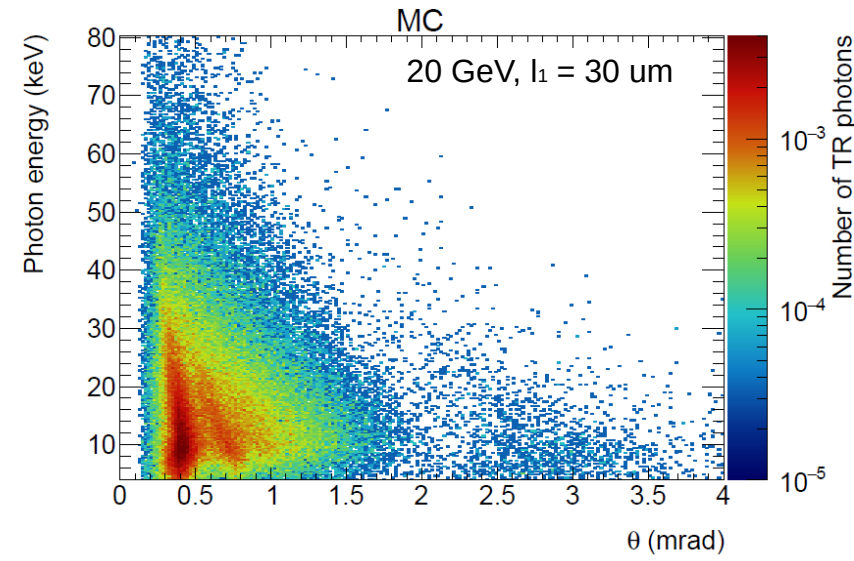
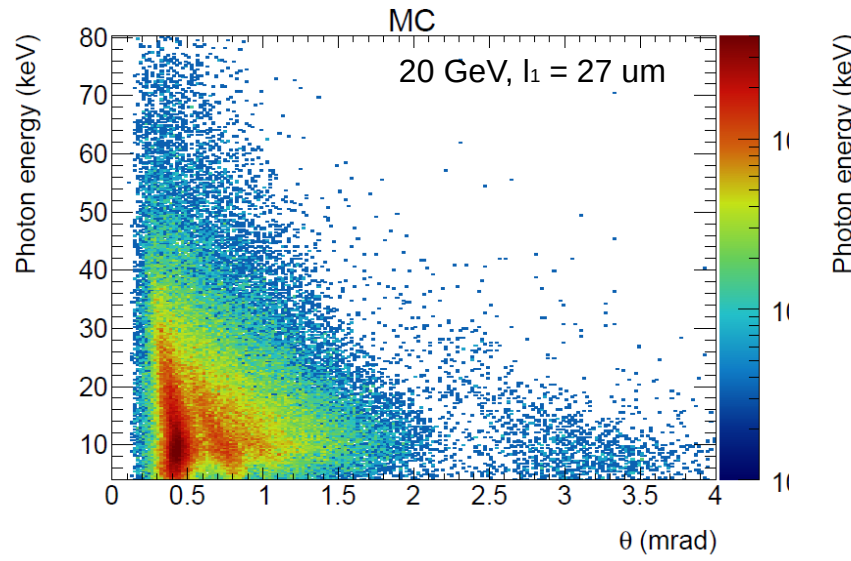
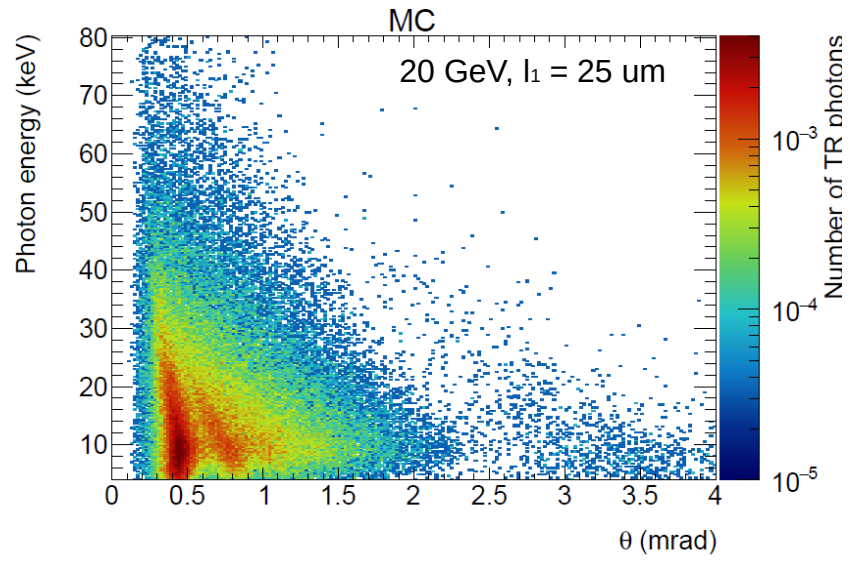
2D spectrum, electrons 20 GeV, L2 = 400 um, Nfoils = 300



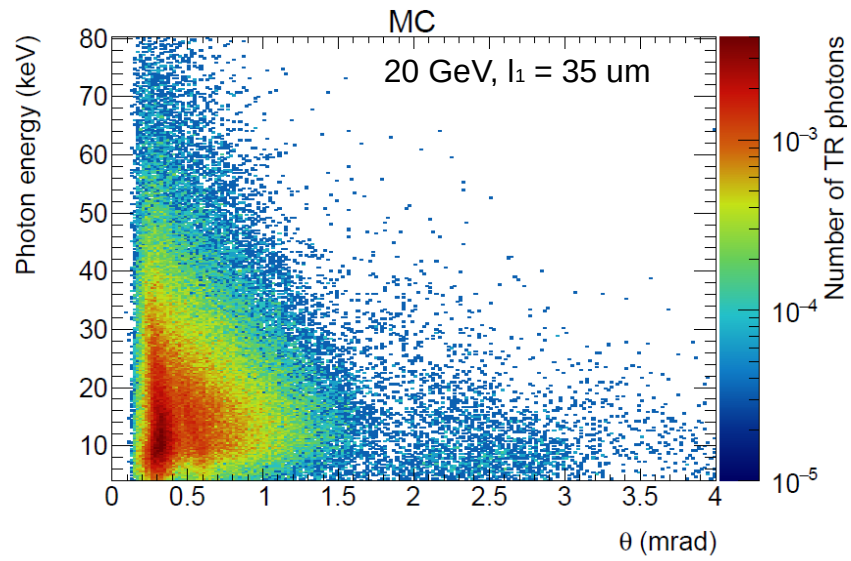
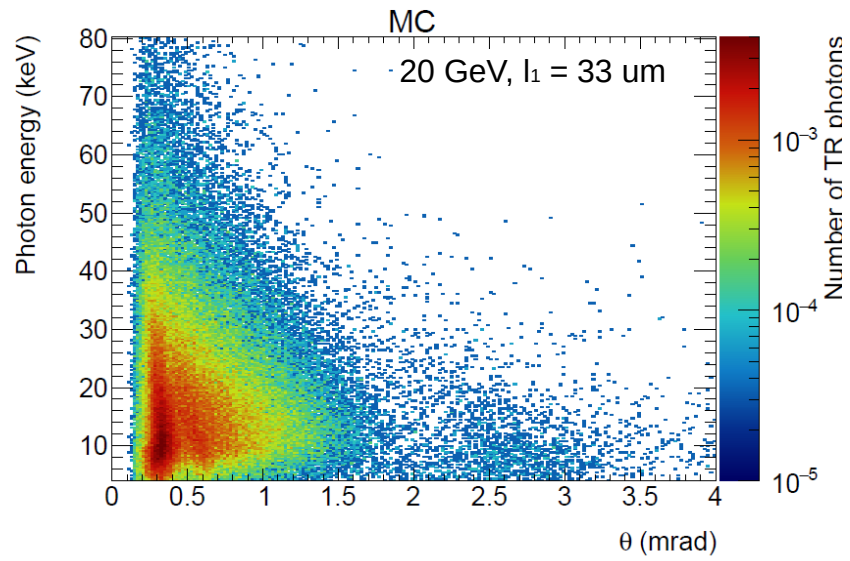
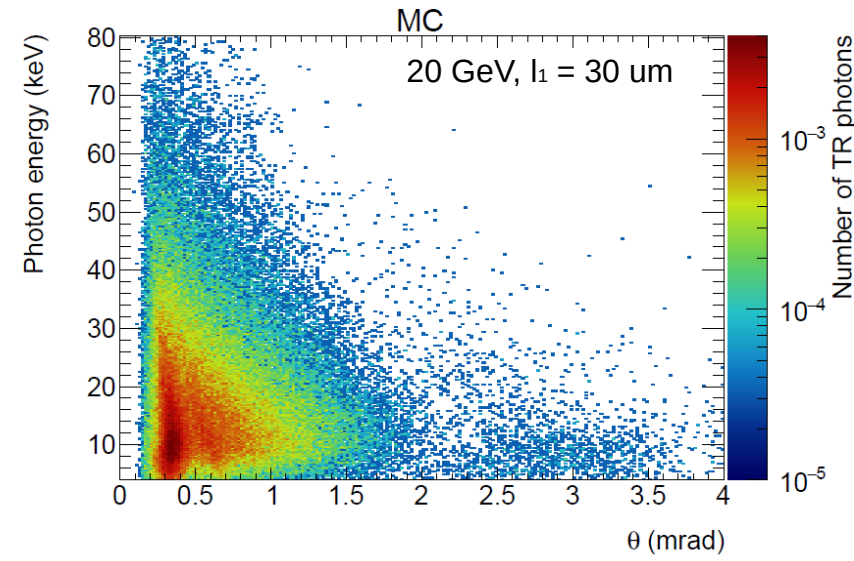
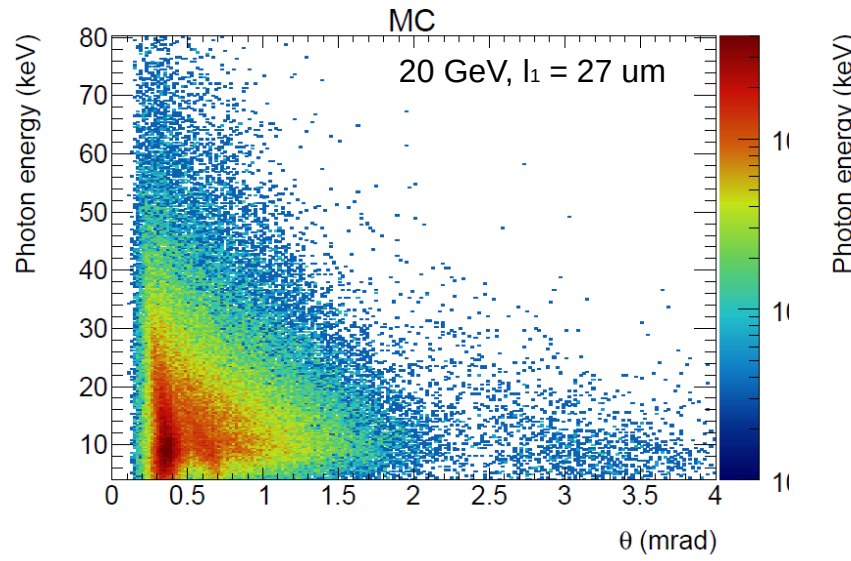
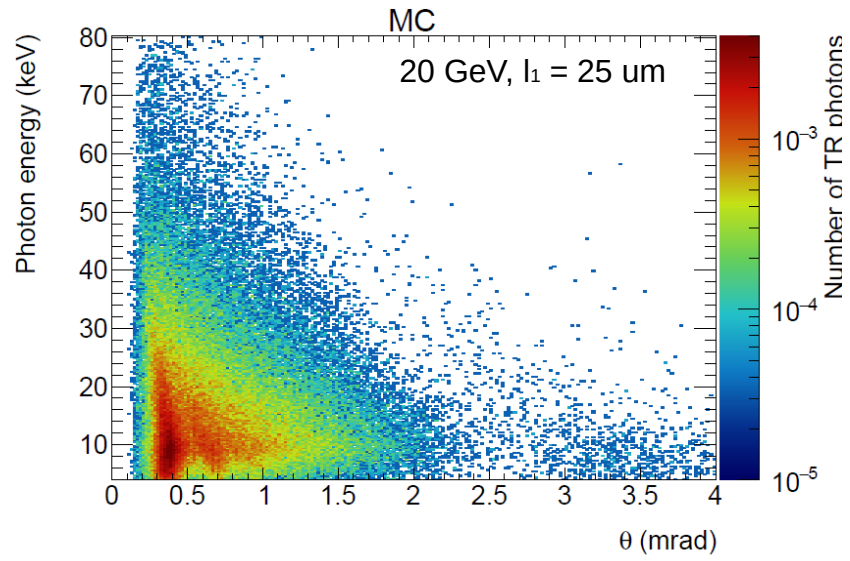
2D spectrum, electrons 20 GeV, L2 = 500 um, Nfoils = 300



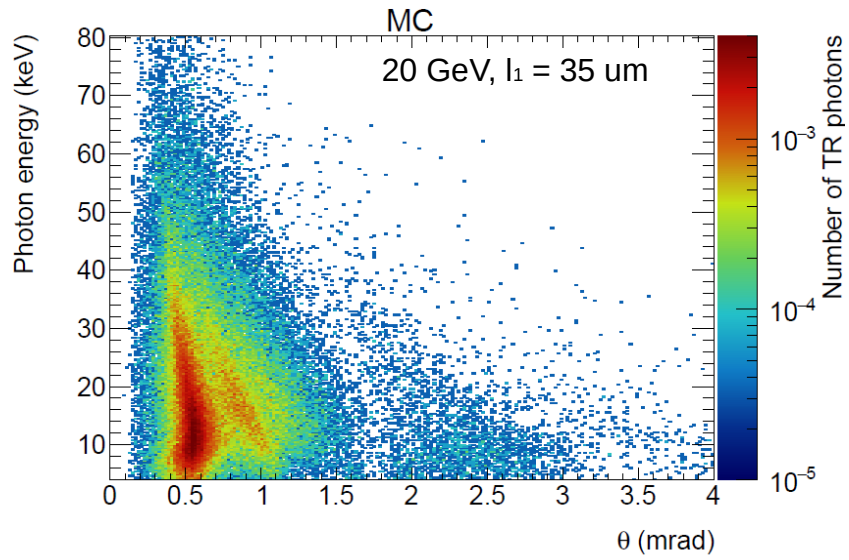
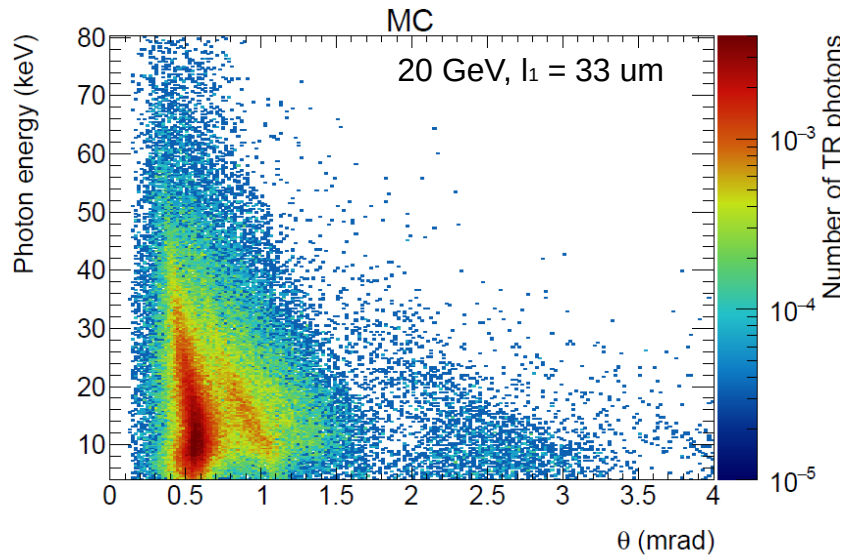
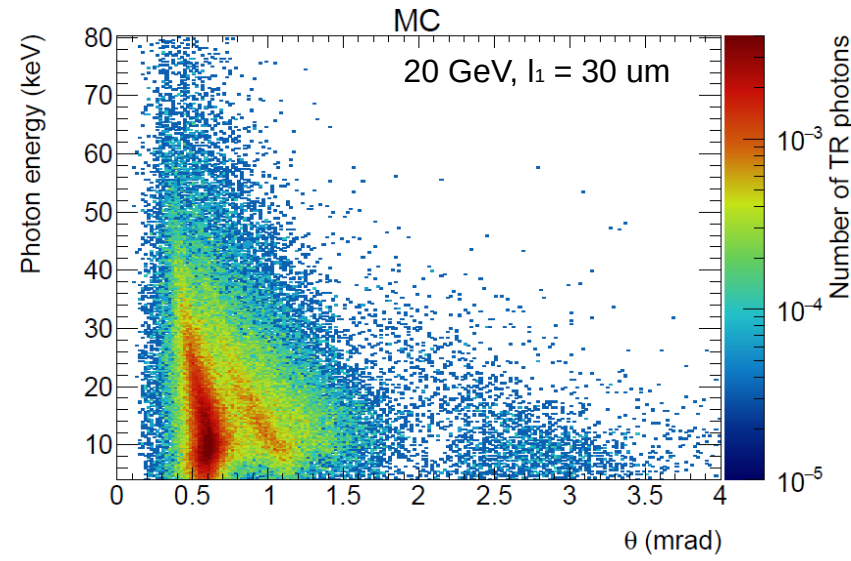
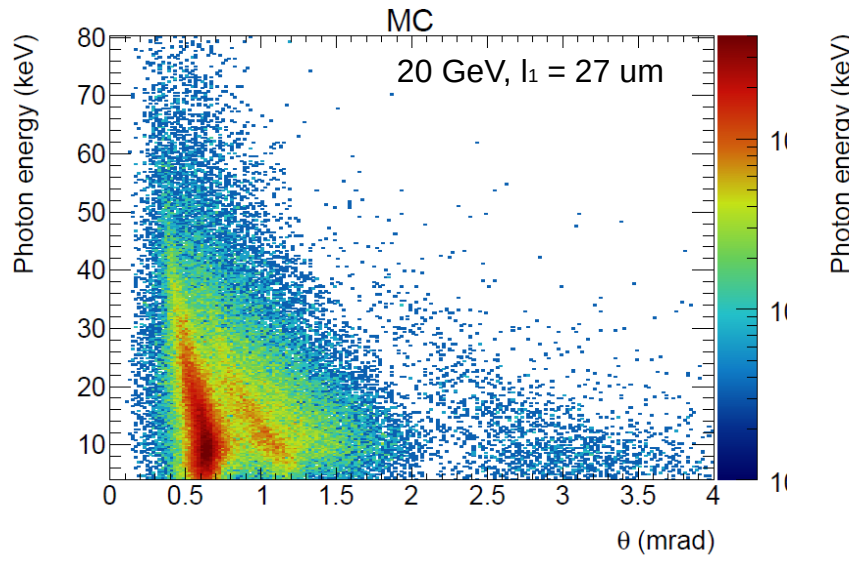
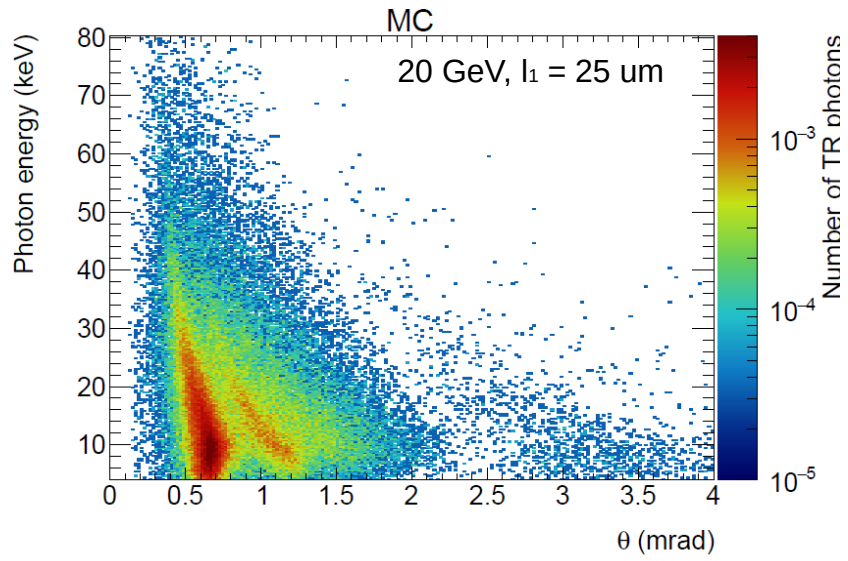
2D spectrum, electrons 20 GeV, L2 = 700 um, Nfoils = 300



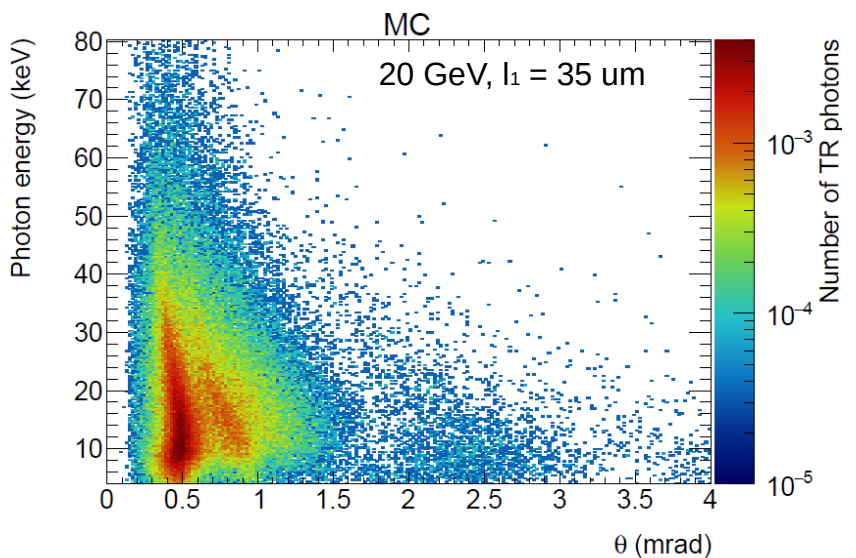
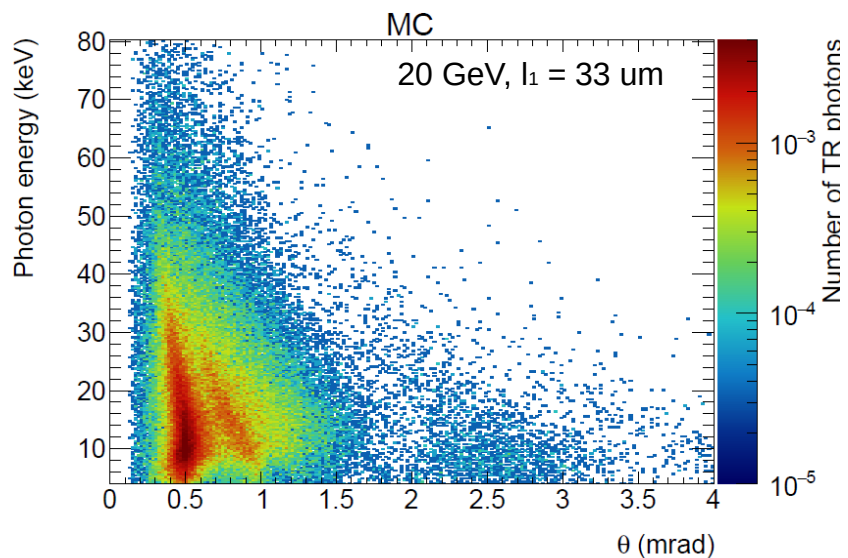
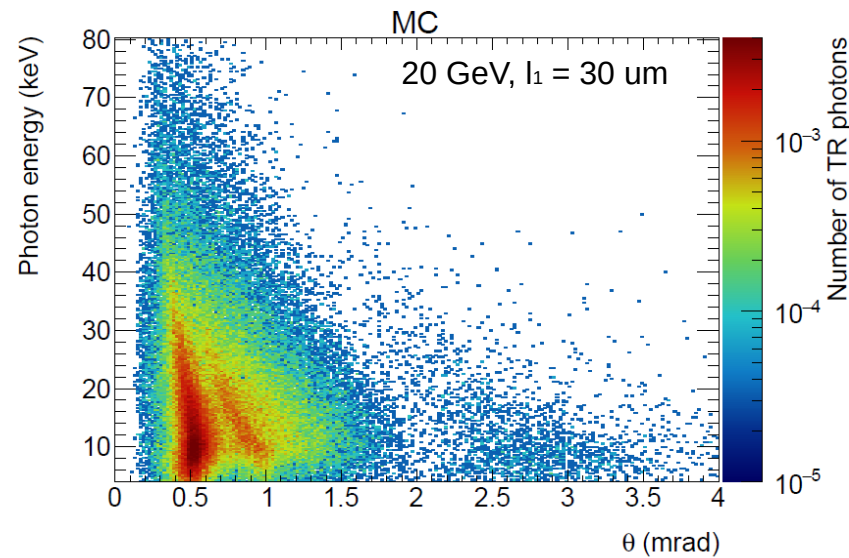
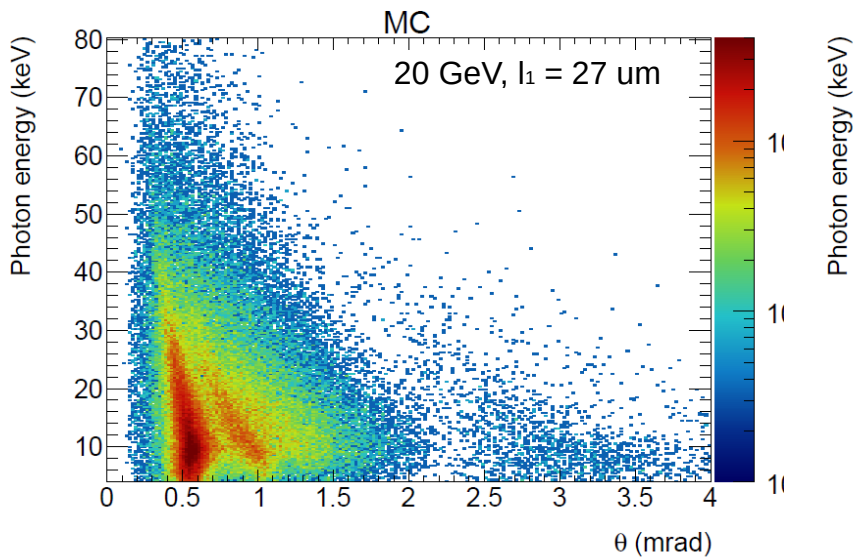
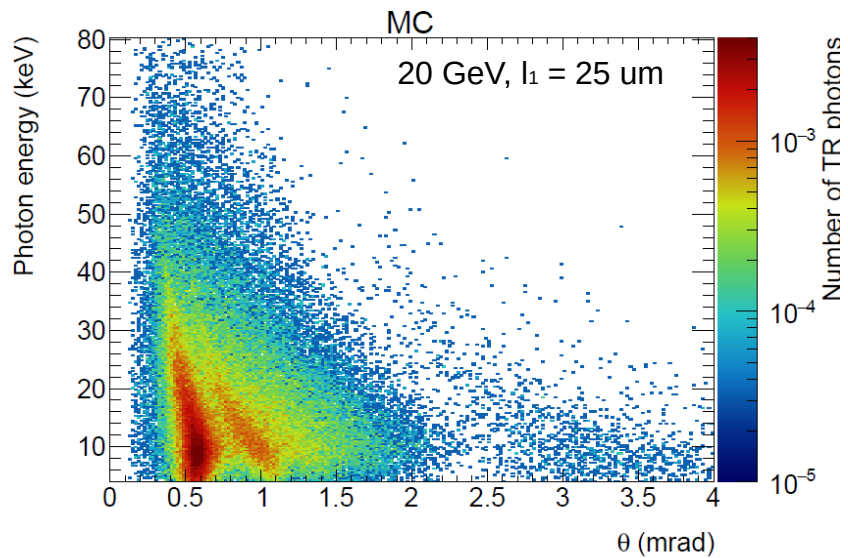
2D spectrum, electrons 20 GeV, L2 = 1000 um, Nfoils = 300



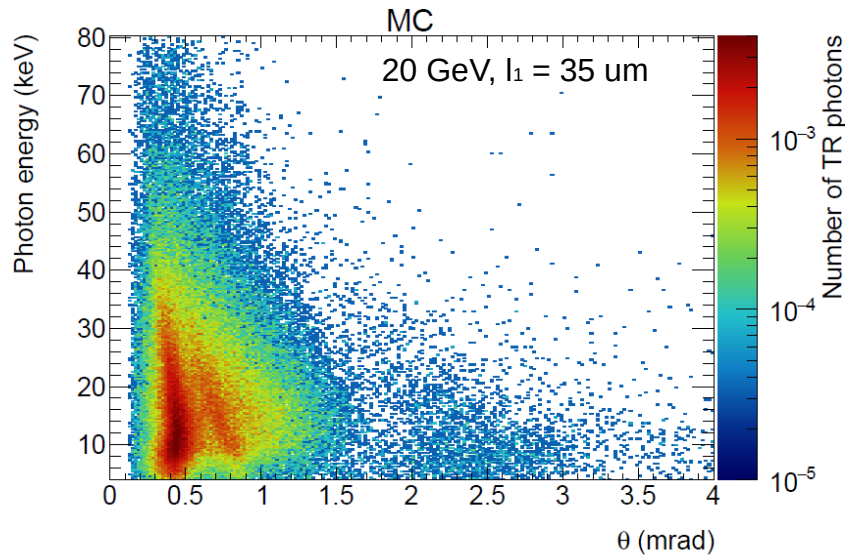
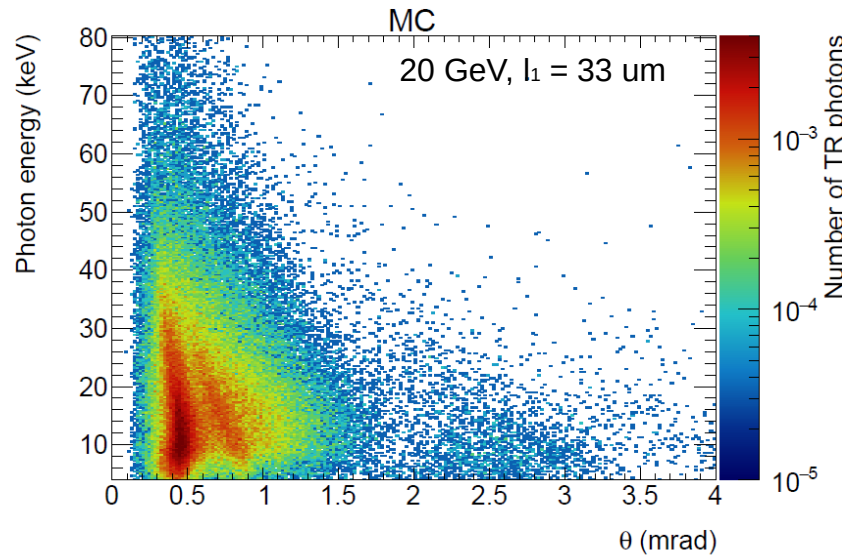
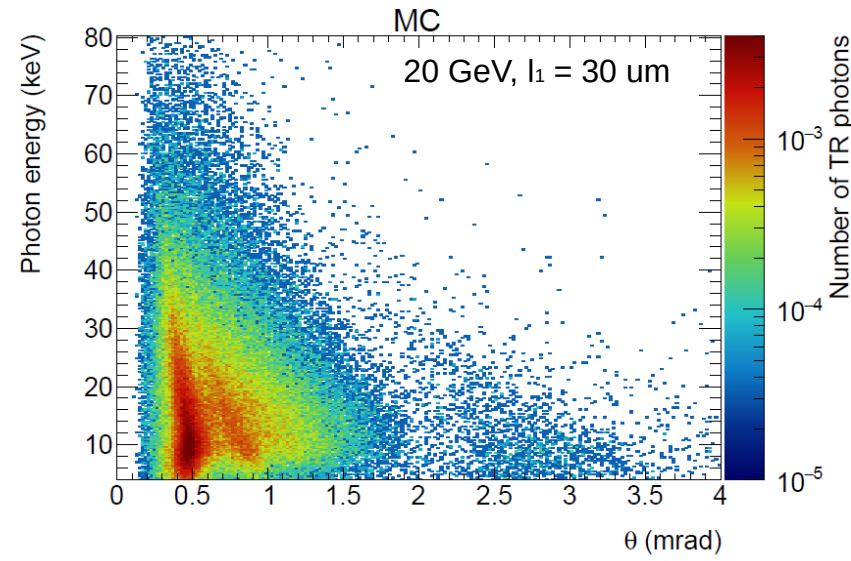
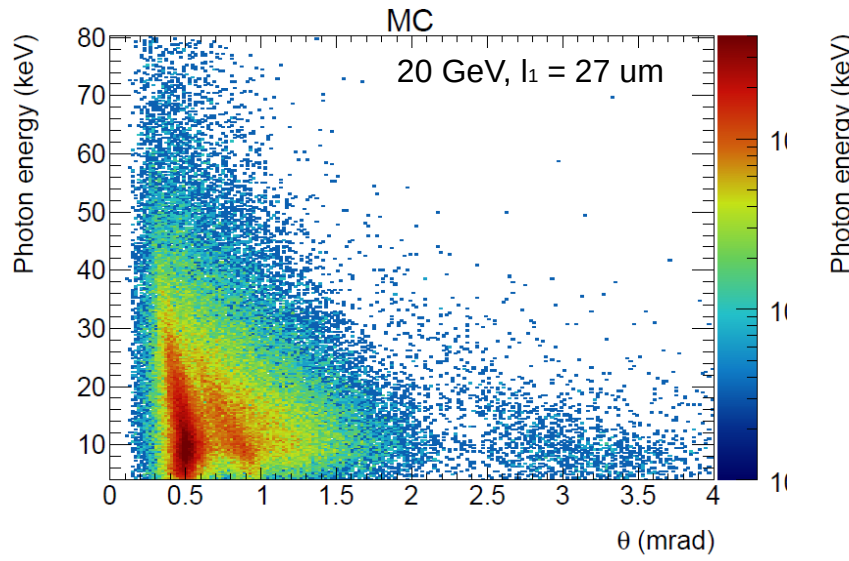
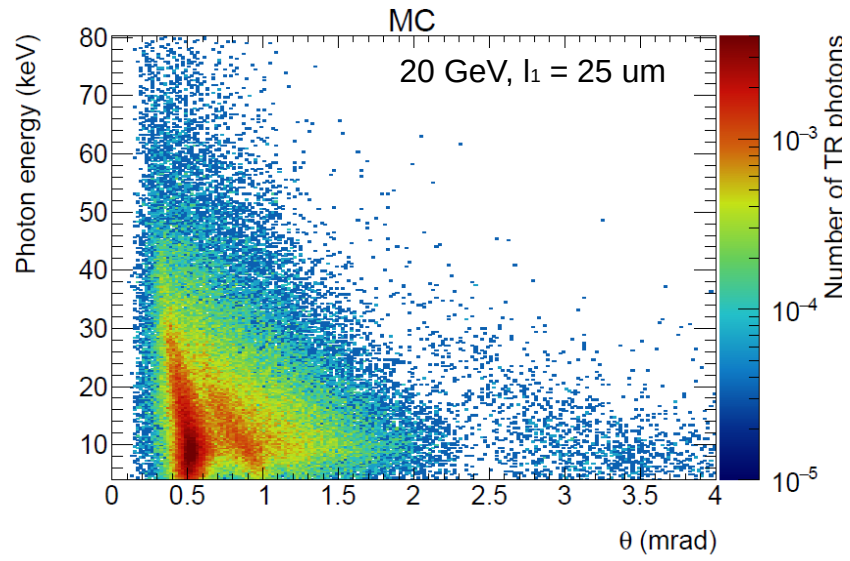
2D spectrum, electrons 20 GeV, L2 = 300 um, Nfoils = 400



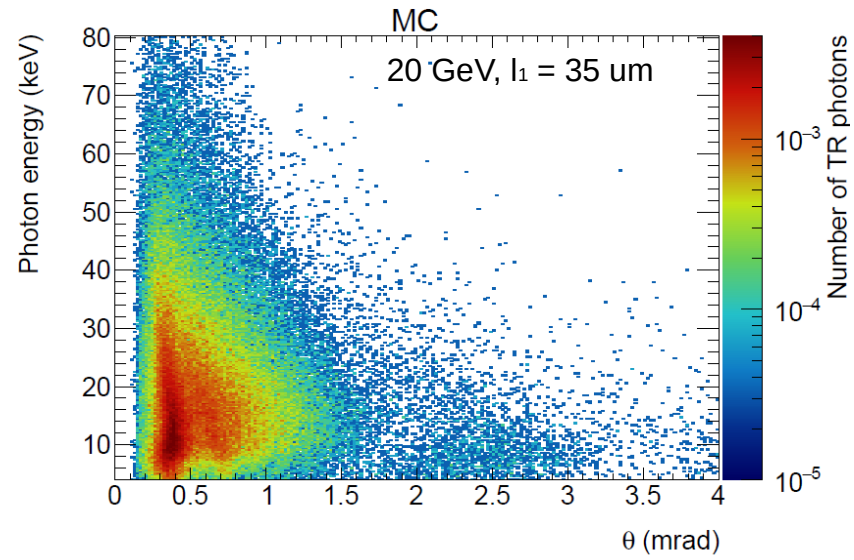
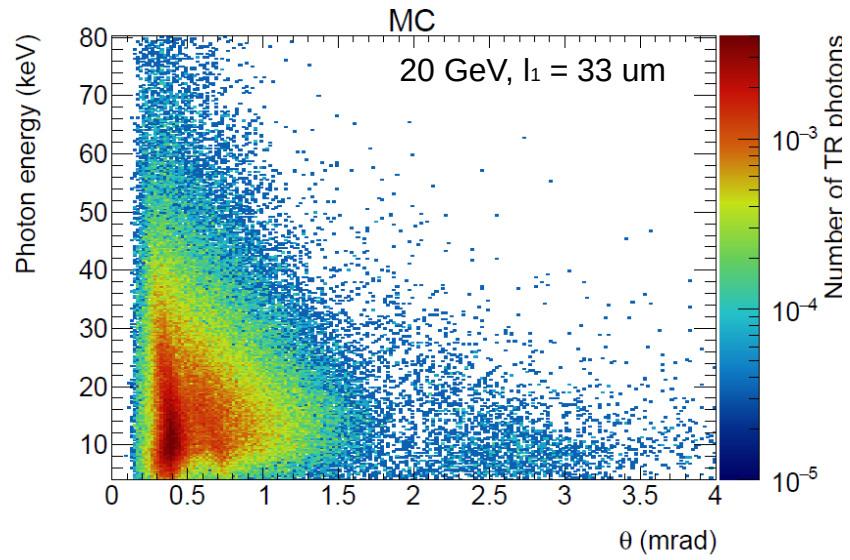
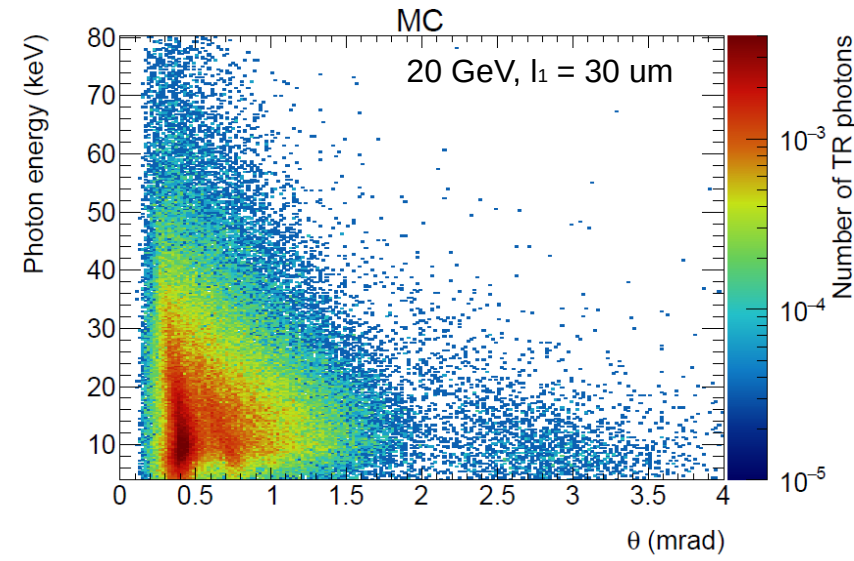
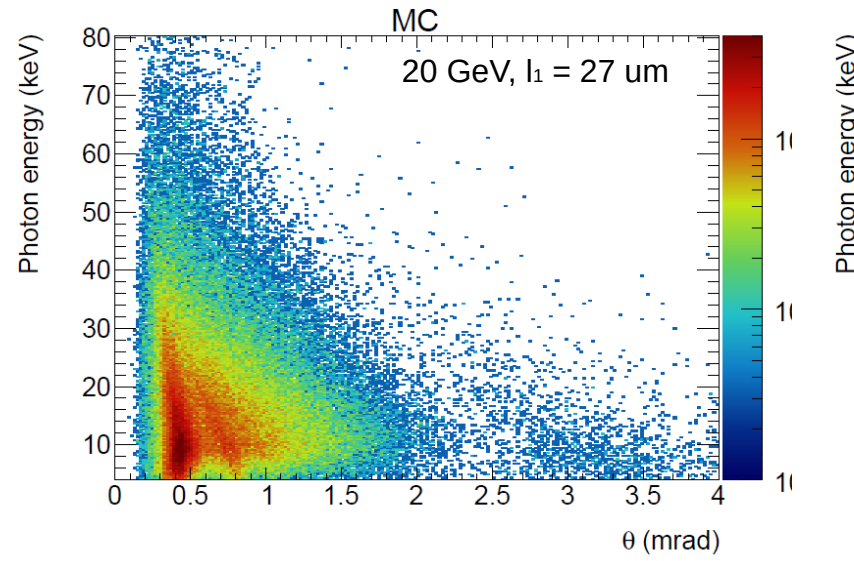
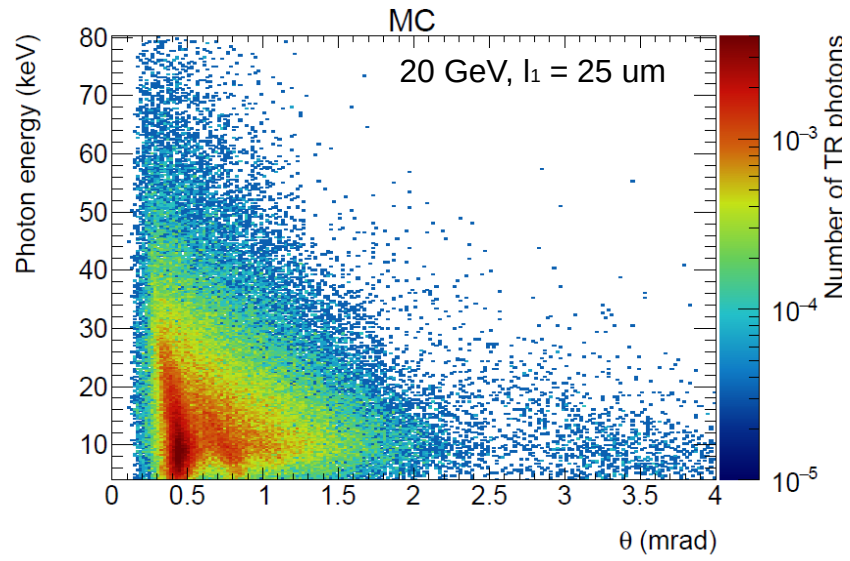
2D spectrum, electrons 20 GeV, L2 = 400 um, Nfoils = 400



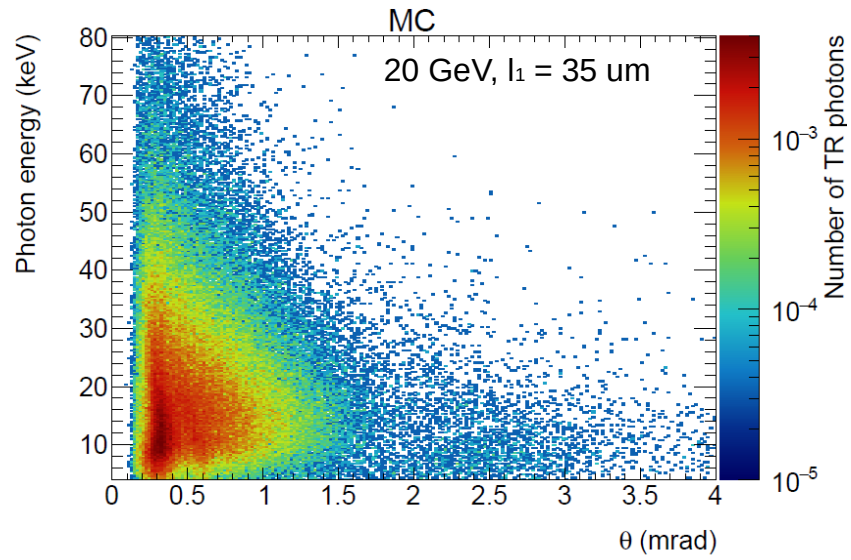
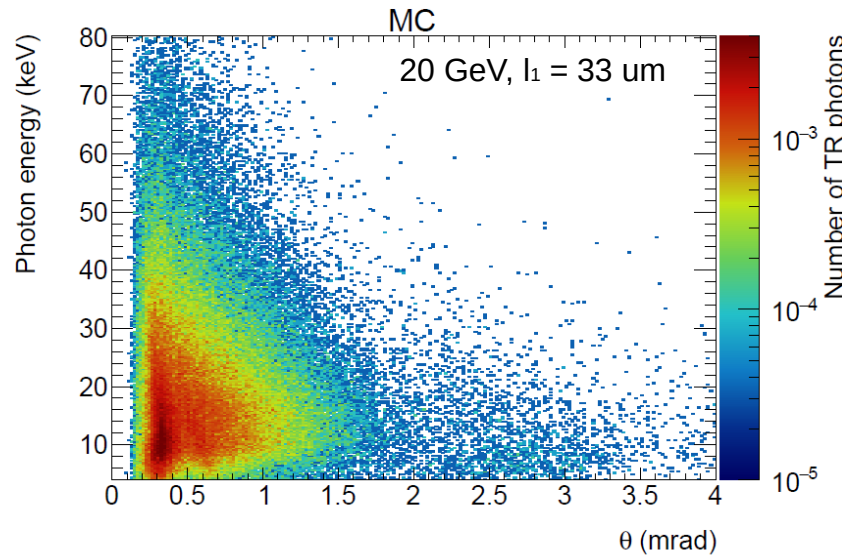
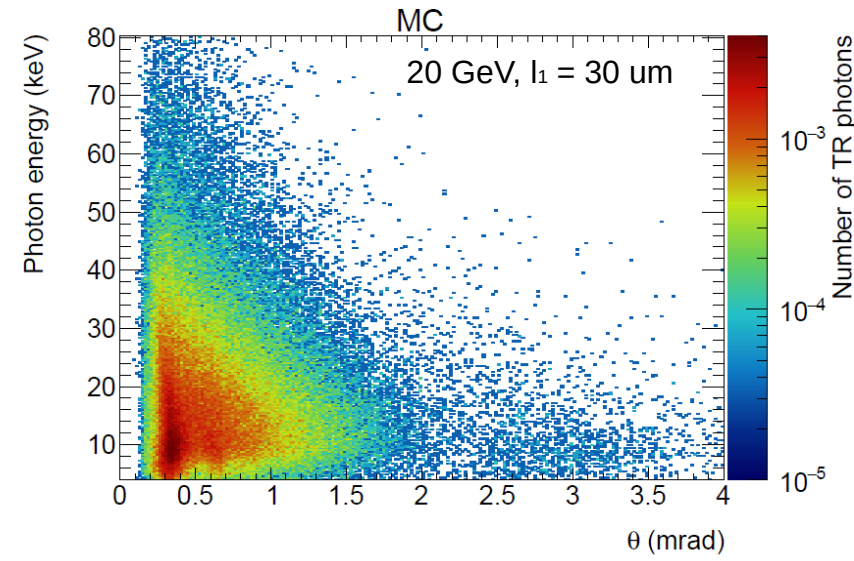
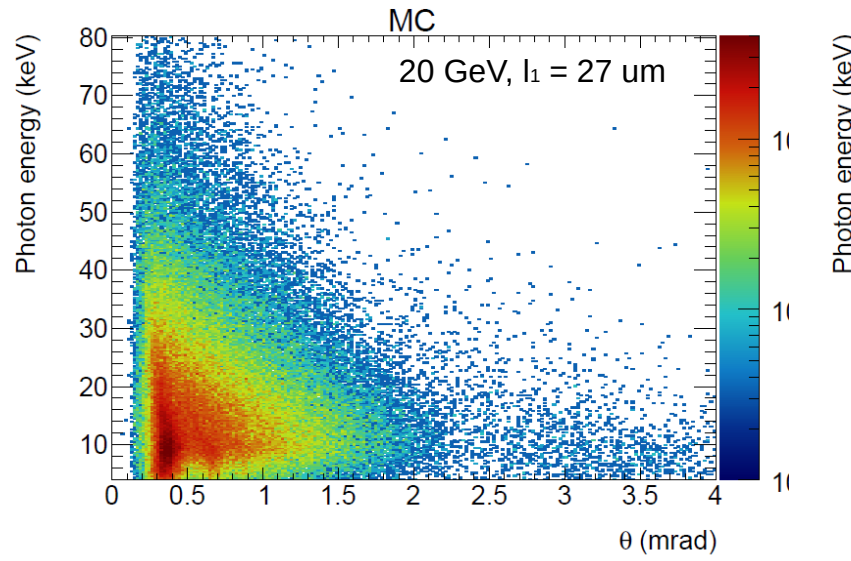
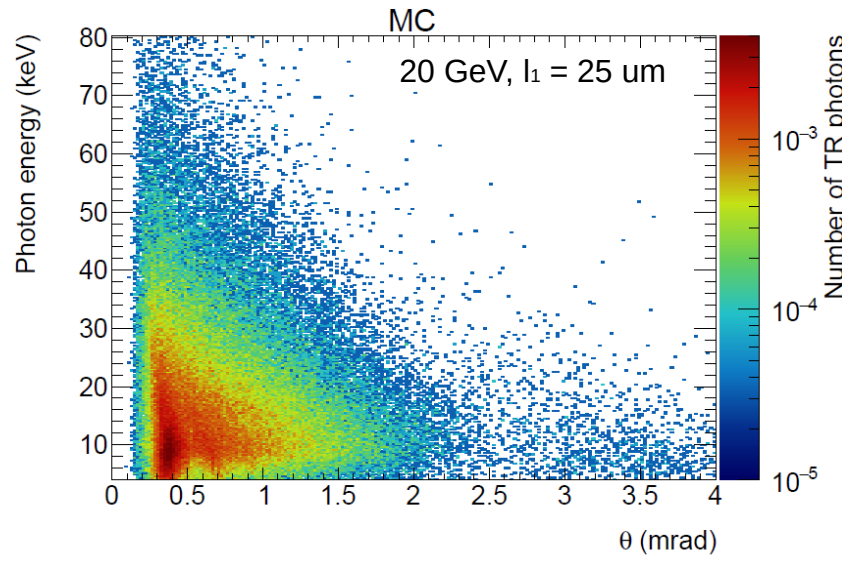
2D spectrum, electrons 20 GeV, L2 = 500 um, Nfoils = 400



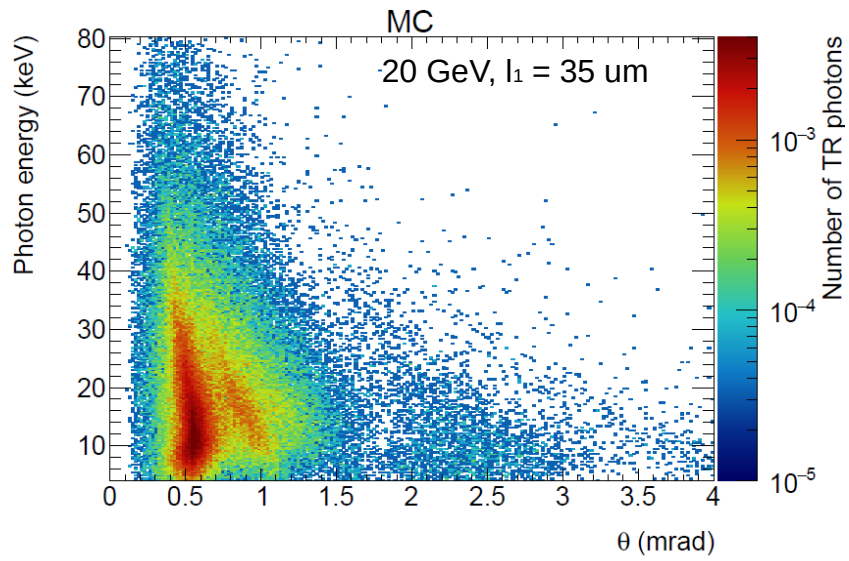
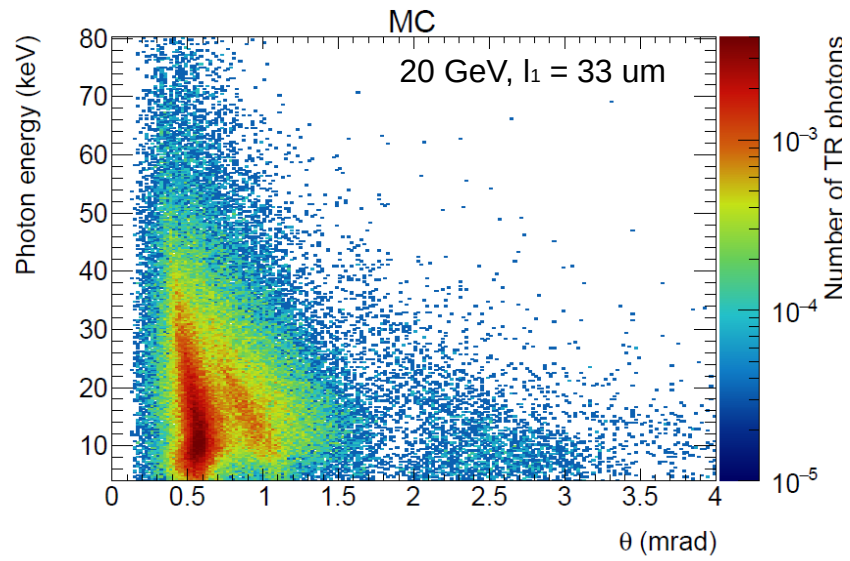
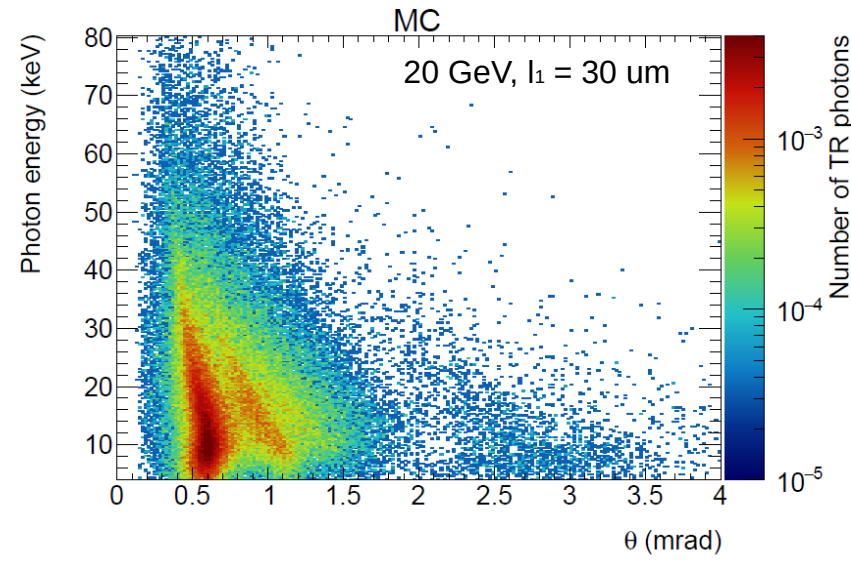
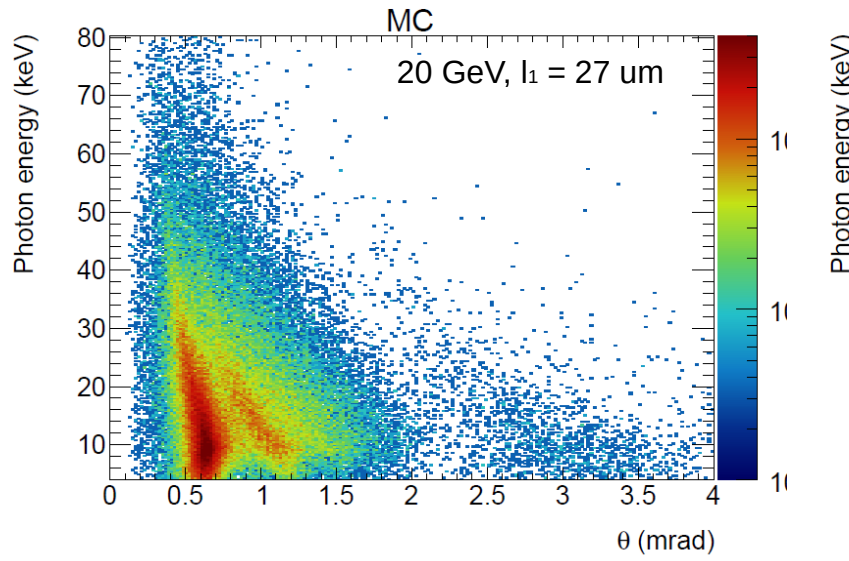
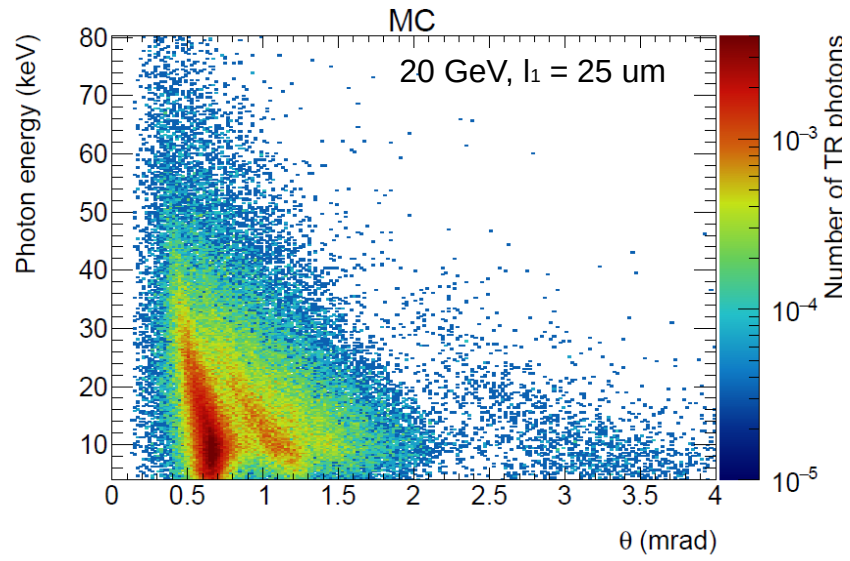
2D spectrum, electrons 20 GeV, L2 = 700 um, Nfoils = 400



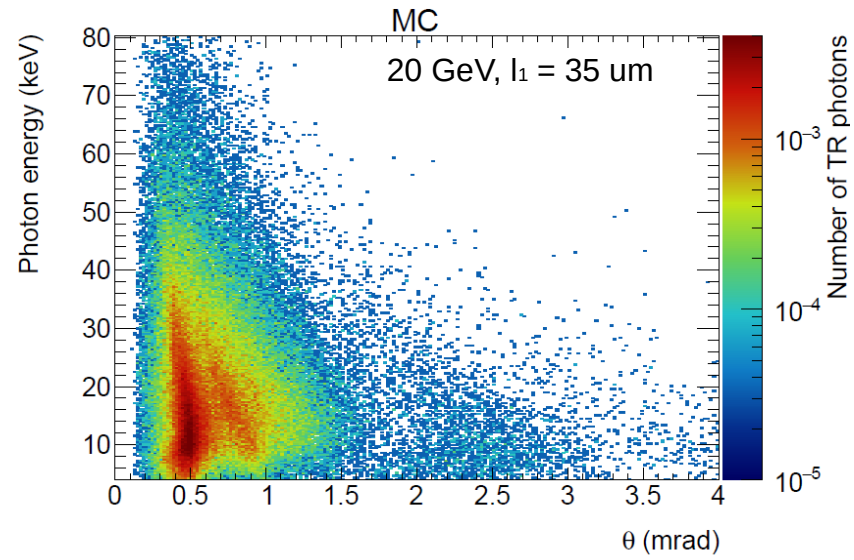
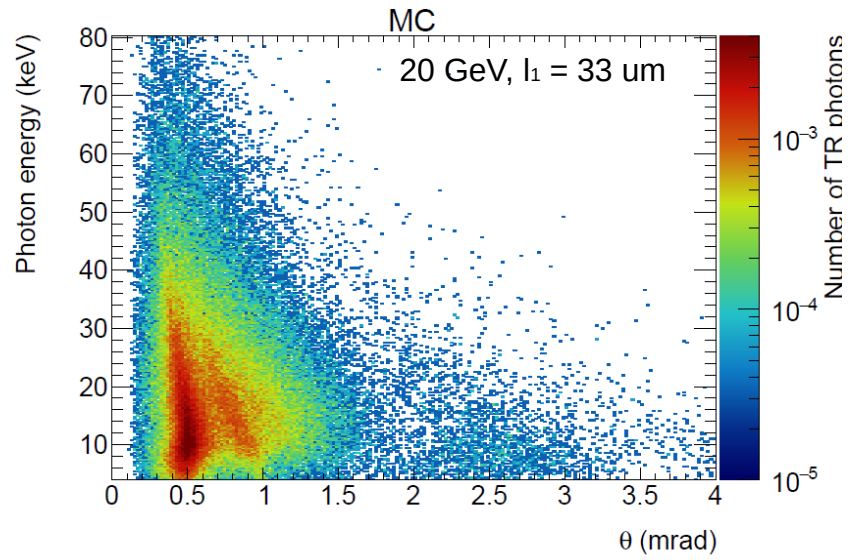
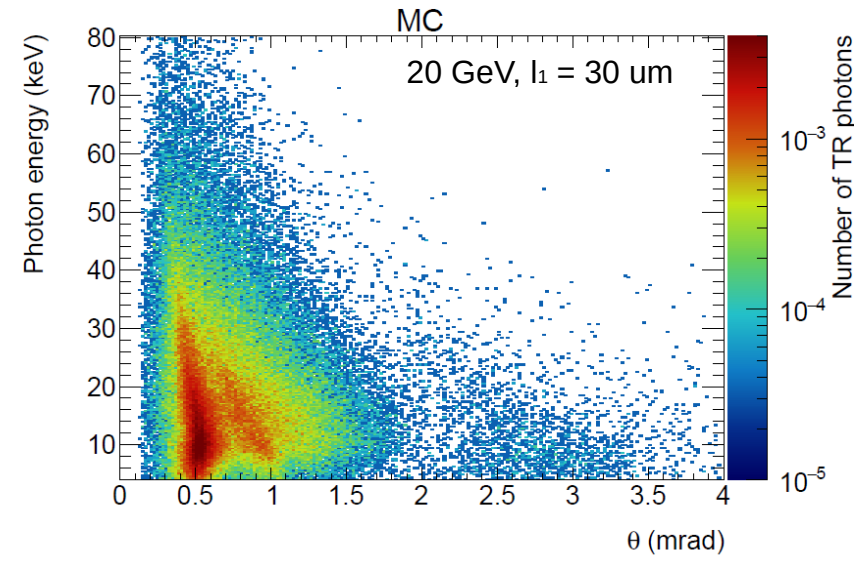
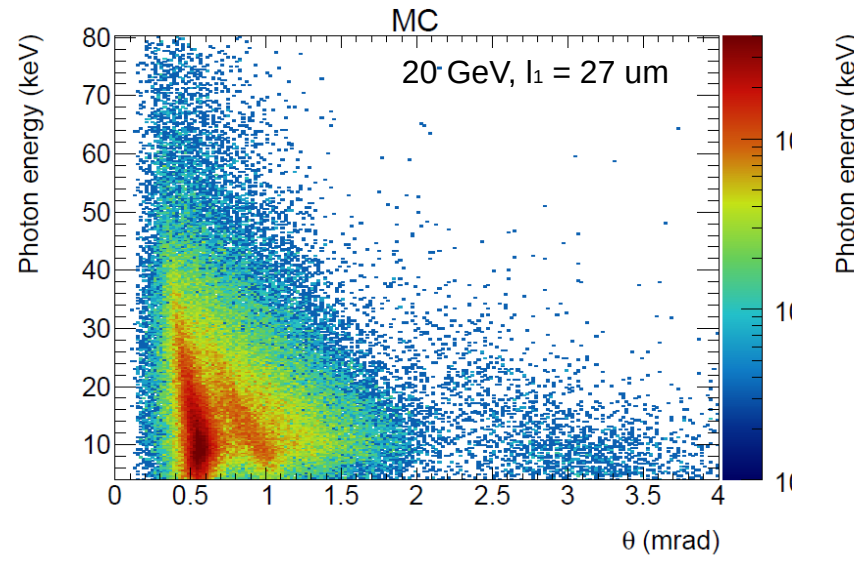
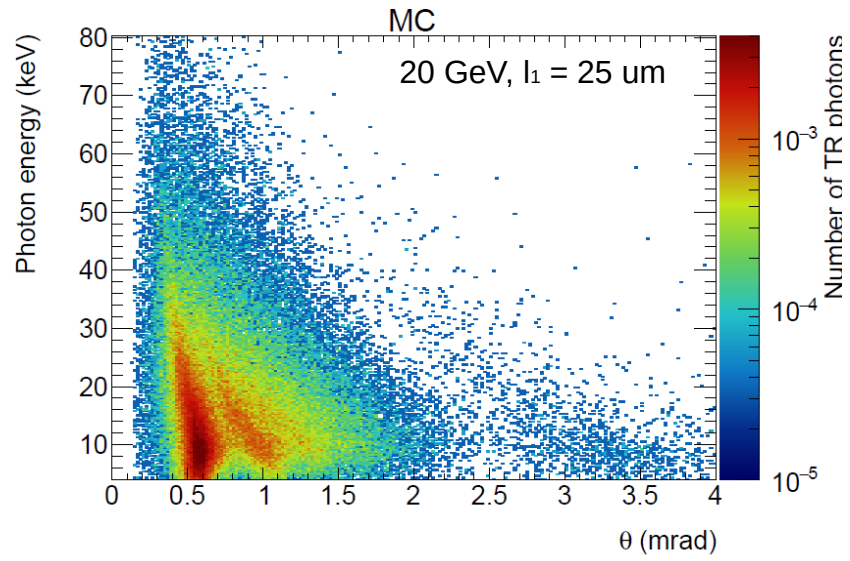
2D spectrum, electrons 20 GeV, L2 = 1000 um, Nfoils = 400



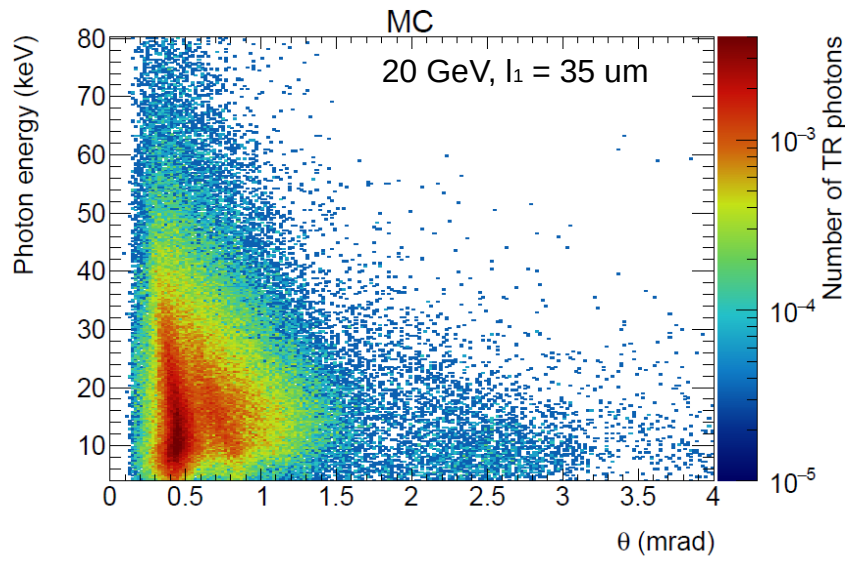
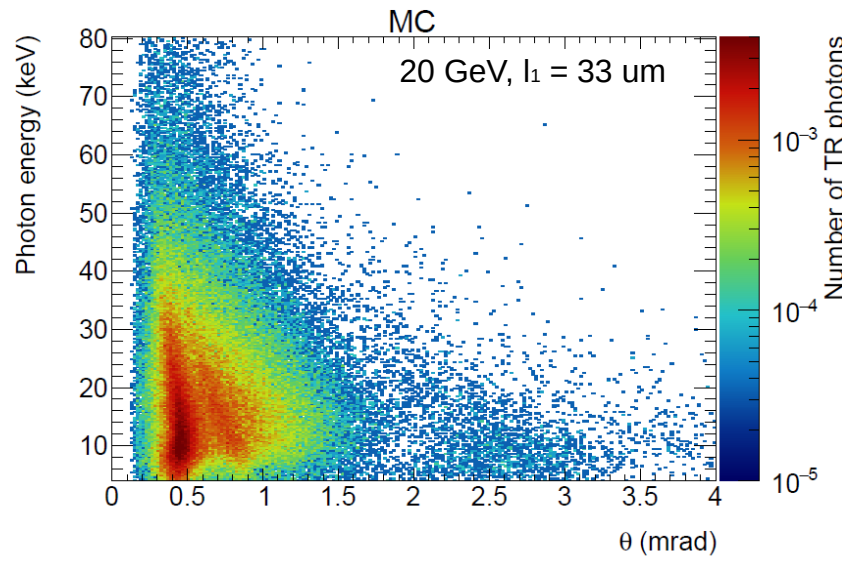
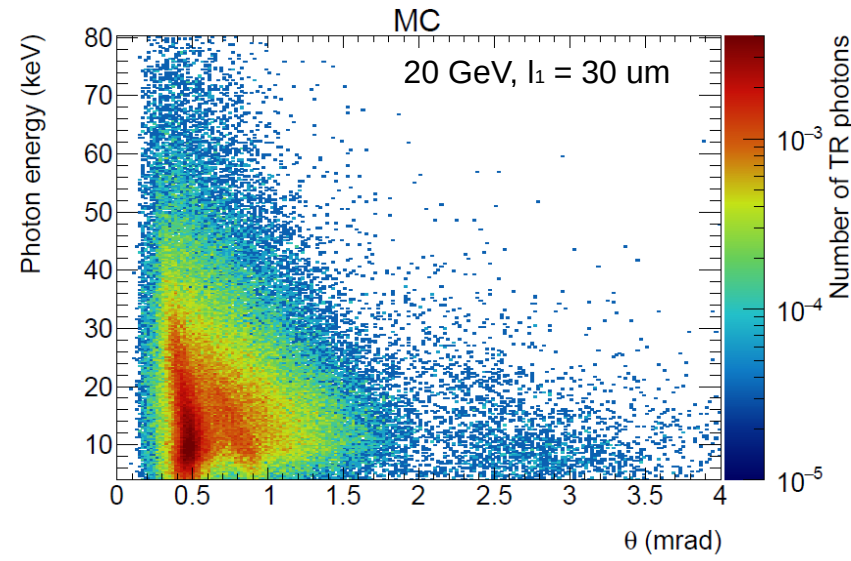
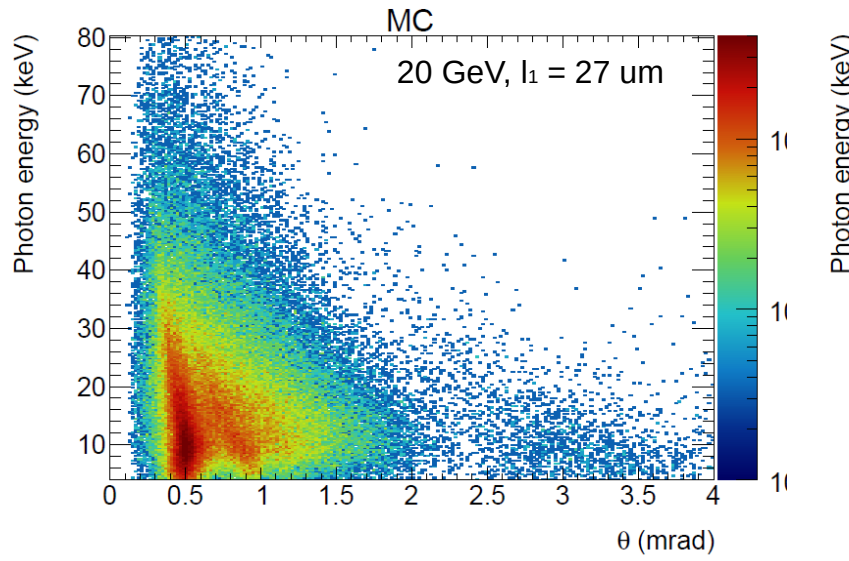
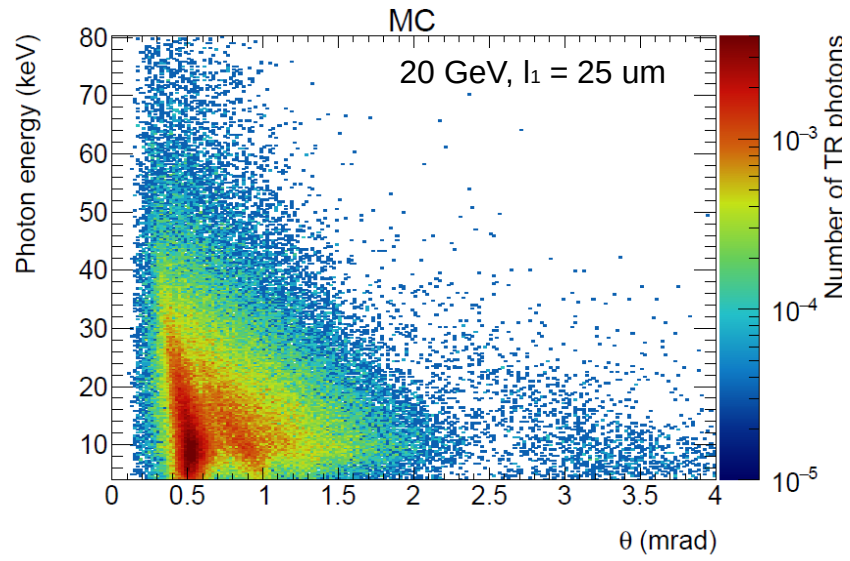
2D spectrum, electrons 20 GeV, L2 = 300 um, Nfoils = 500



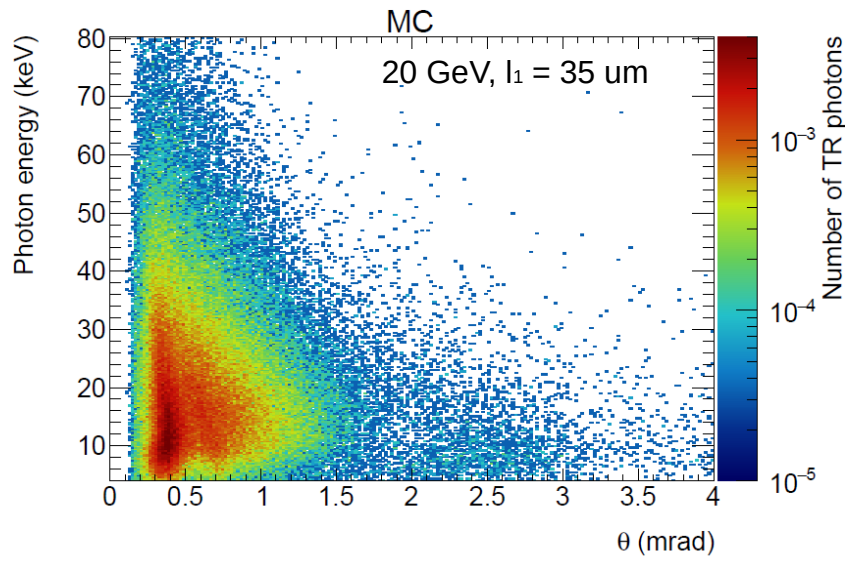
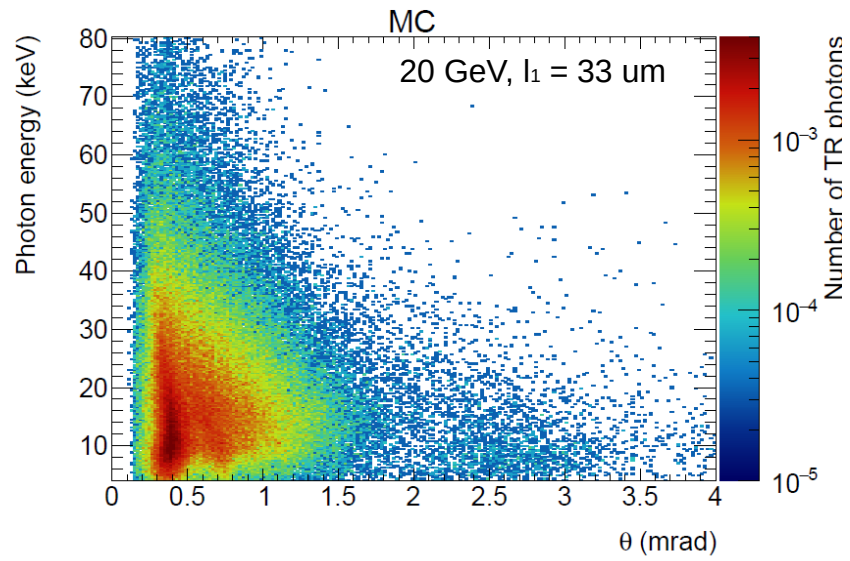
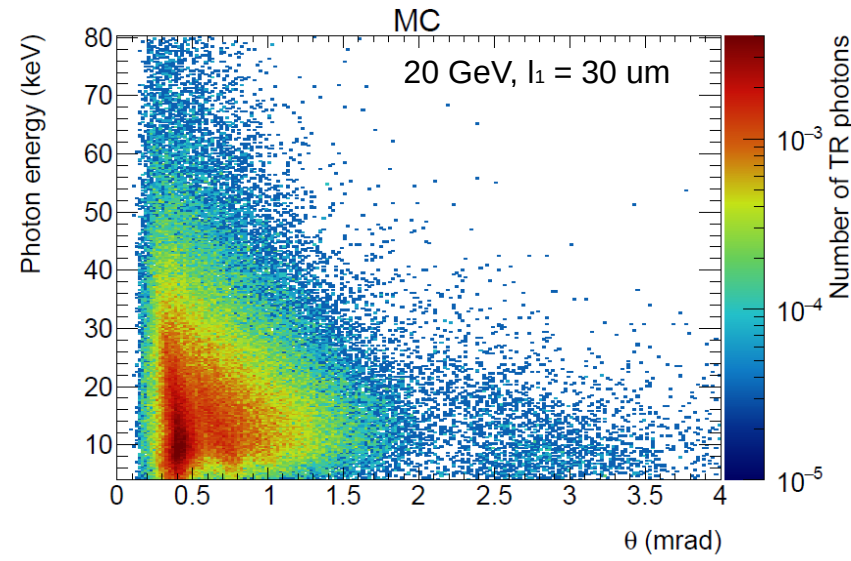
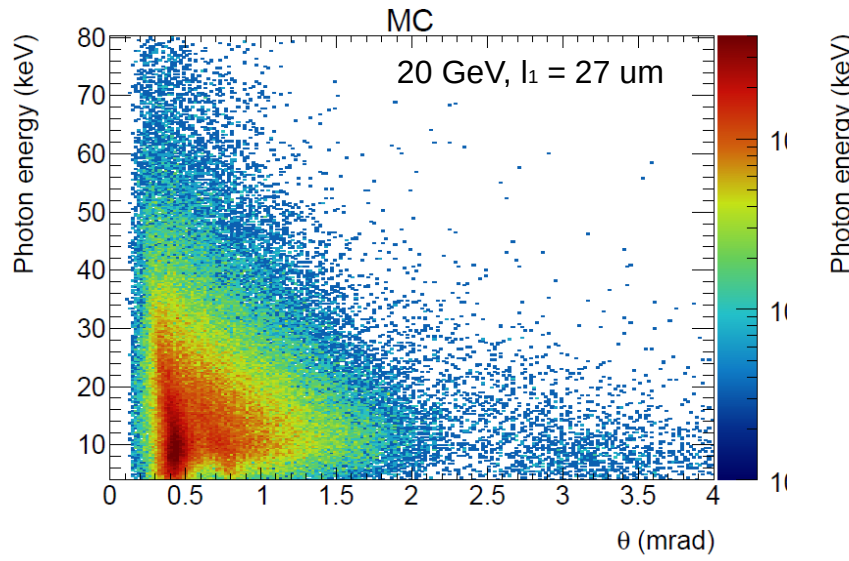
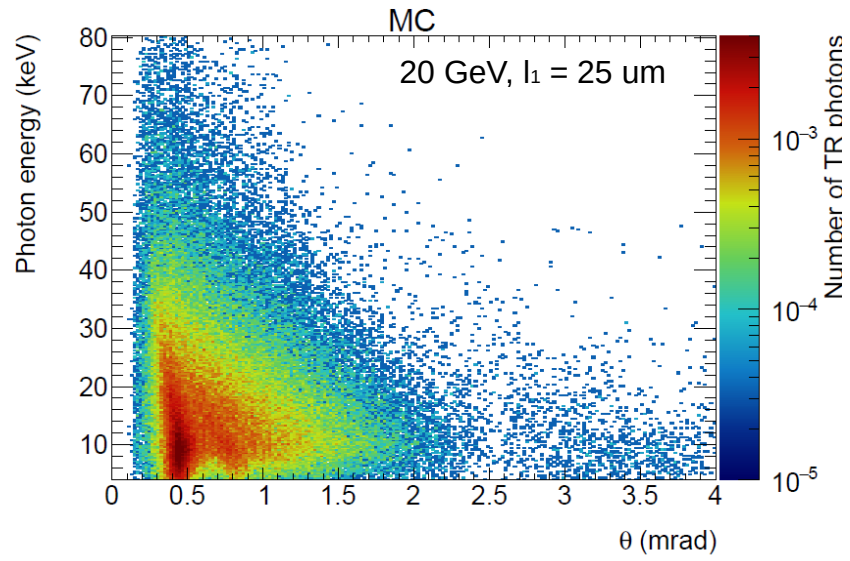
2D spectrum, electrons 20 GeV, L2 = 400 um, Nfoils = 500



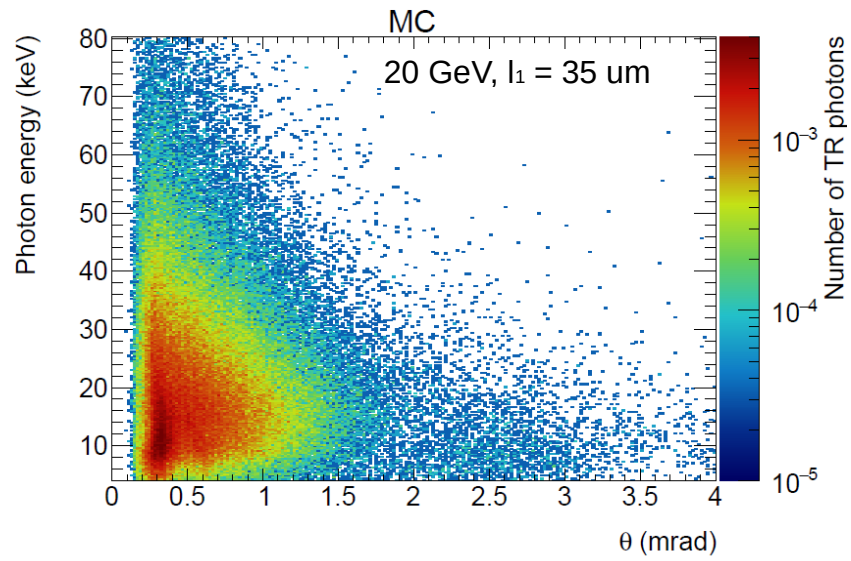
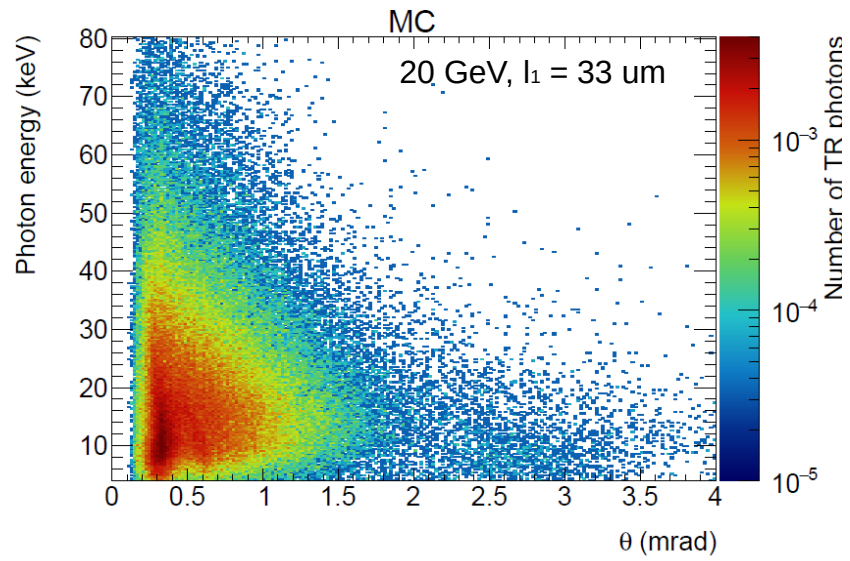
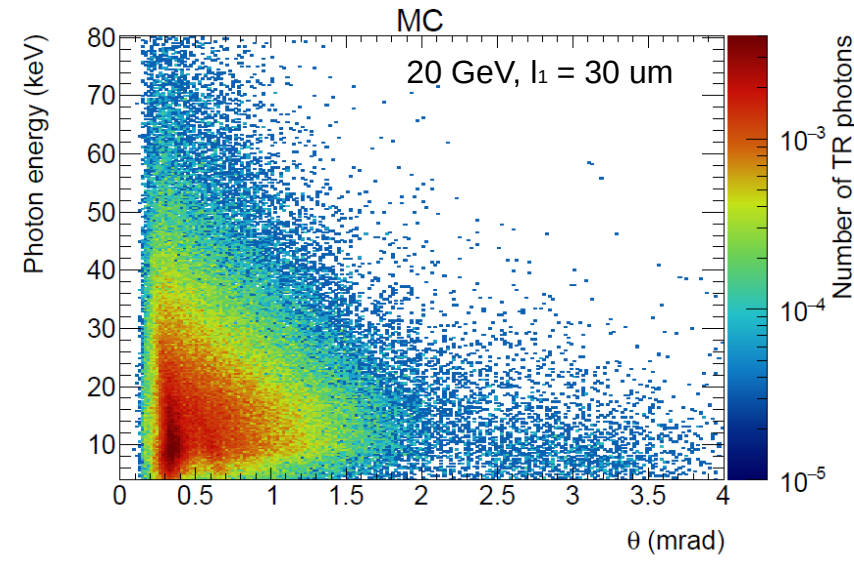
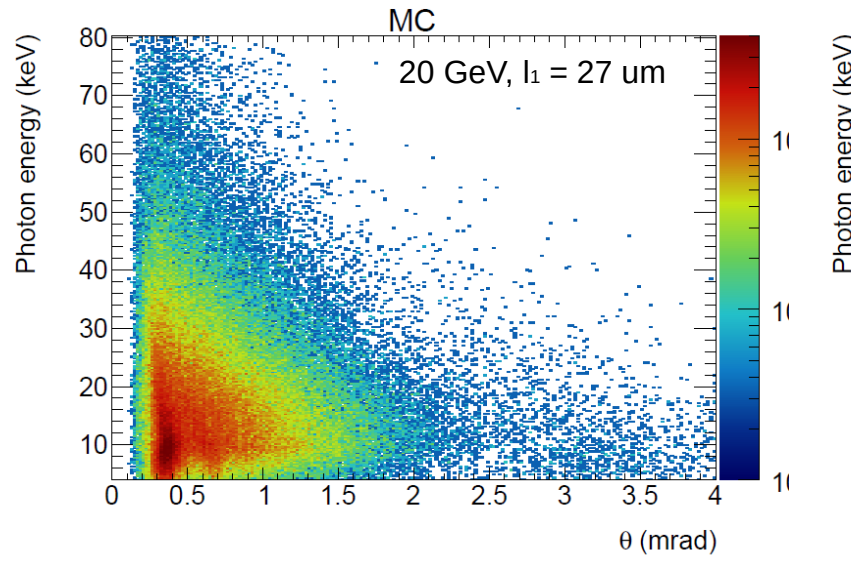
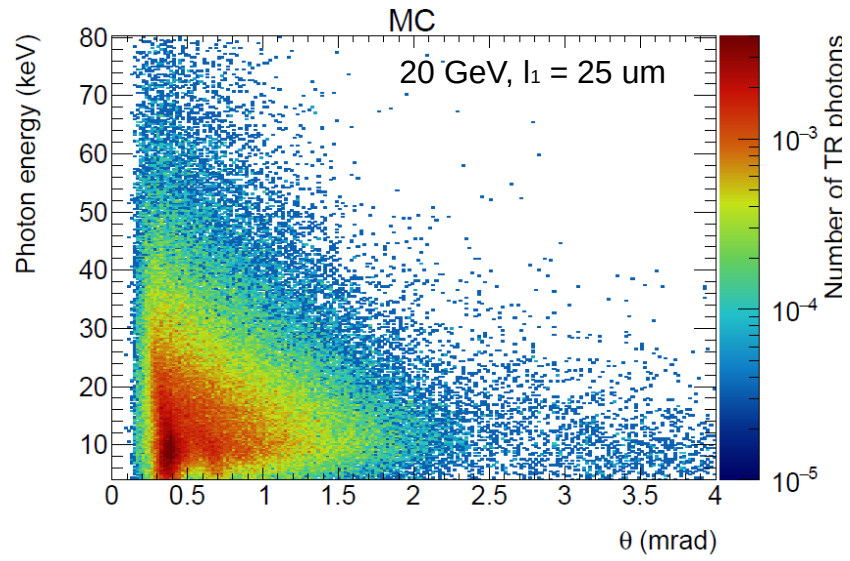
2D spectrum, electrons 20 GeV, L2 = 500 um, Nfoils = 500



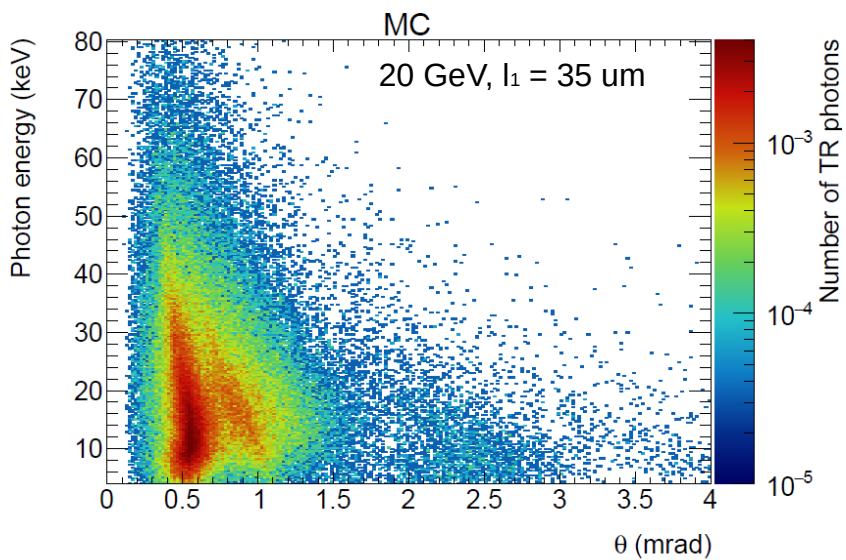
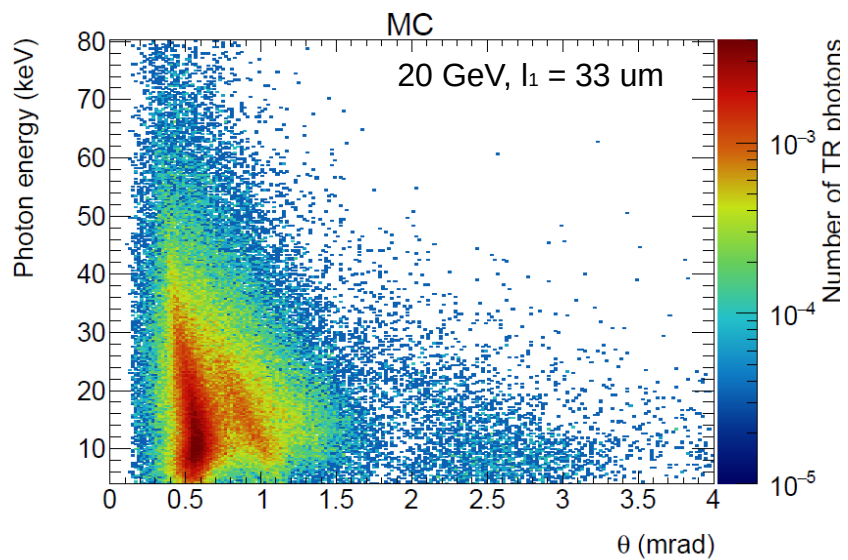
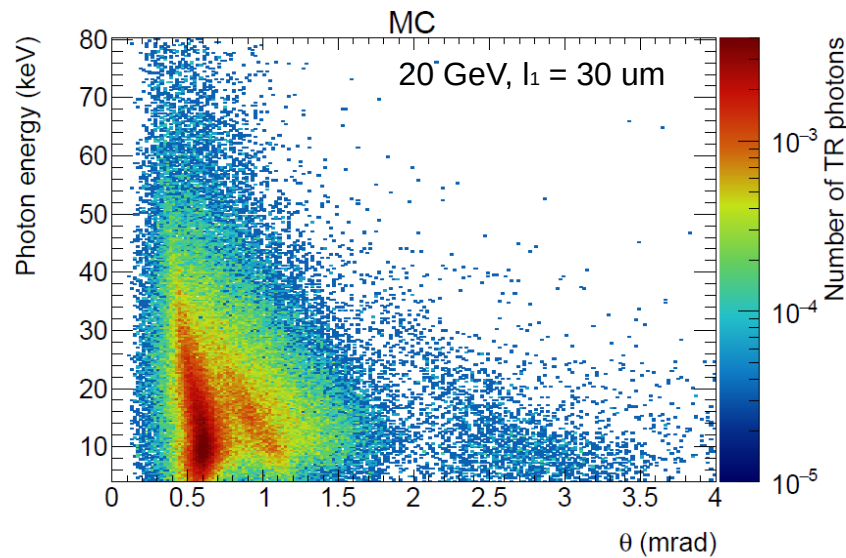
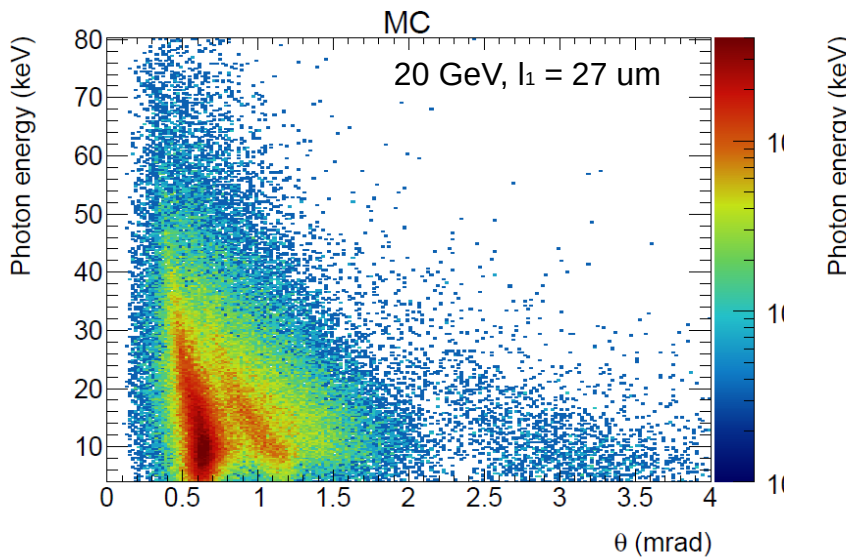
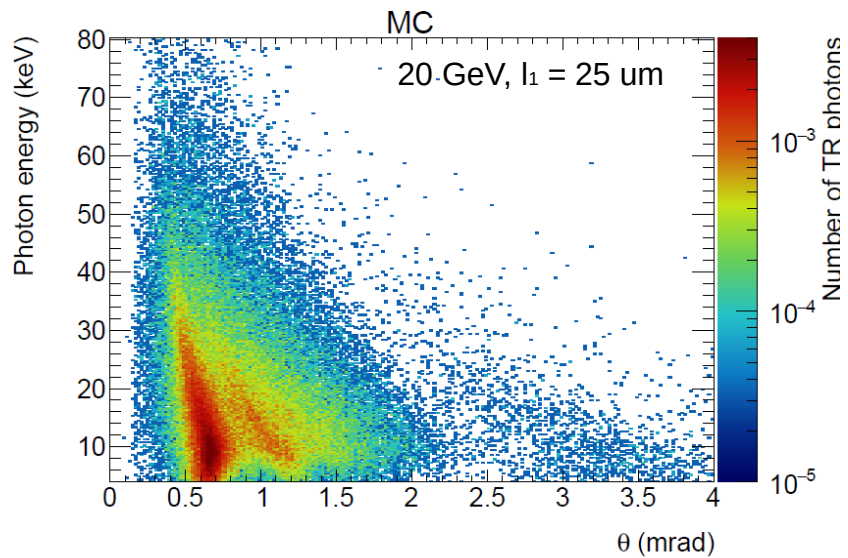
2D spectrum, electrons 20 GeV, L2 = 700 um, Nfoils = 500



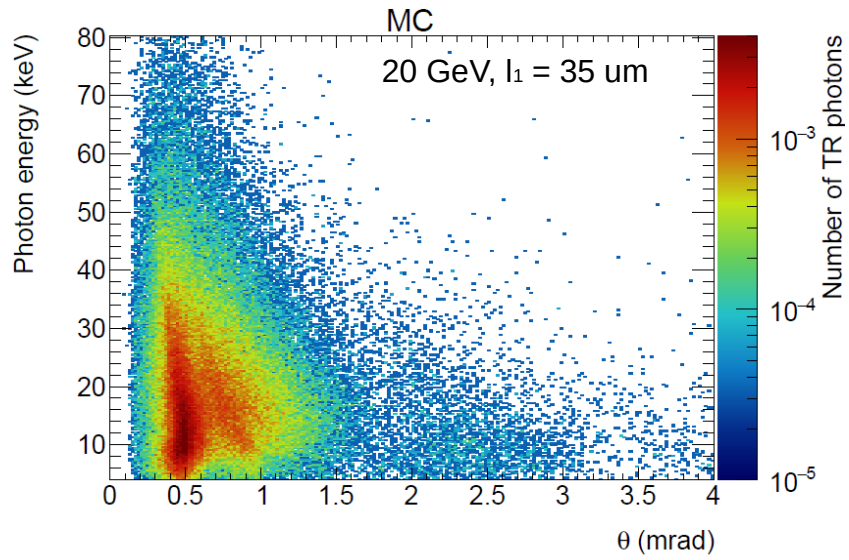
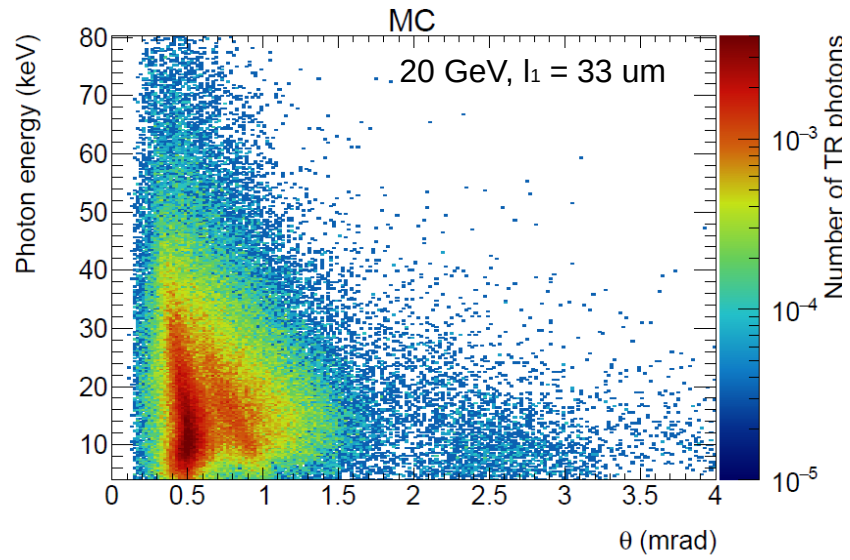
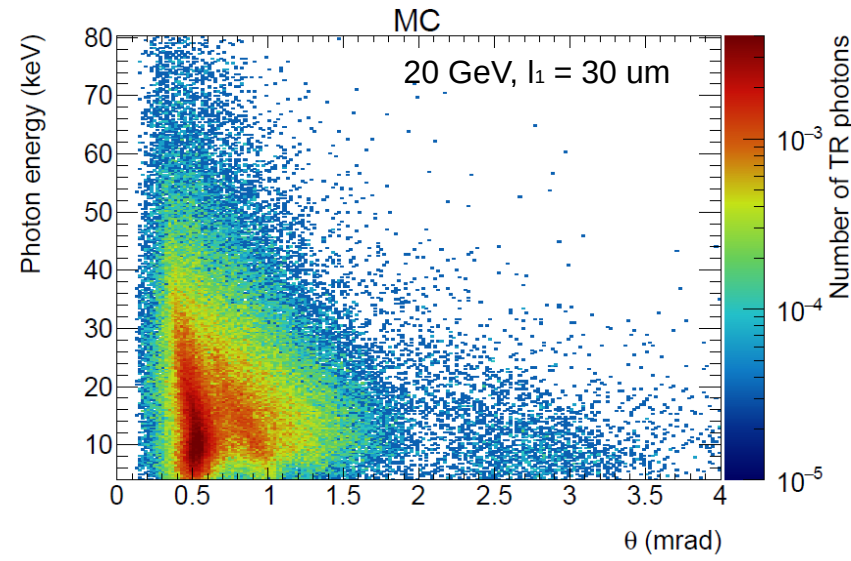
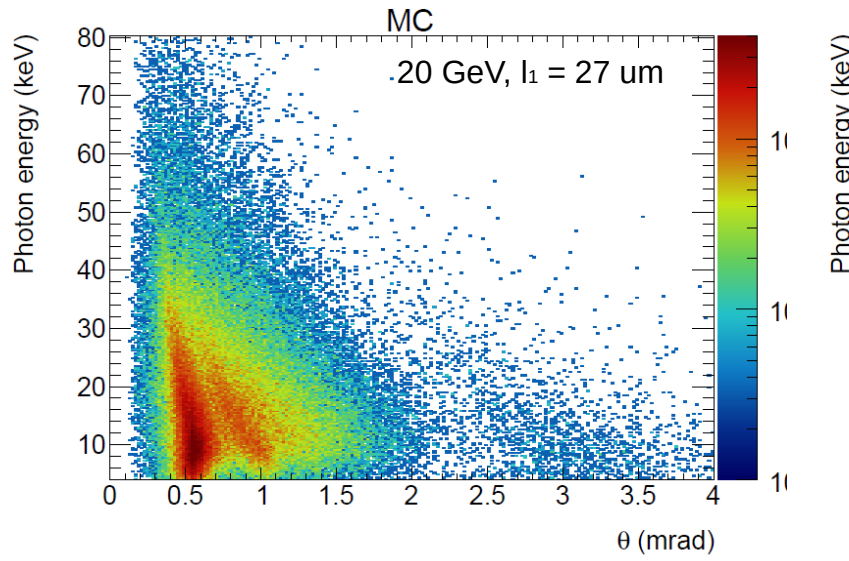
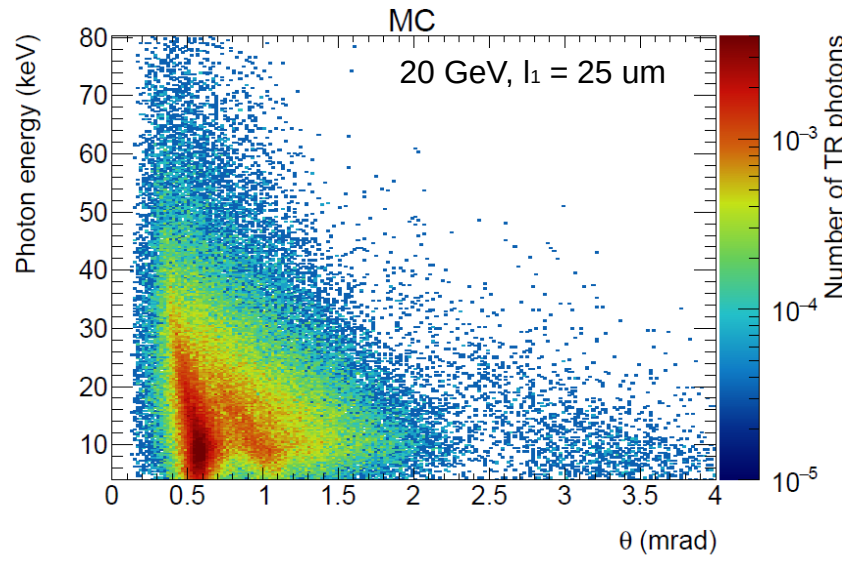
2D spectrum, electrons 20 GeV, L2 = 1000 um, Nfoils = 500



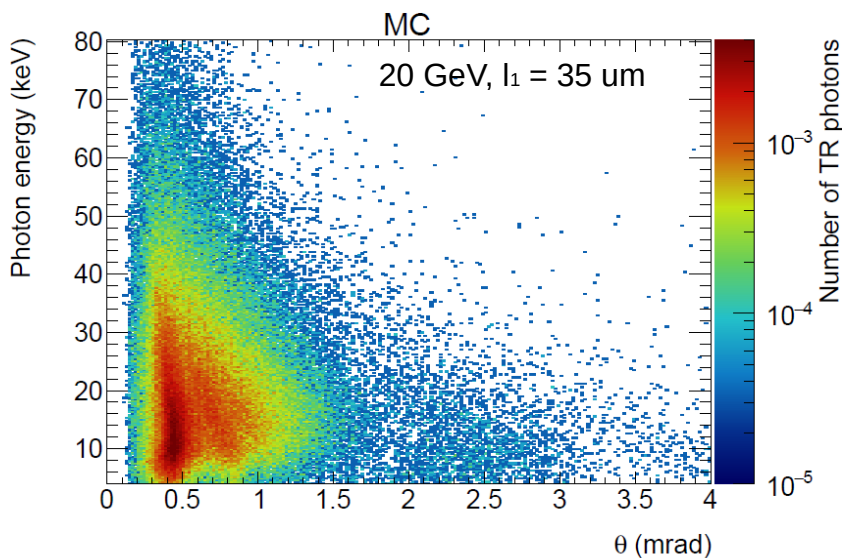
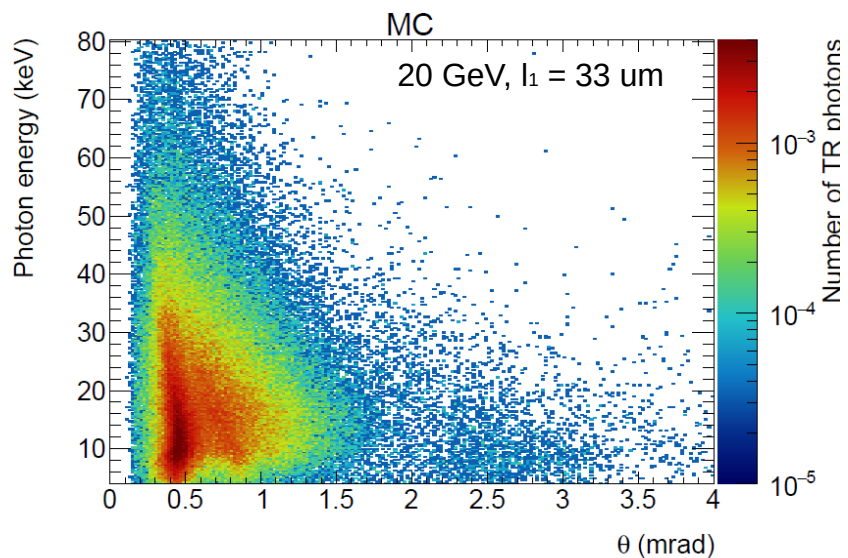
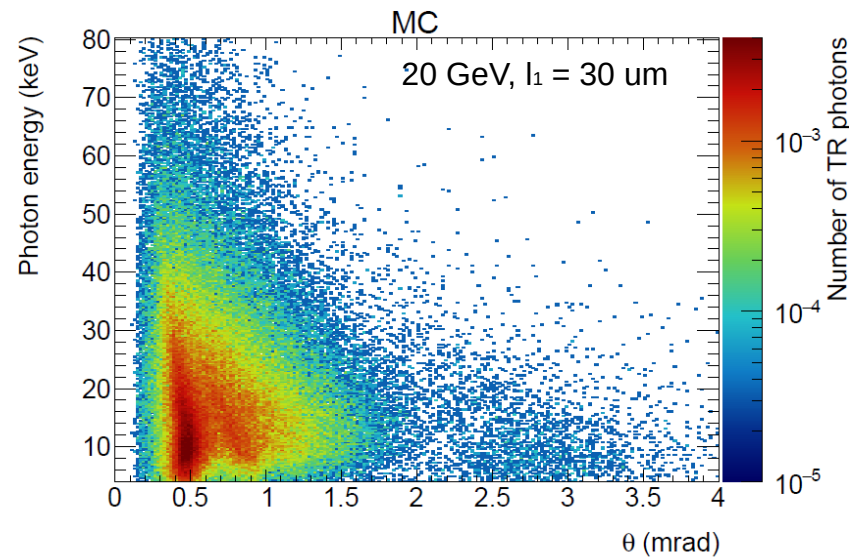
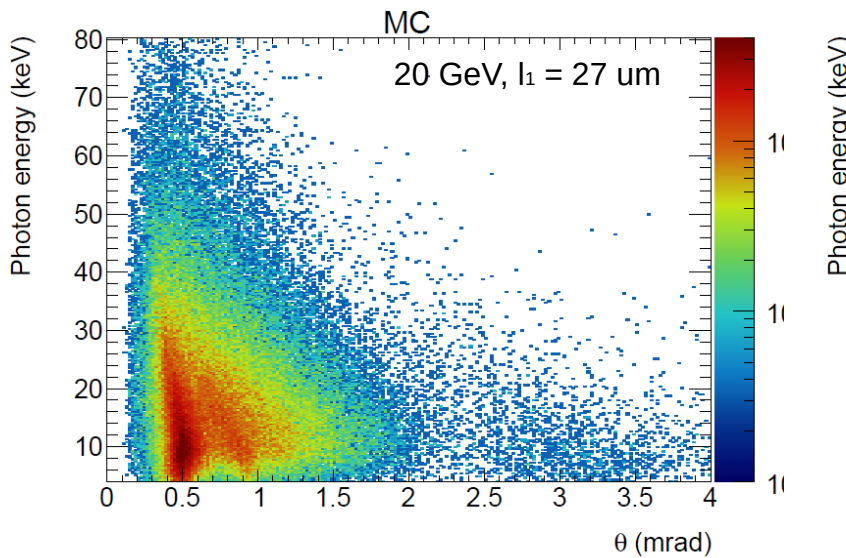
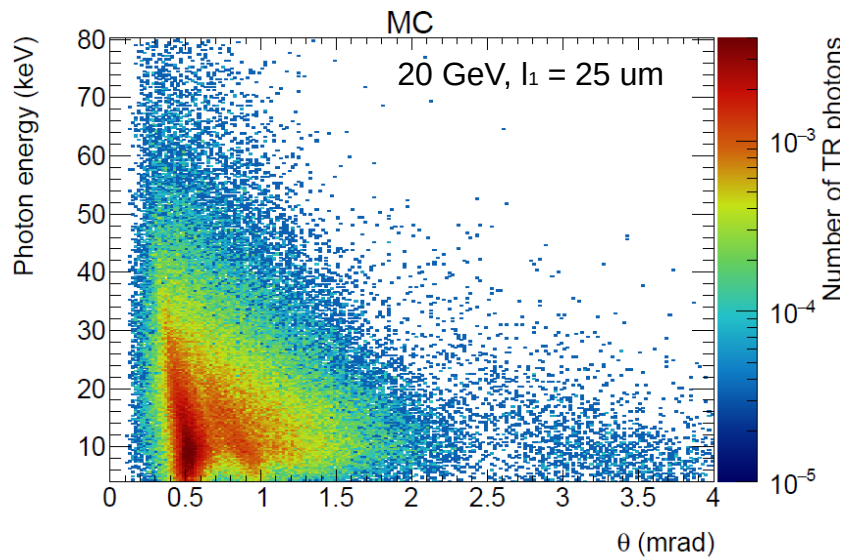
2D spectrum, electrons 20 GeV, L2 = 300 um, Nfoils = 600



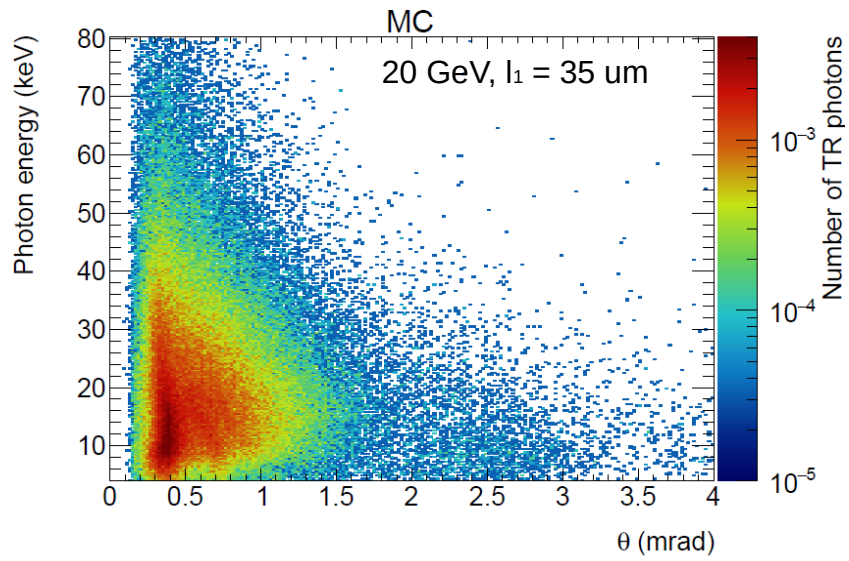
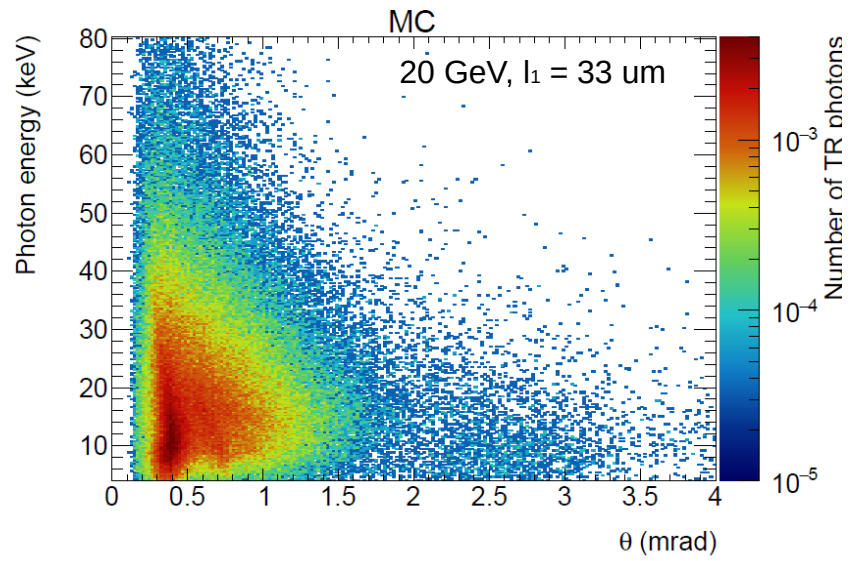
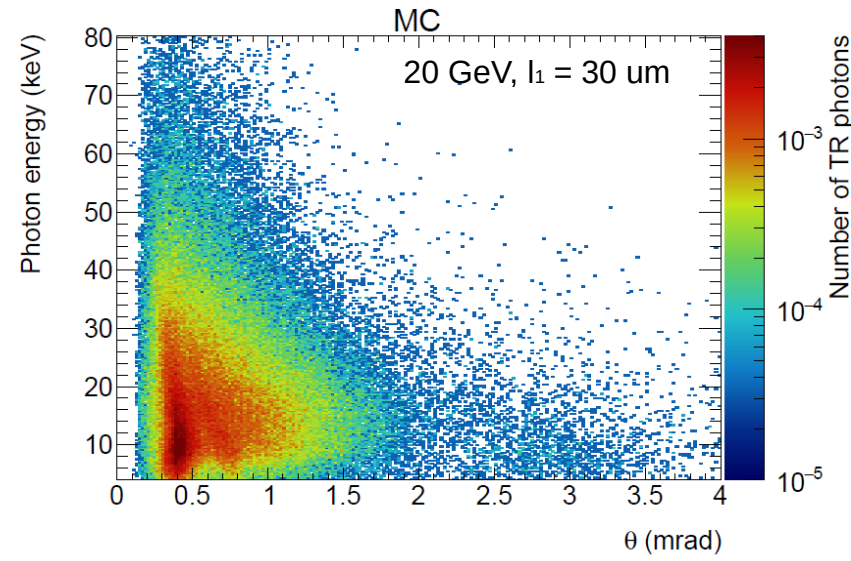
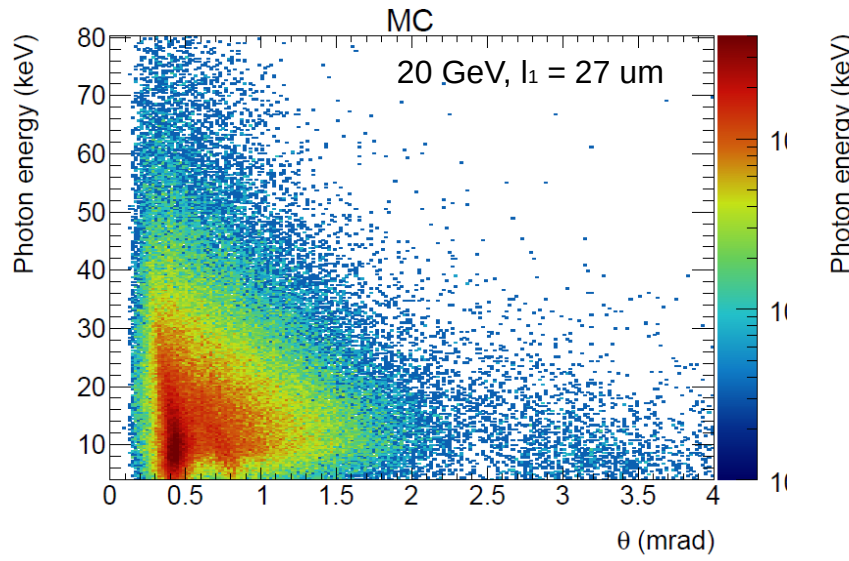
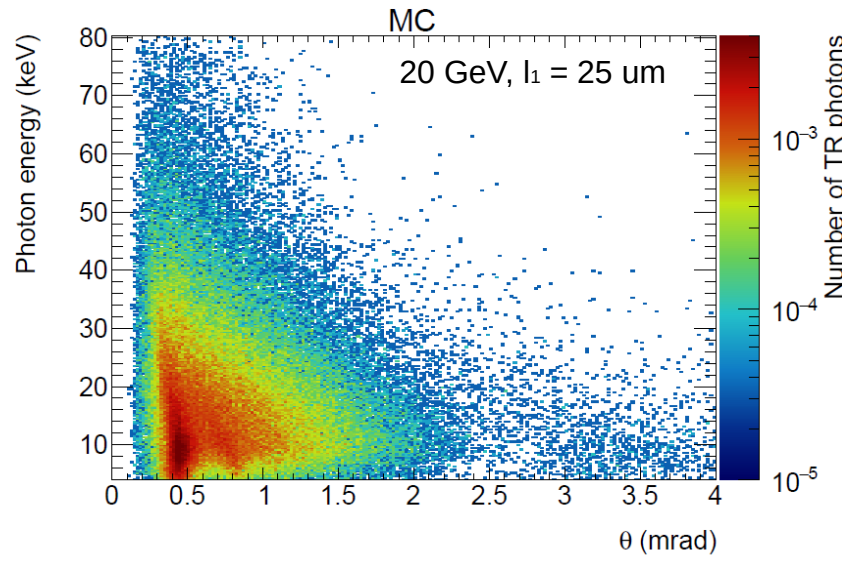
2D spectrum, electrons 20 GeV, L2 = 400 um, Nfoils = 600



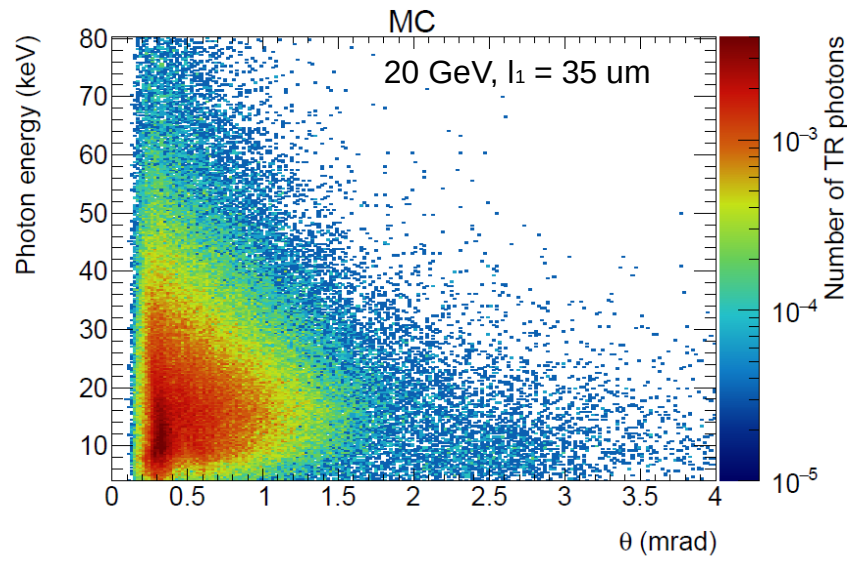
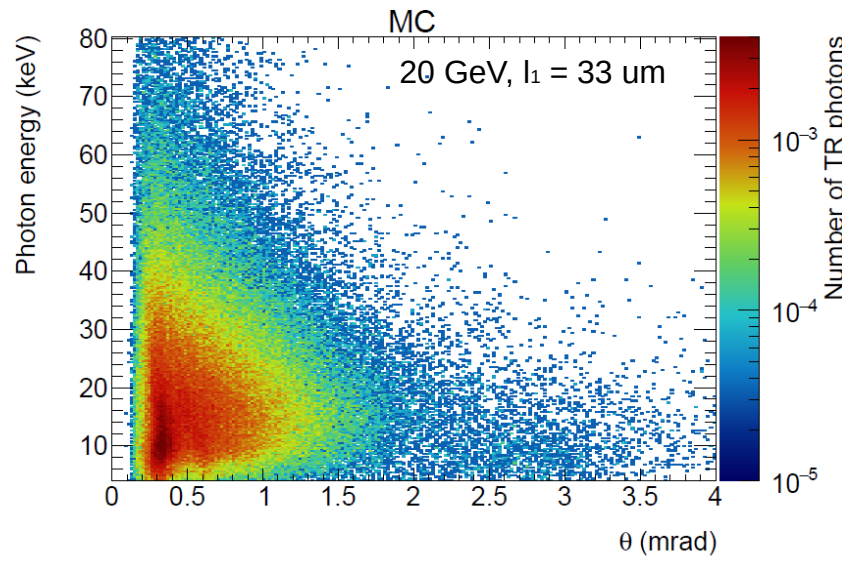
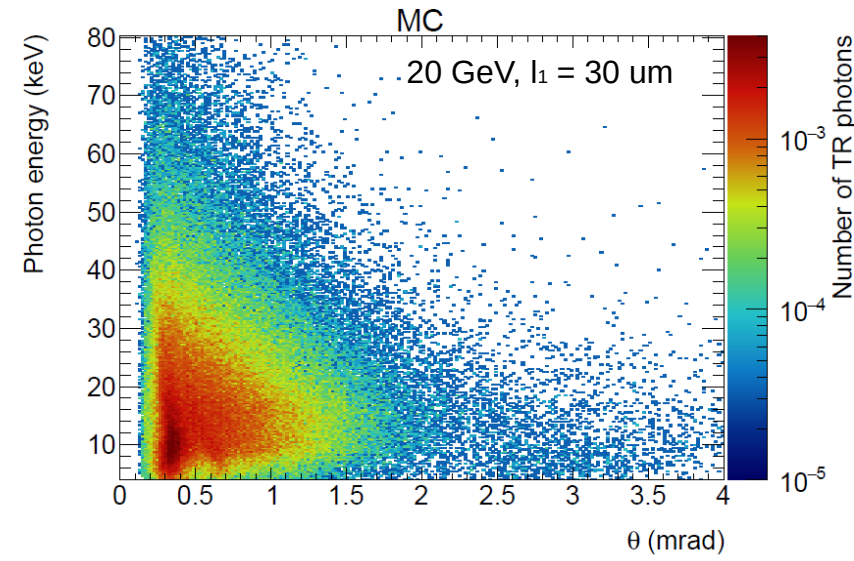
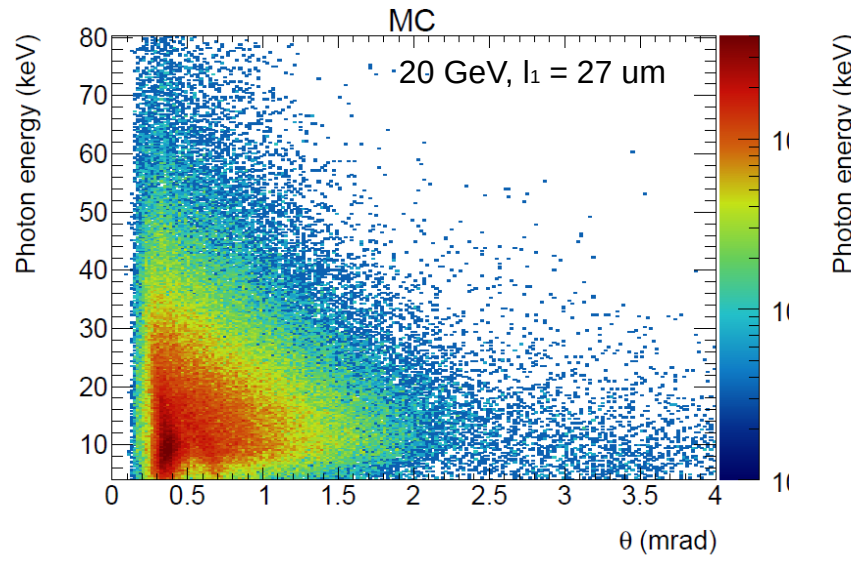
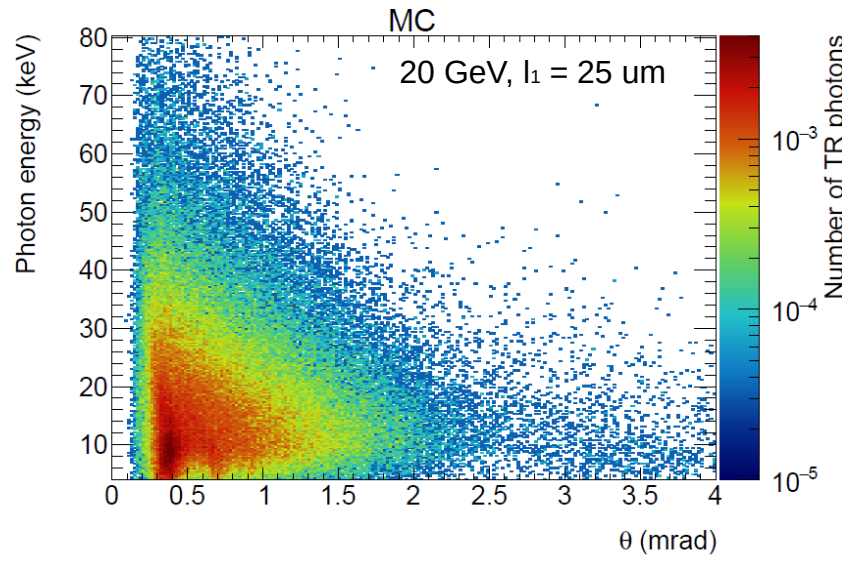
2D spectrum, electrons 20 GeV, L2 = 500 um, Nfoils = 600



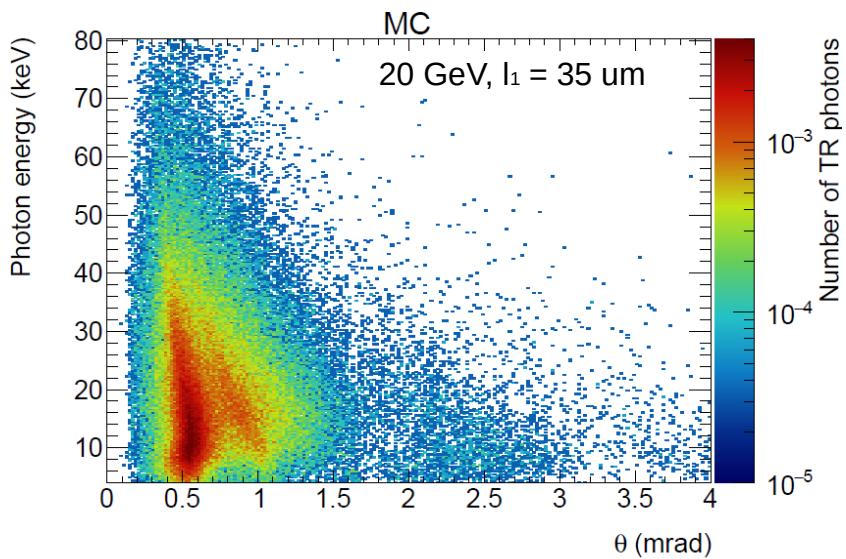
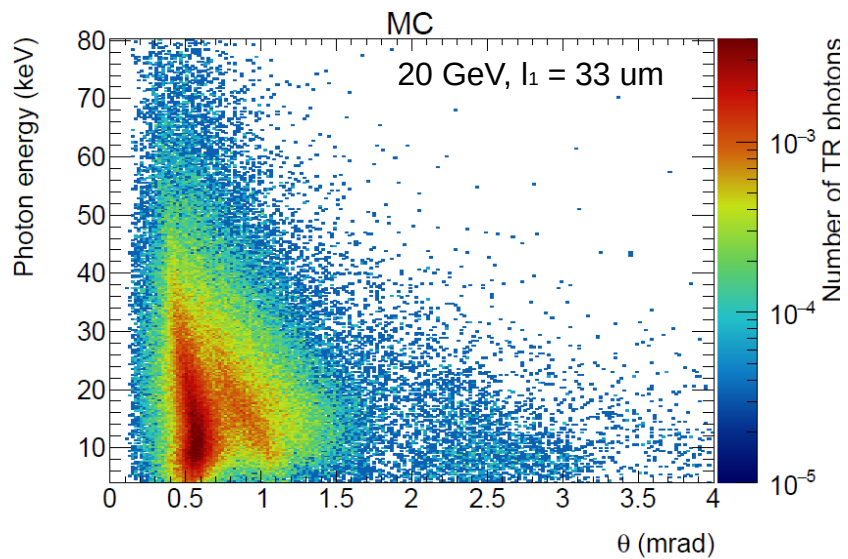
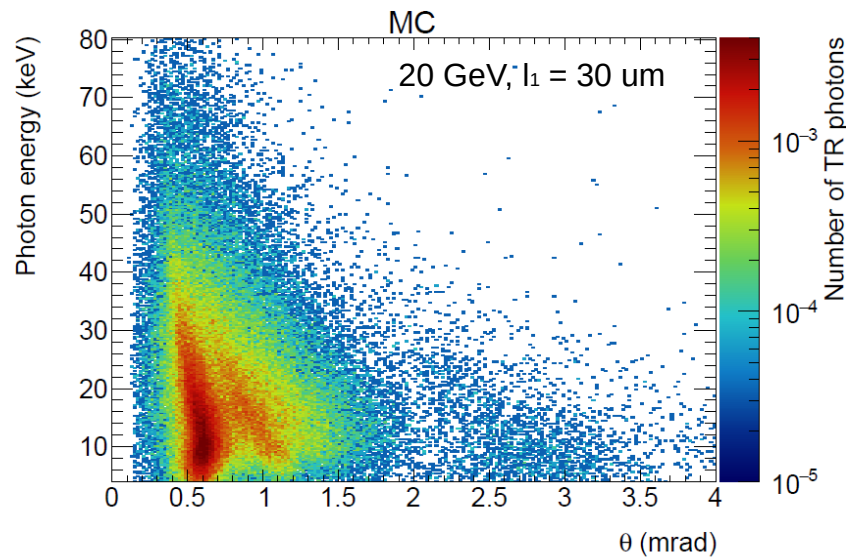
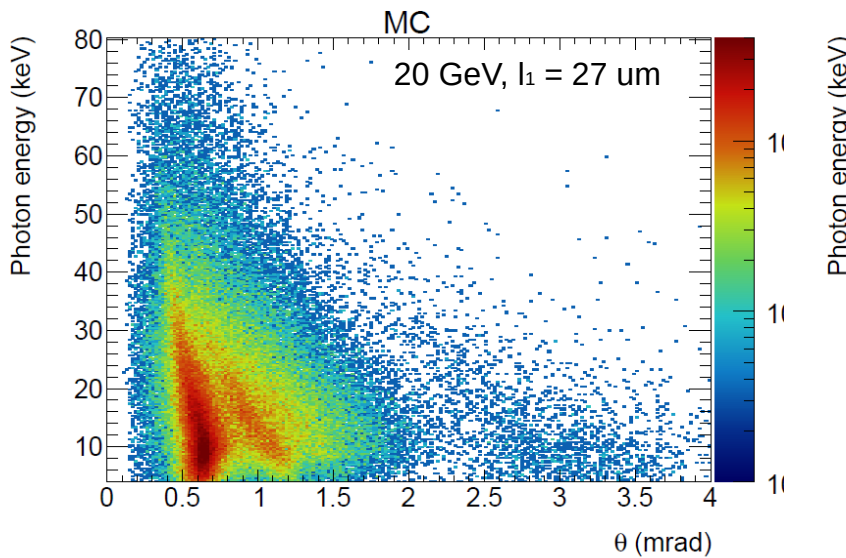
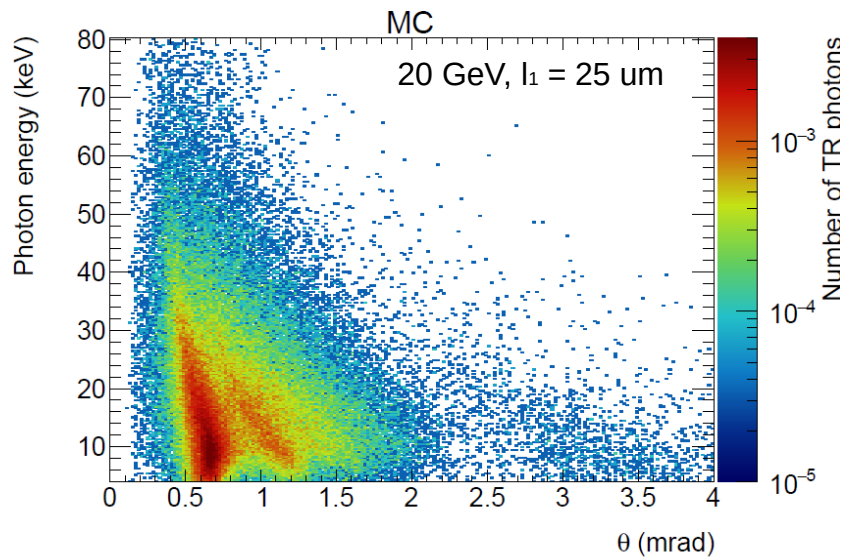
2D spectrum, electrons 20 GeV, L2 = 700 um, Nfoils = 600



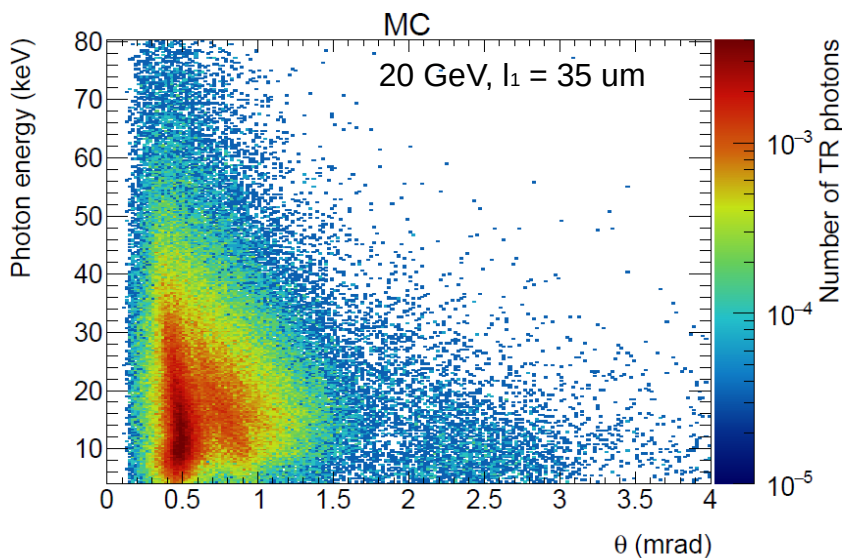
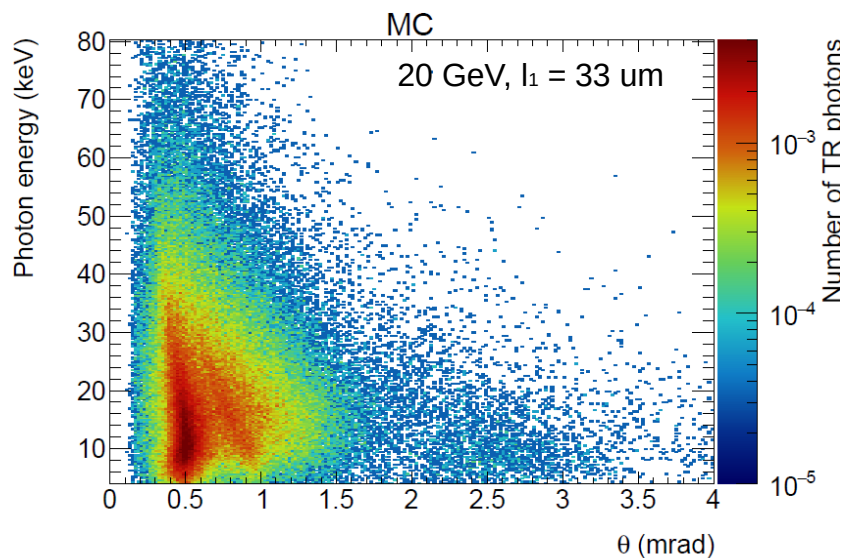
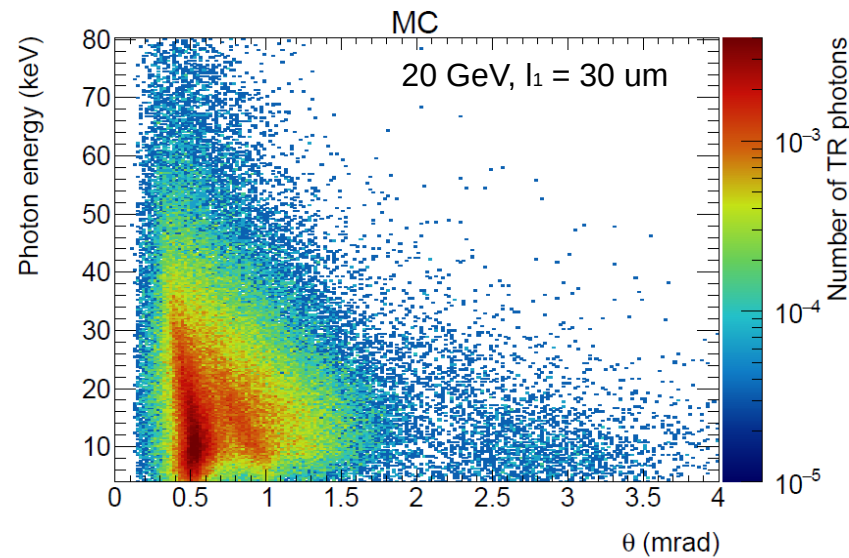
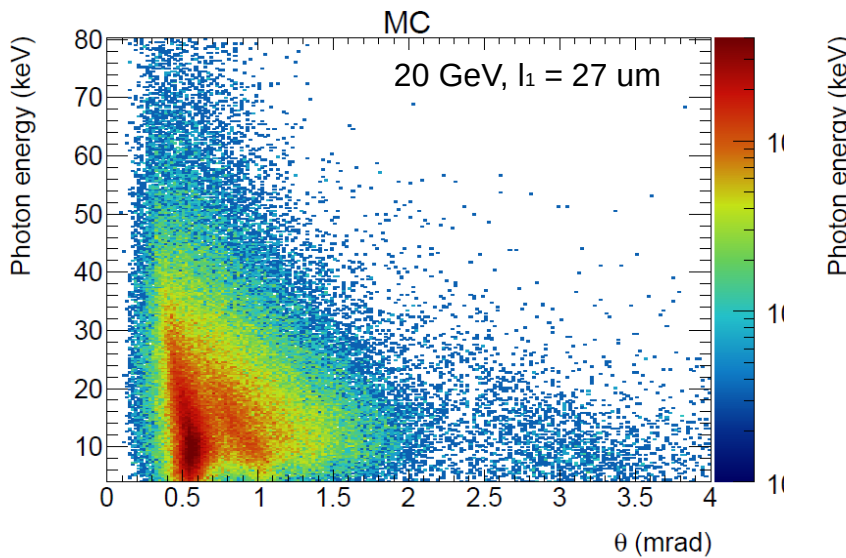
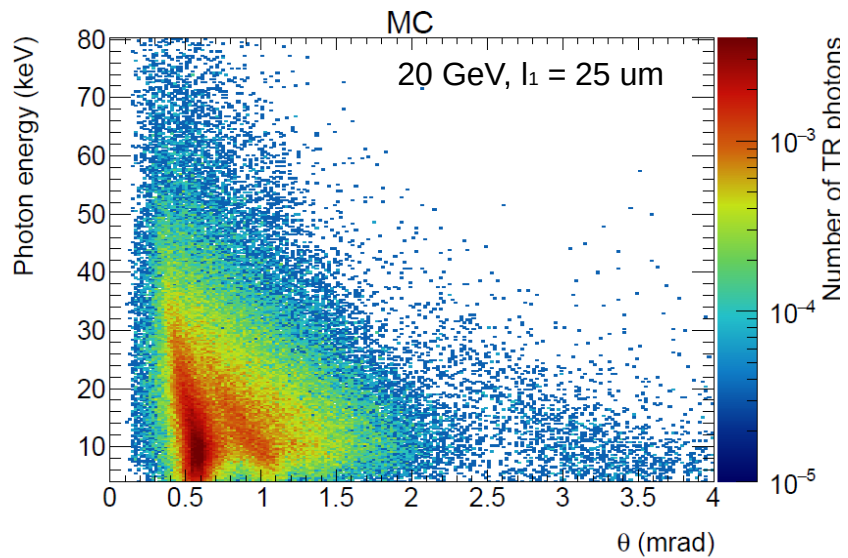
2D spectrum, electrons 20 GeV, L2 = 1000 um, Nfoils = 600



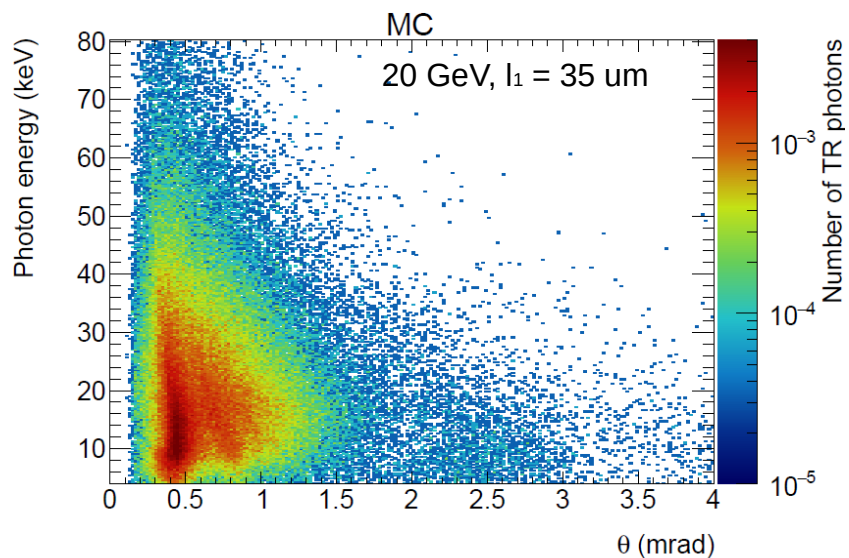
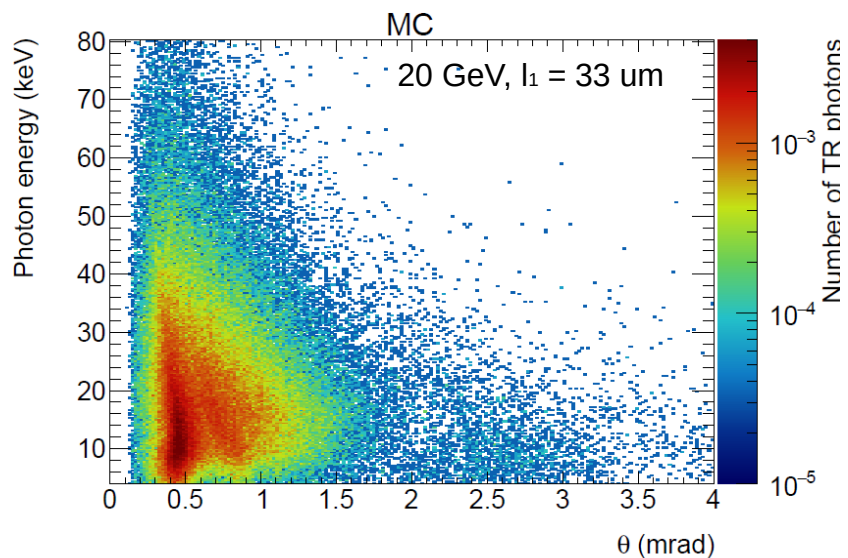
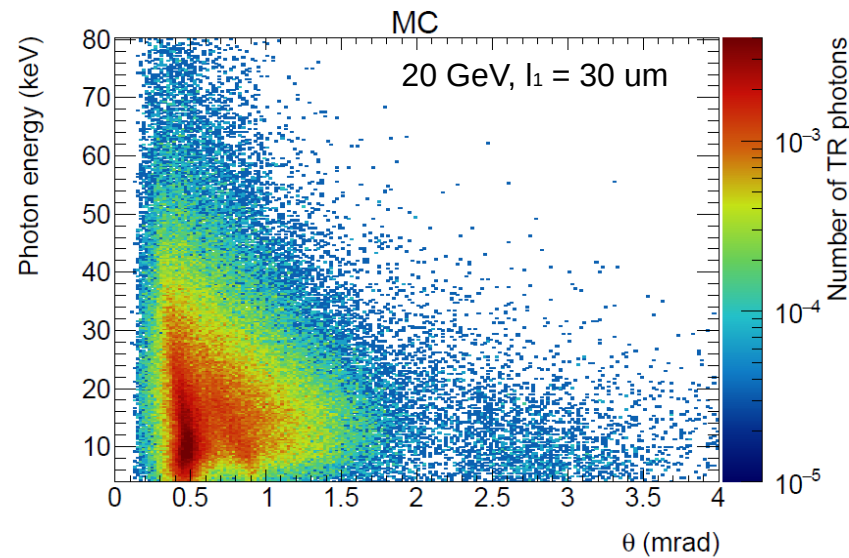
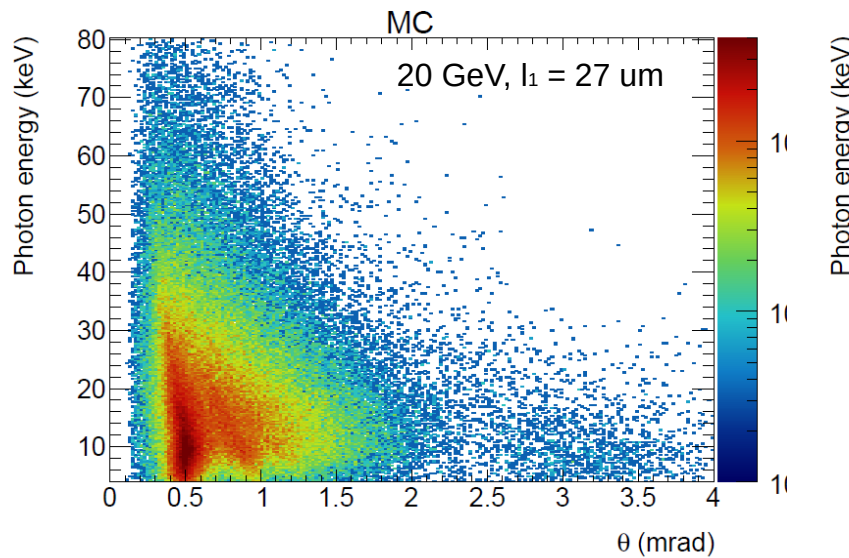
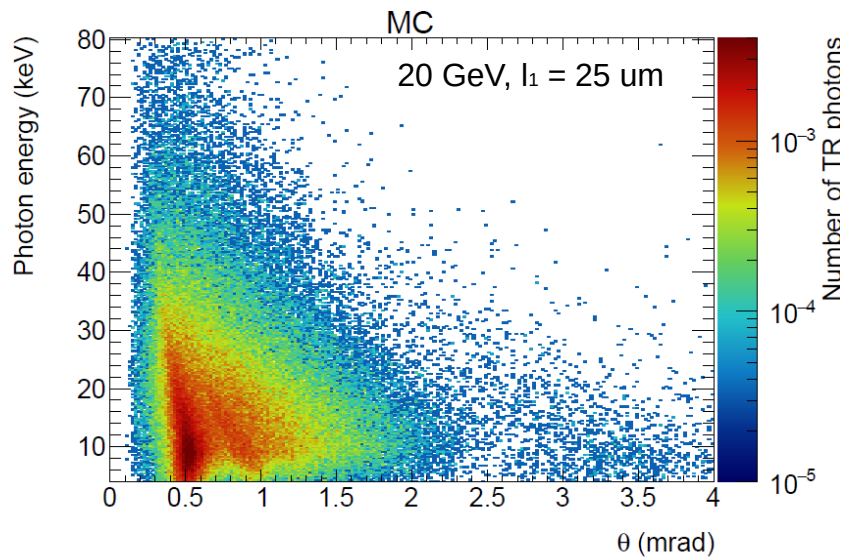
2D spectrum, electrons 20 GeV, L2 = 300 um, Nfoils = 700



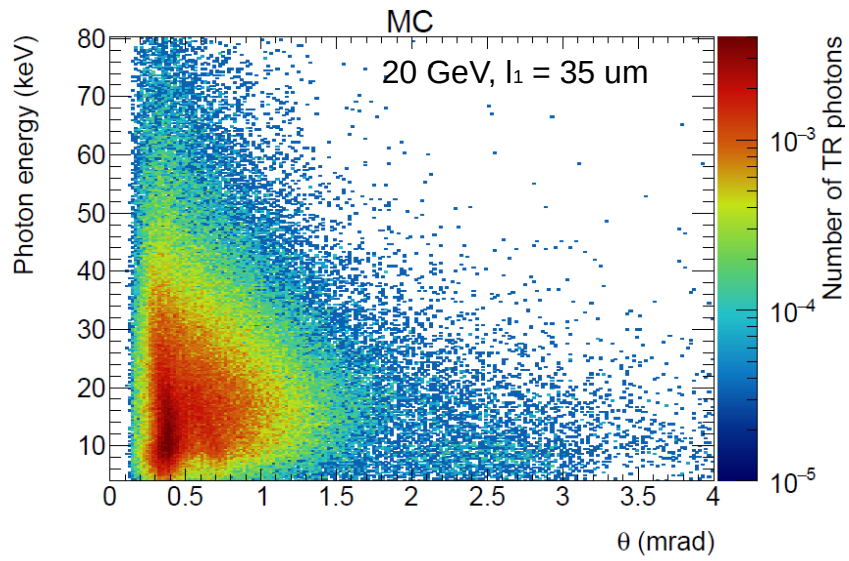
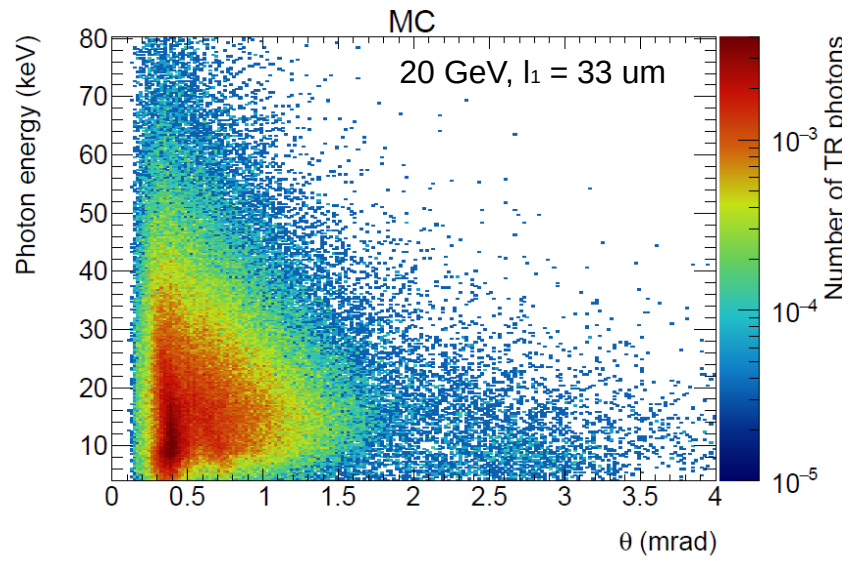
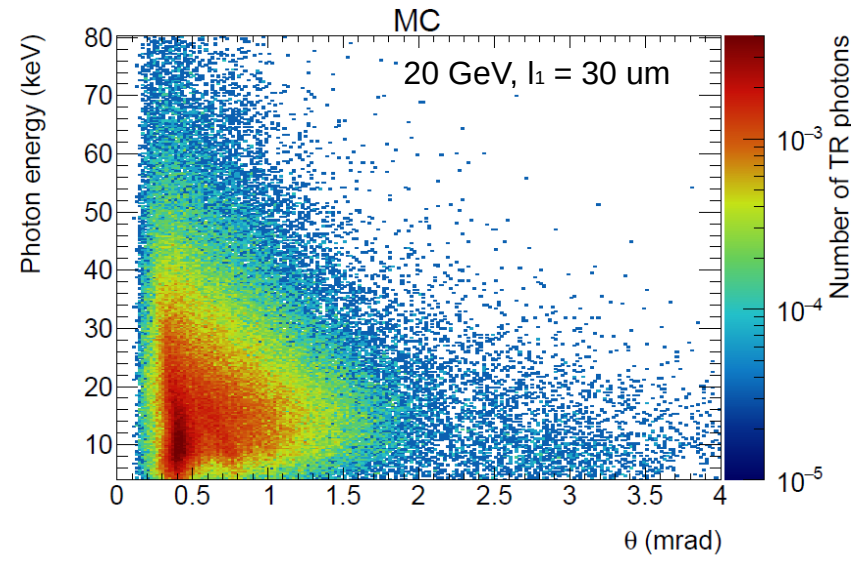
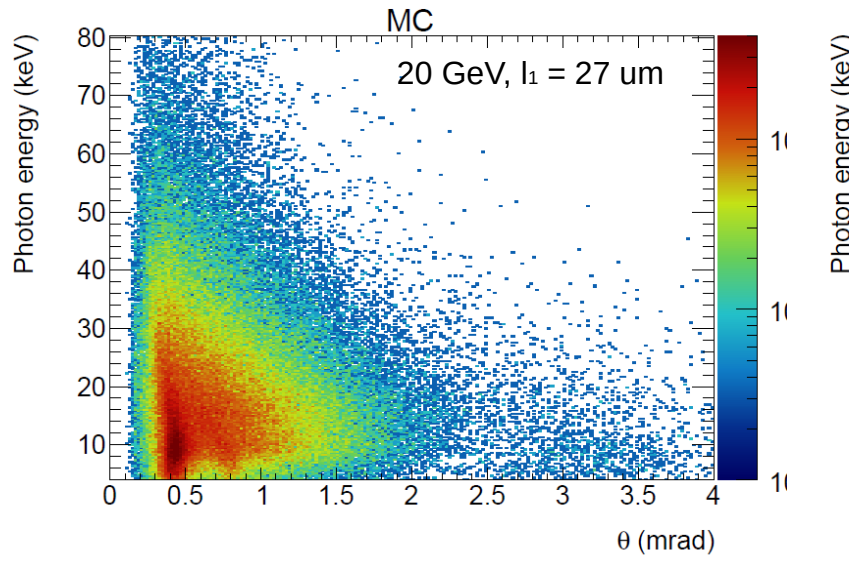
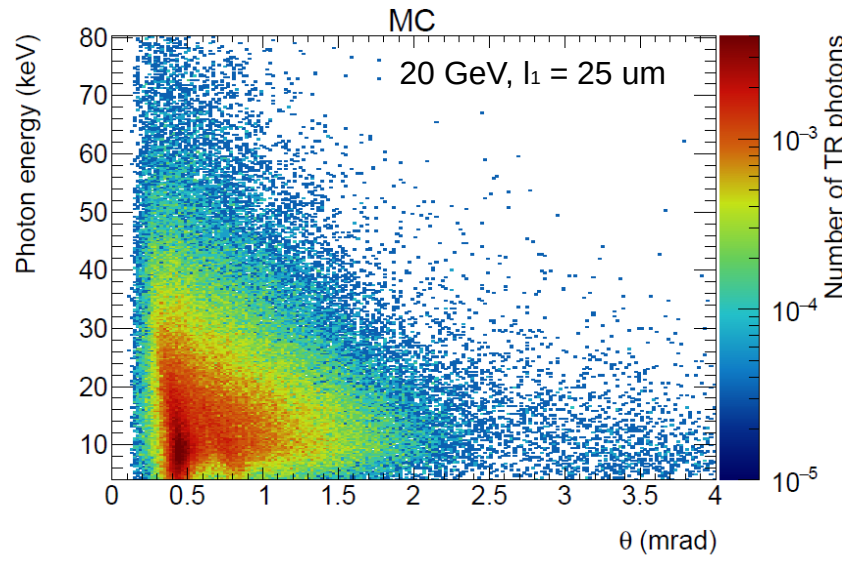
2D spectrum, electrons 20 GeV, L2 = 400 um, Nfoils = 700



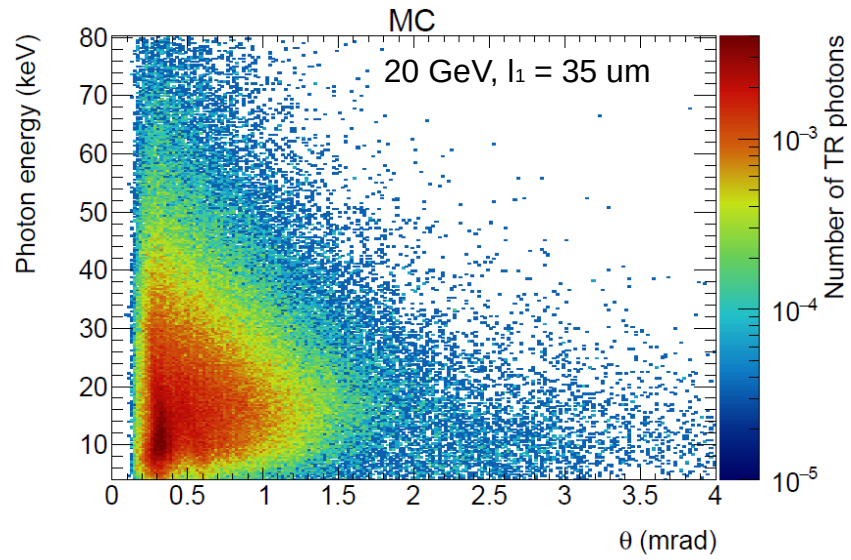
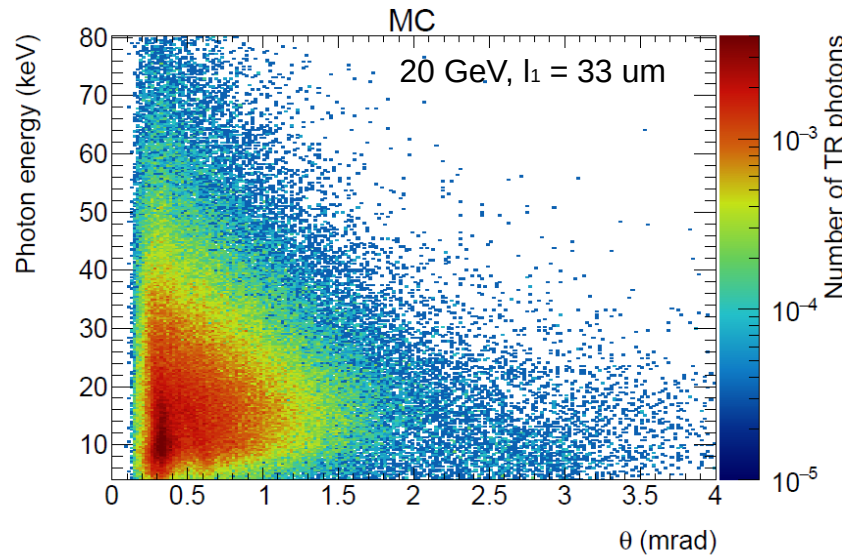
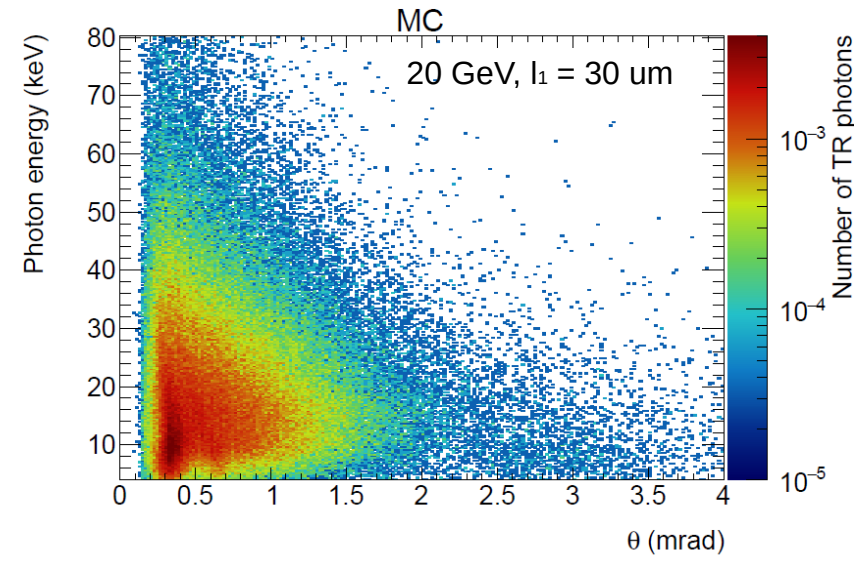
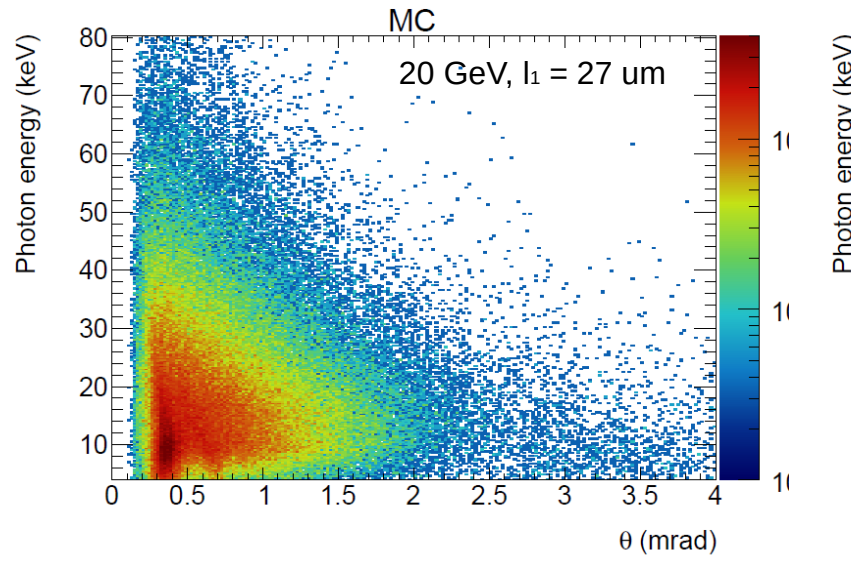
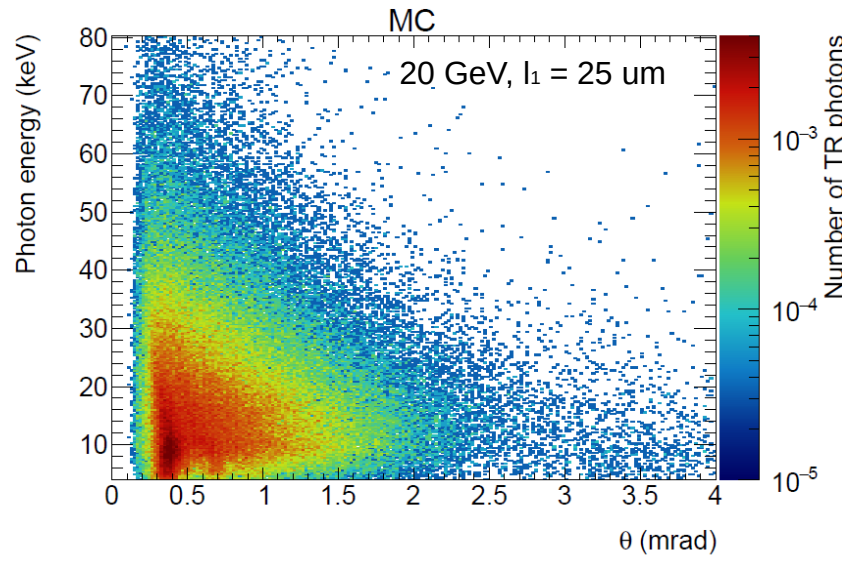
2D spectrum, electrons 20 GeV, L2 = 500 um, Nfoils = 700



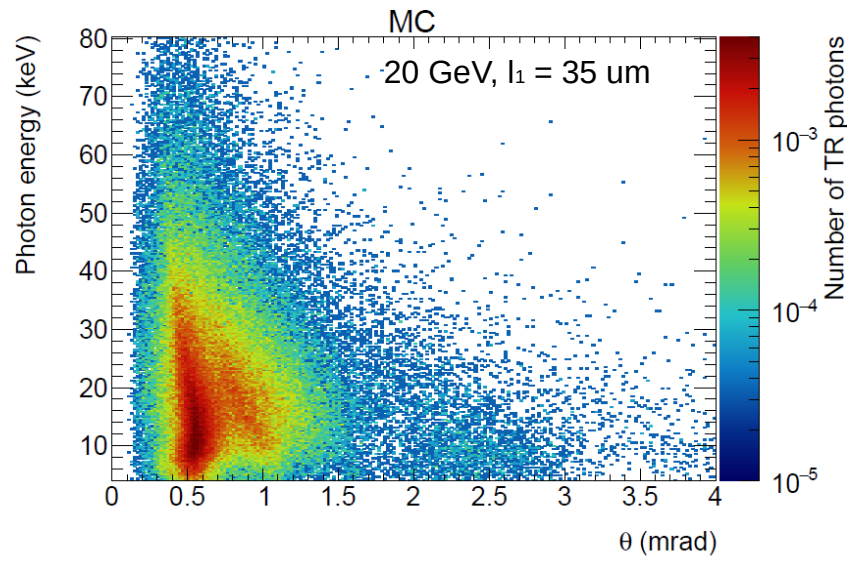
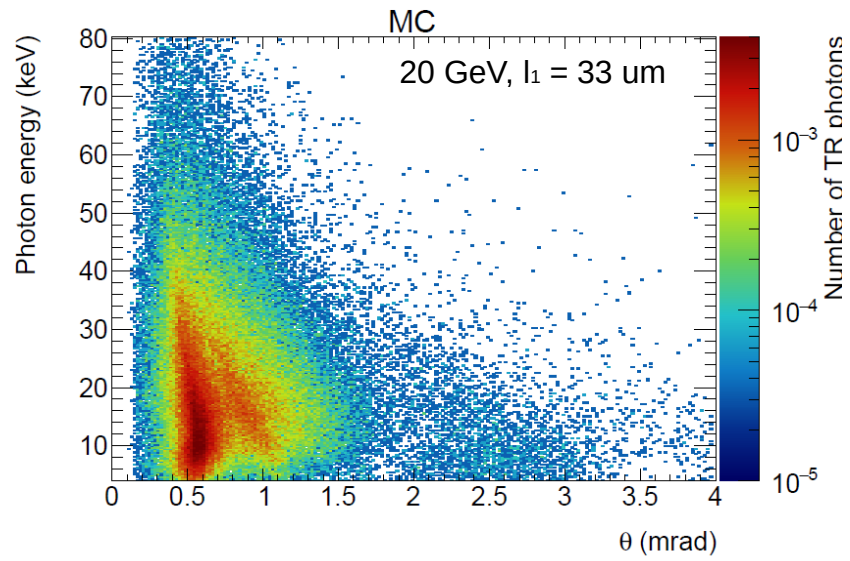
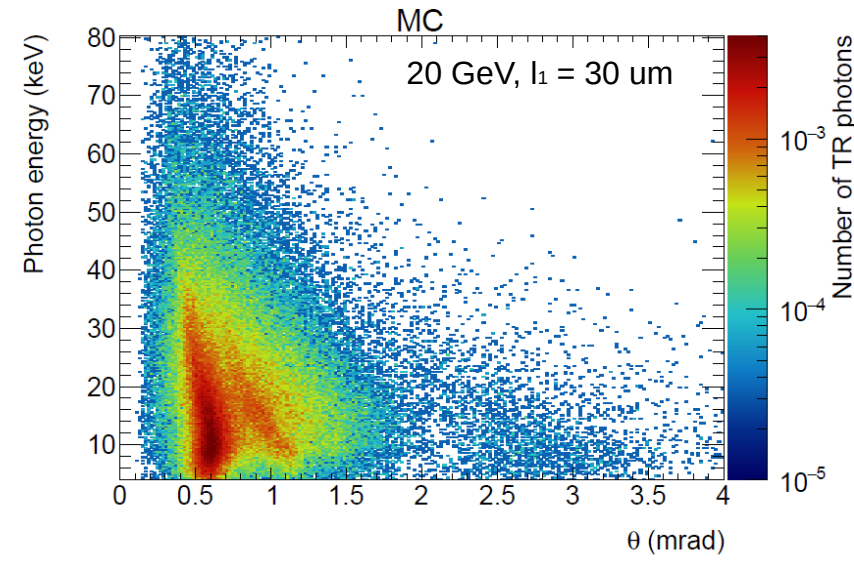
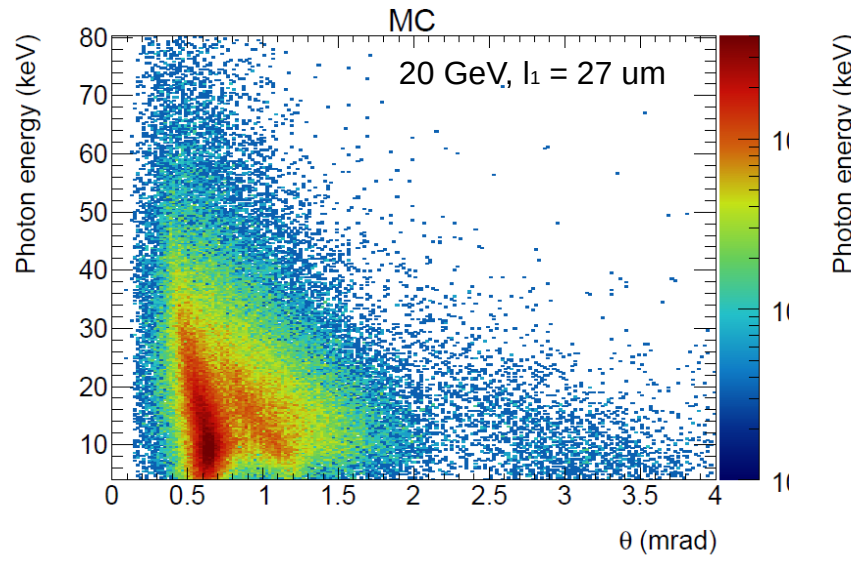
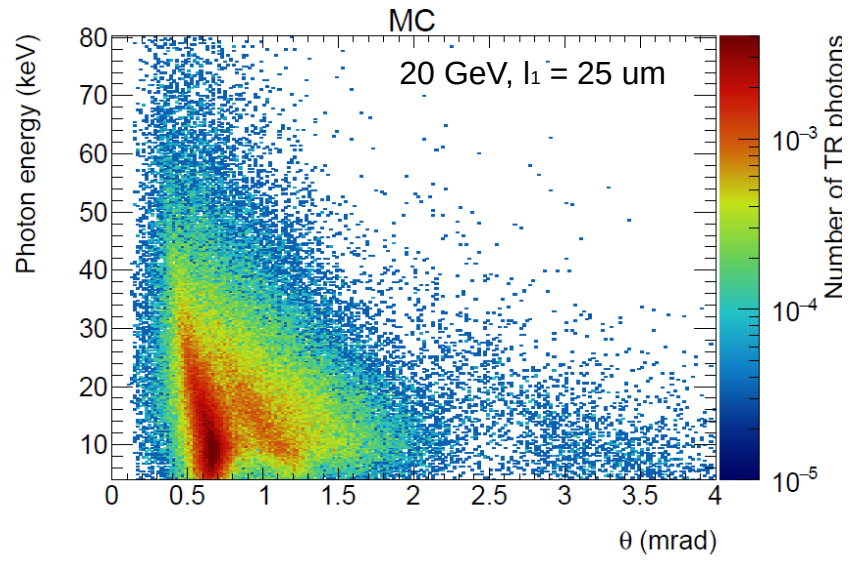
2D spectrum, electrons 20 GeV, L2 = 700 um, Nfoils = 700



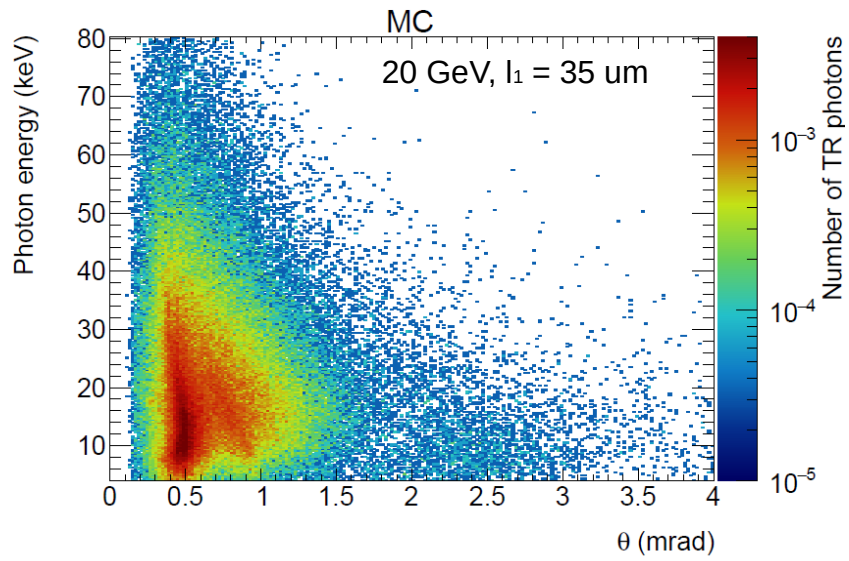
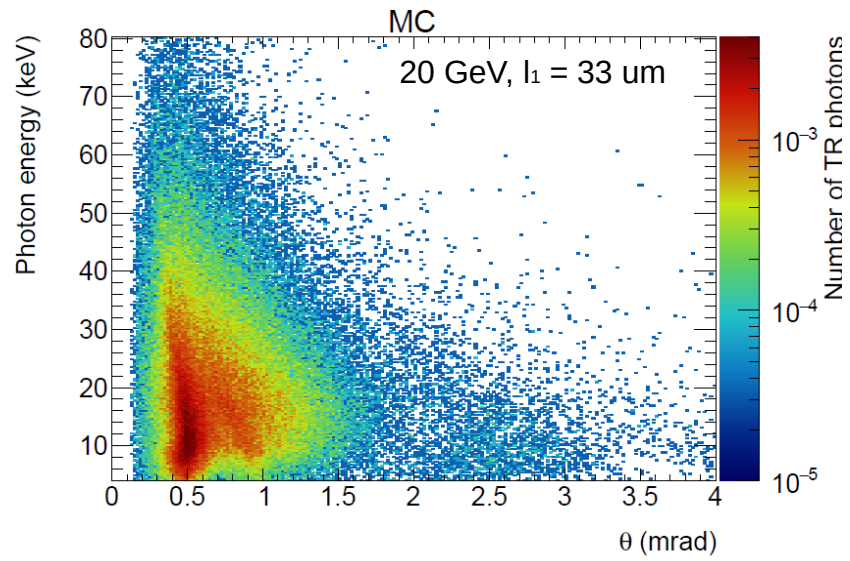
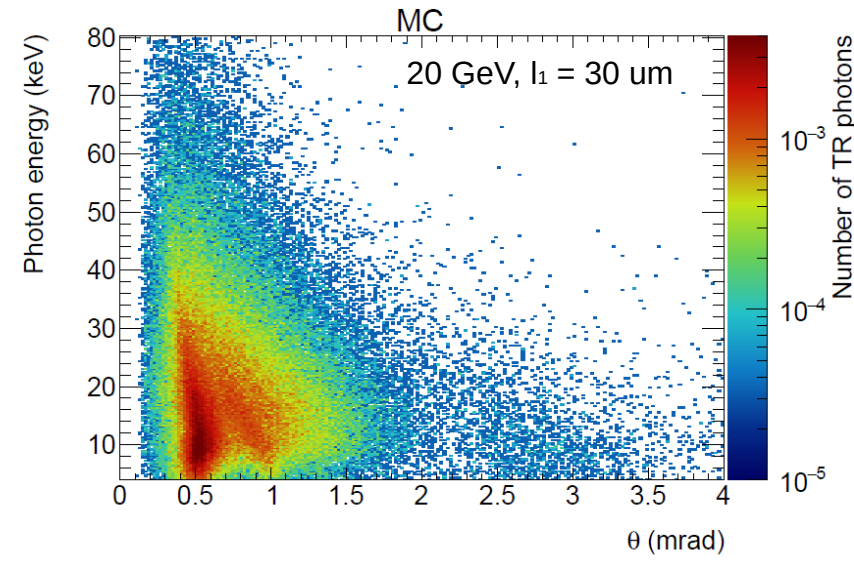
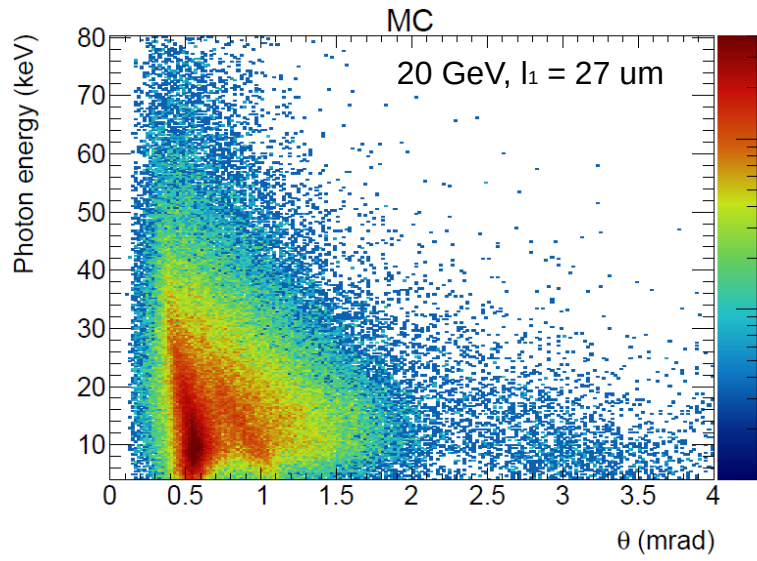
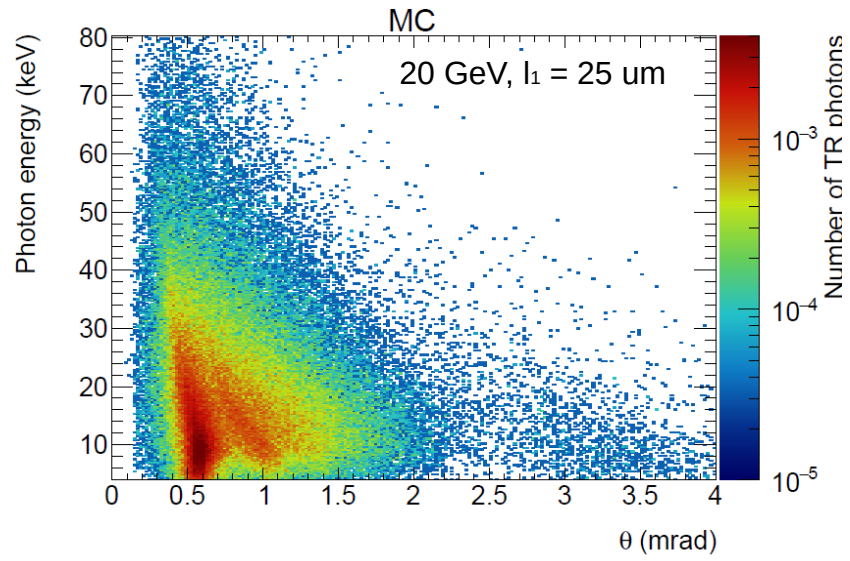
2D spectrum, electrons 20 GeV, L2 = 1000 um, Nfoils = 700



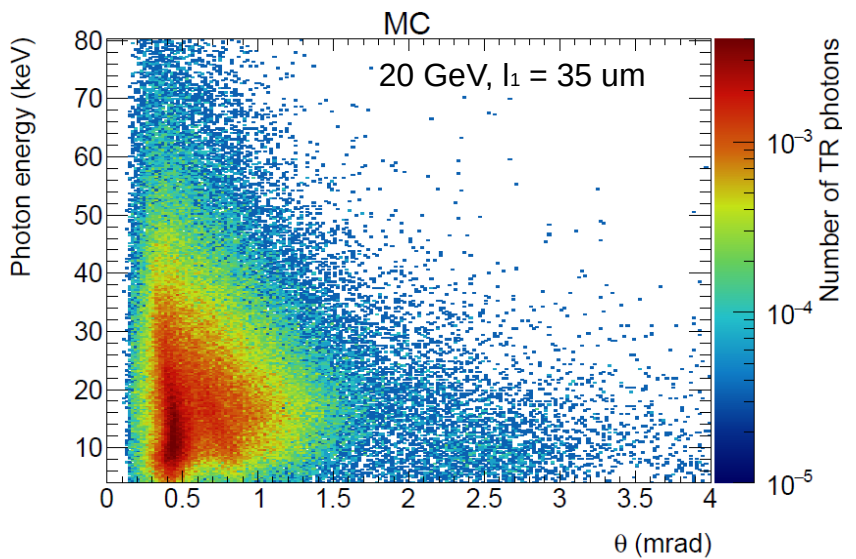
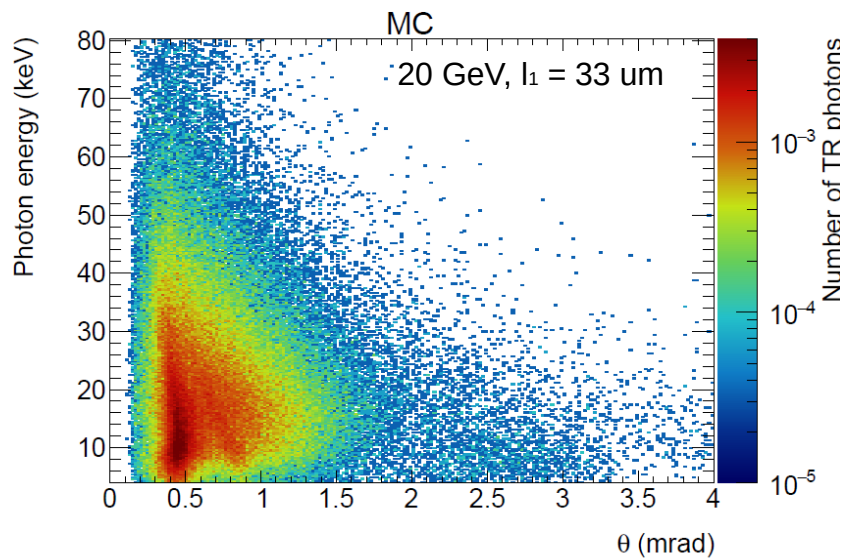
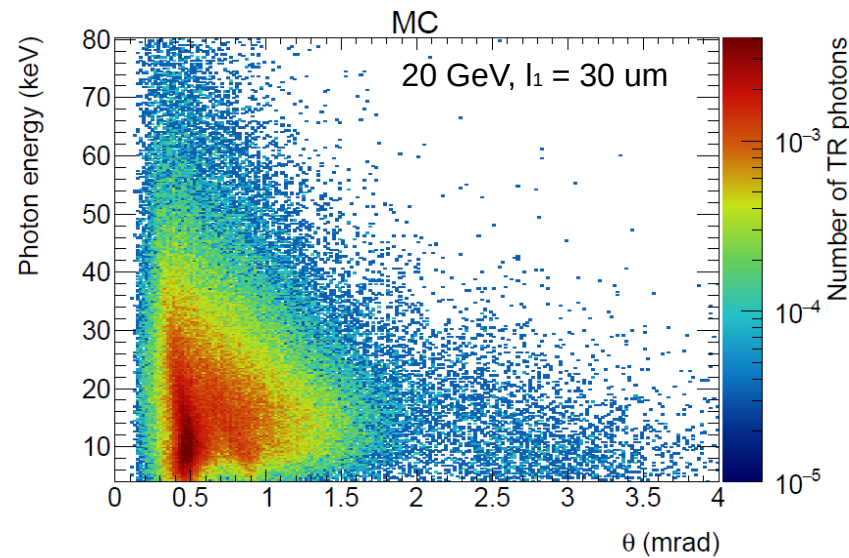
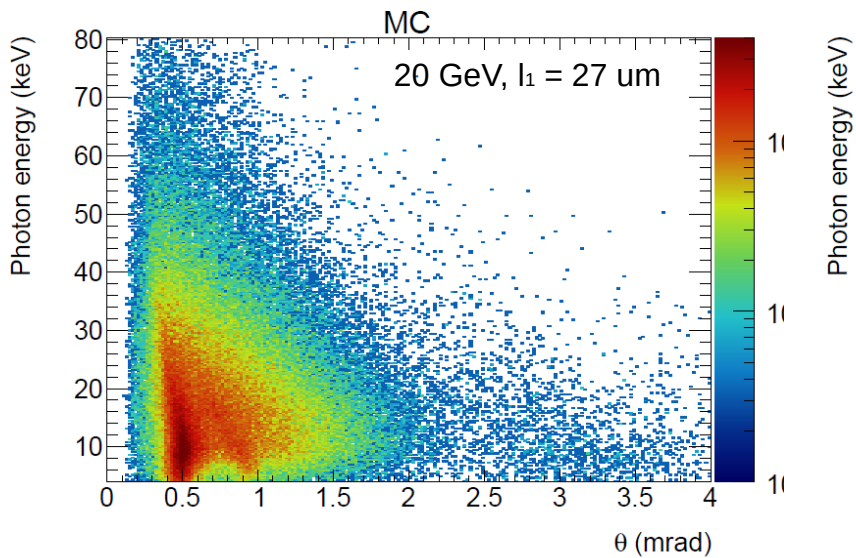
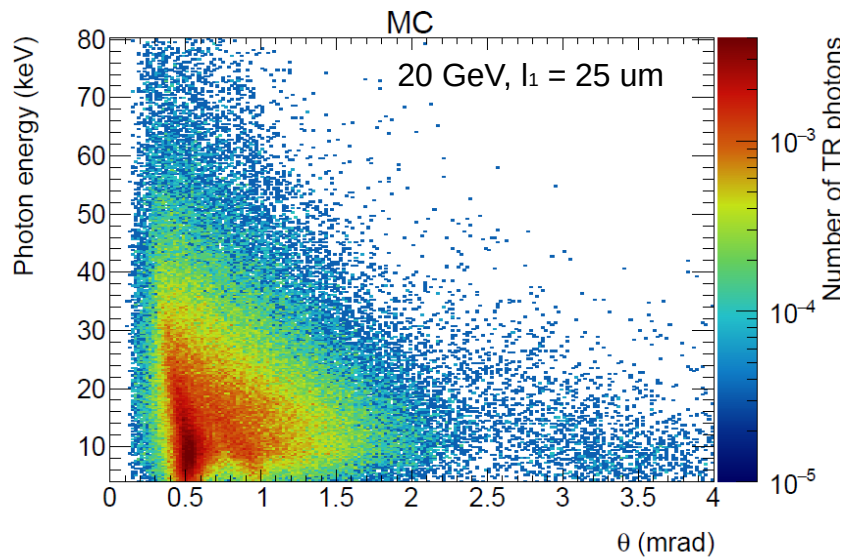
2D spectrum, electrons 20 GeV, L2 = 300 um, Nfoils = 800



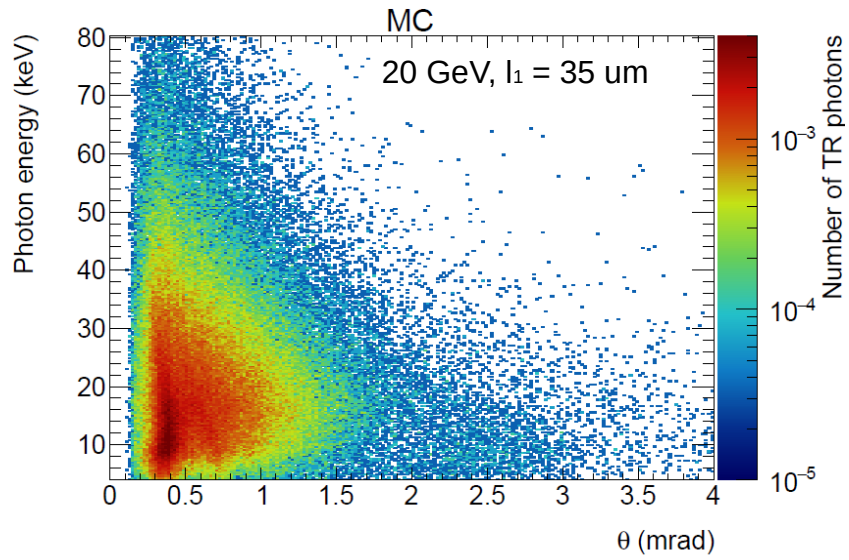
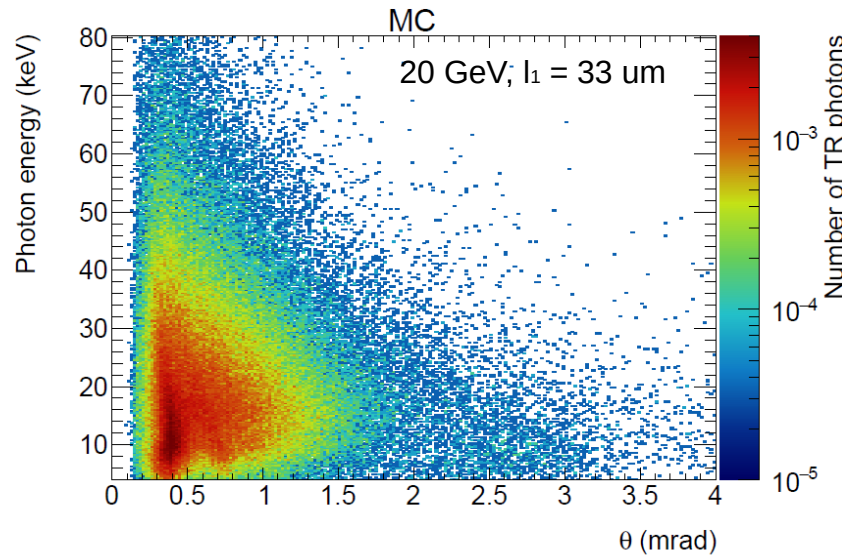
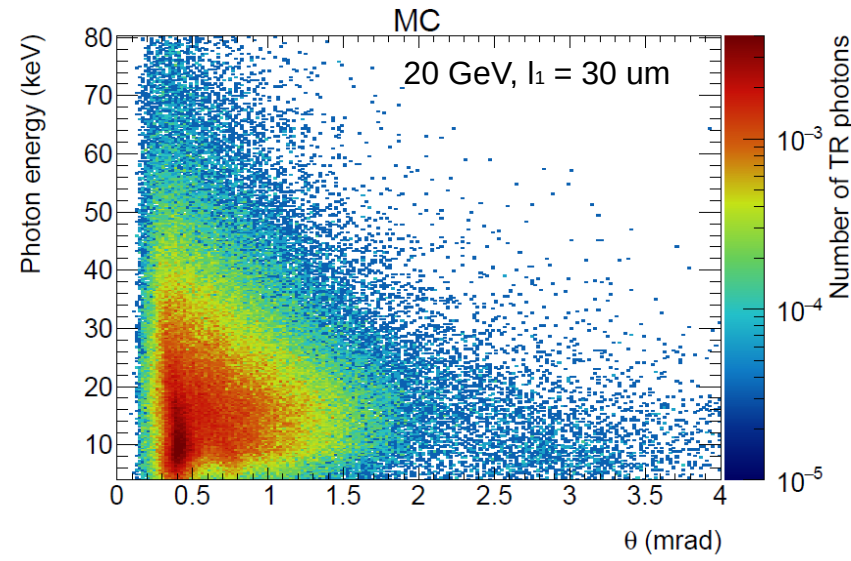
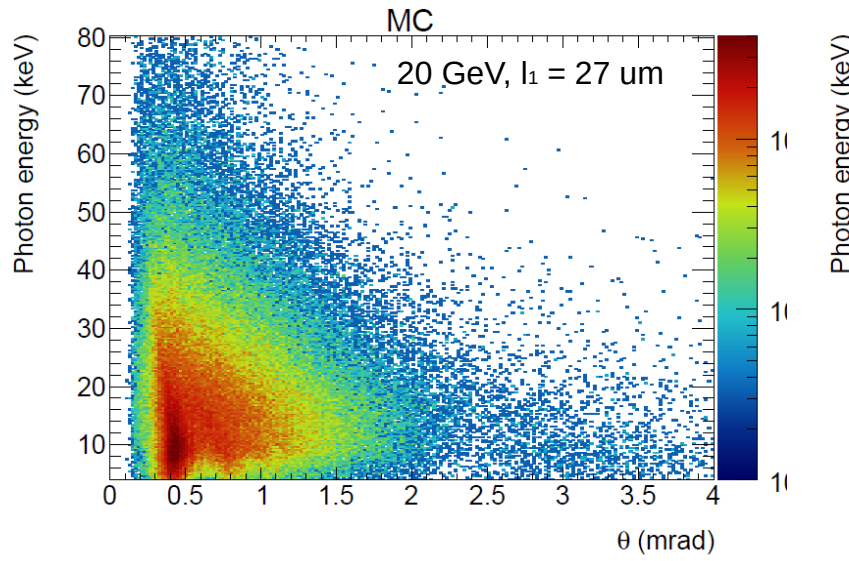
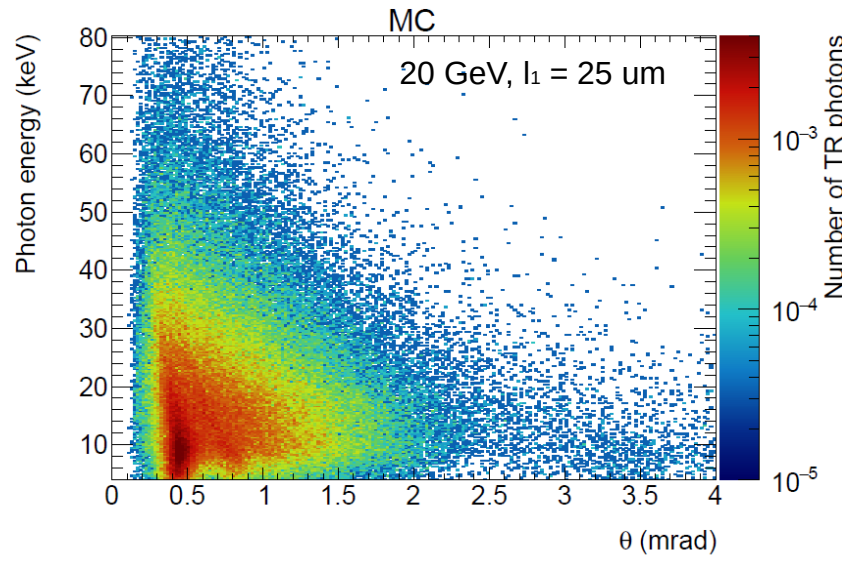
2D spectrum, electrons 20 GeV, L2 = 400 um, Nfoils = 800



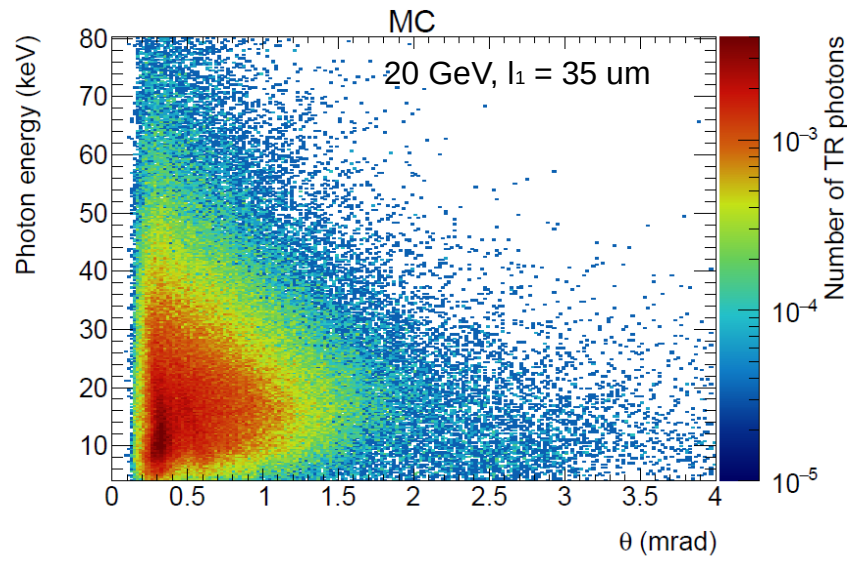
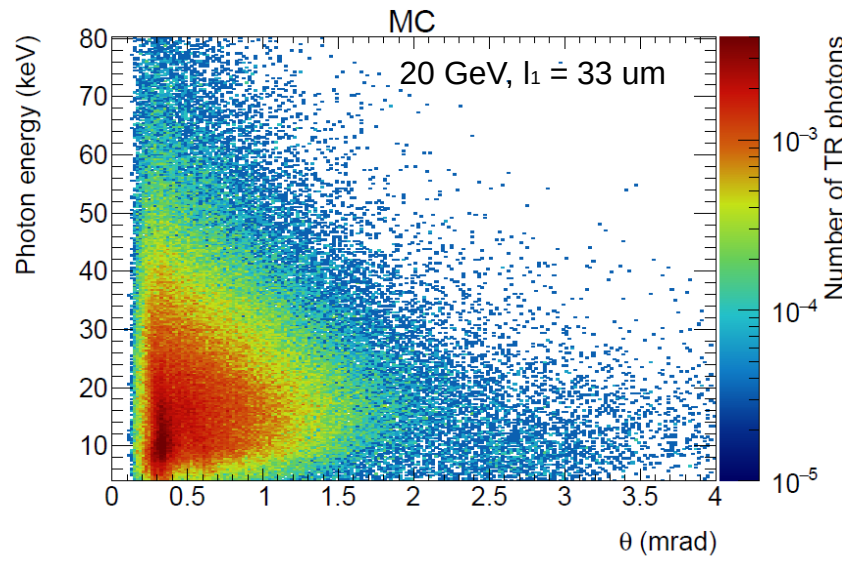
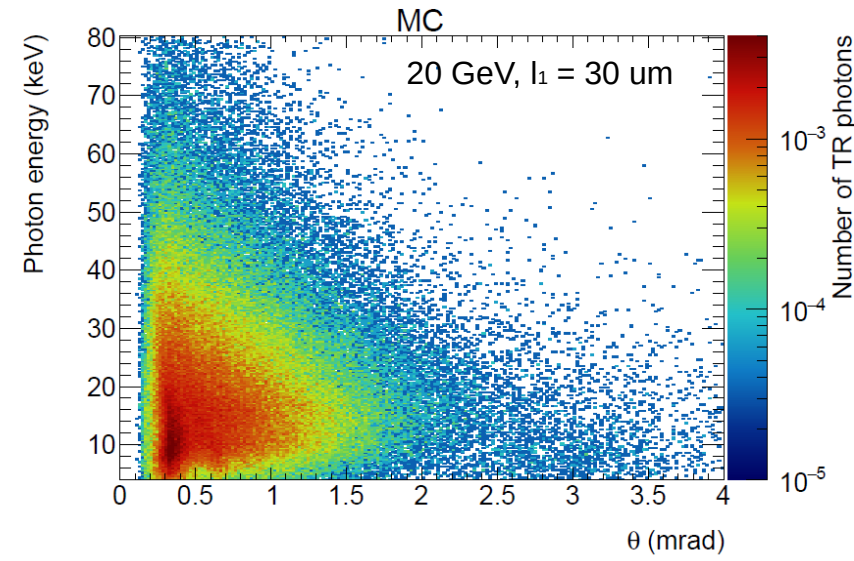
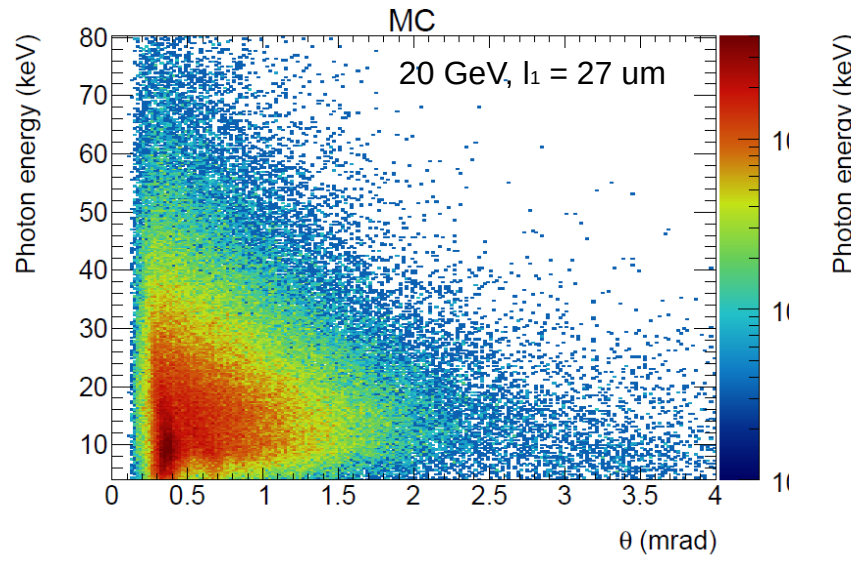
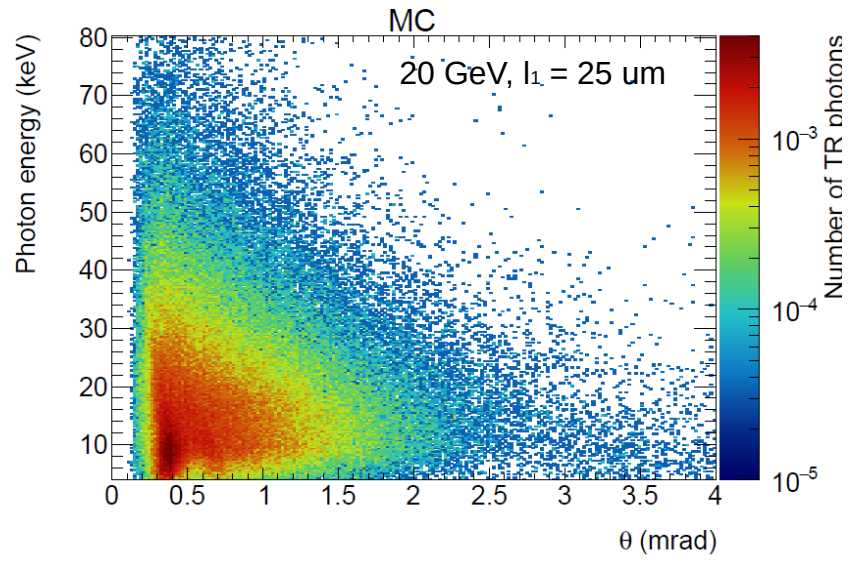
2D spectrum, electrons 20 GeV, L2 = 500 um, Nfoils = 800



2D spectrum, electrons 20 GeV, L2 = 700 um, Nfoils = 800

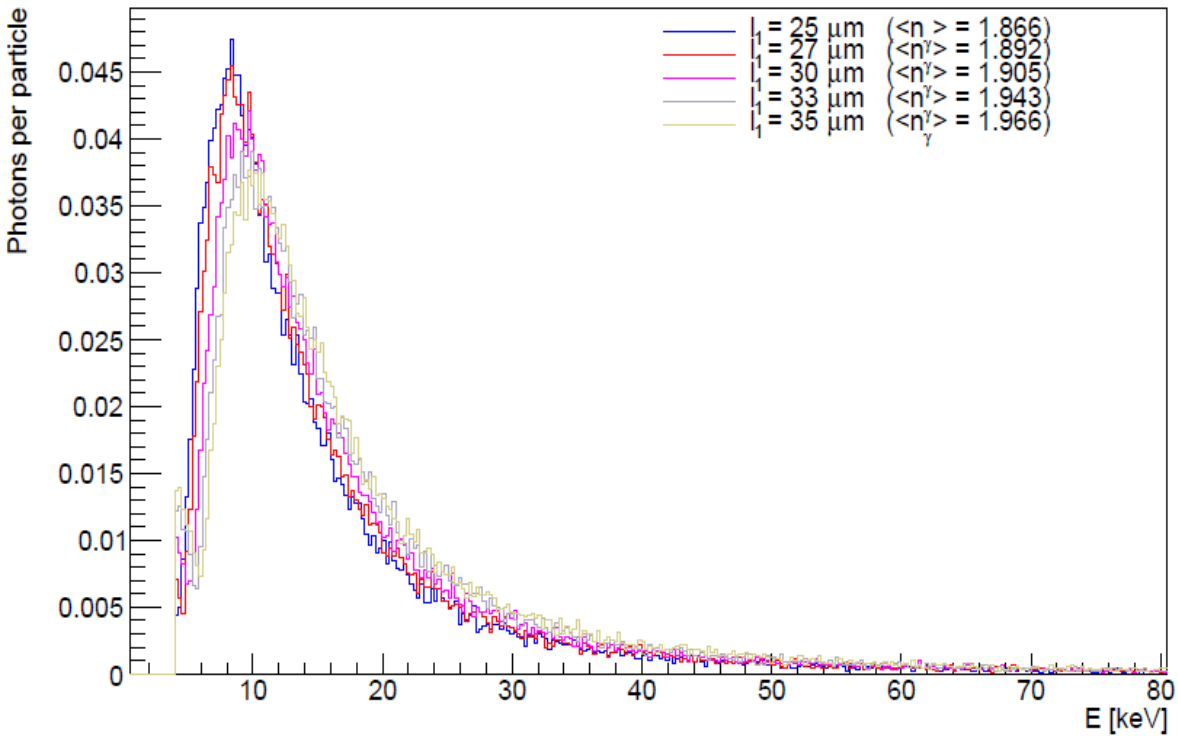


2D spectrum, electrons 20 GeV, L2 = 1000 um, Nfoils = 800

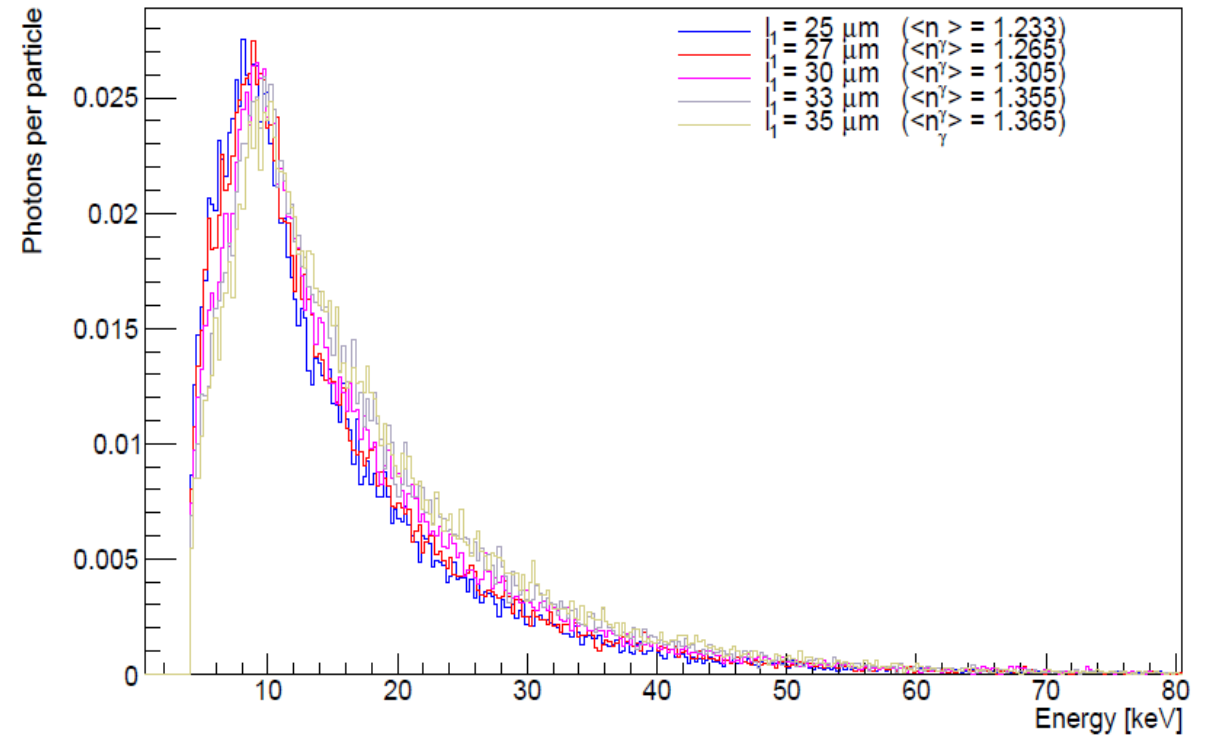


Incident and detected energy spectra, electrons 20 GeV, L2 = 300 μm , Nfoils = 100

1 m, Incident, Polyethylene, $l_2 = 0.3 \text{ mm}$, $N_f = 100$

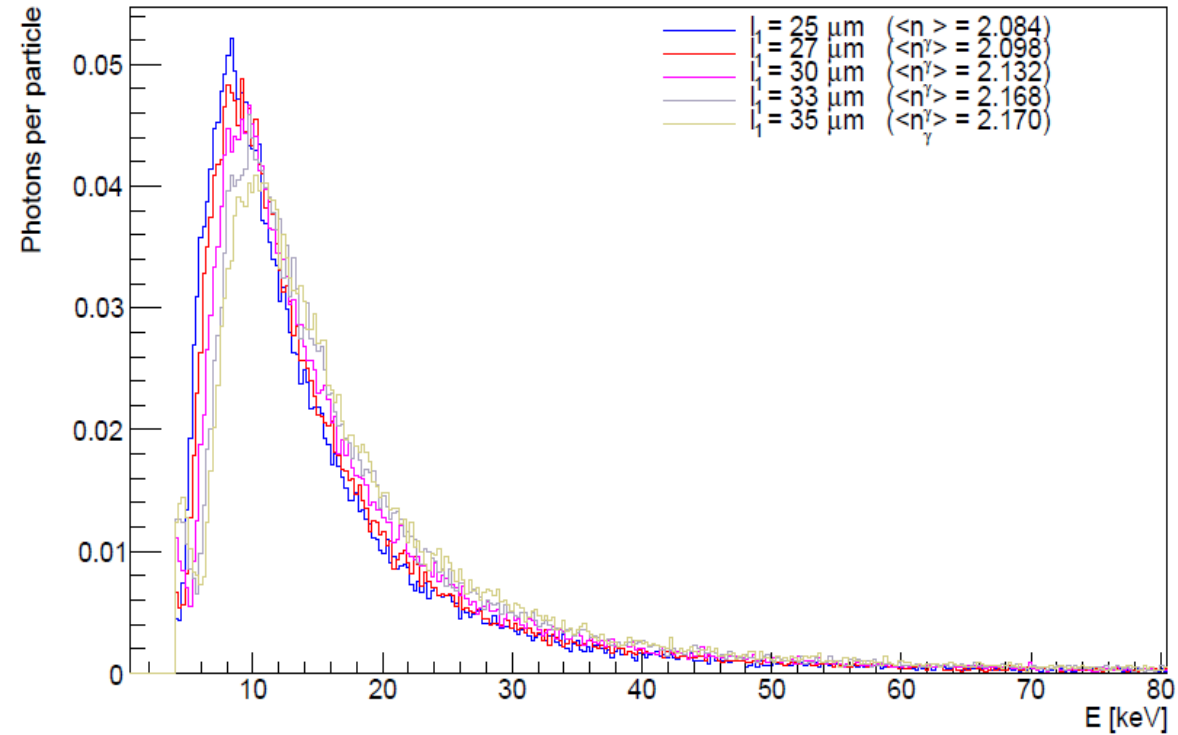


1 m, Detected, Polyethylene, $l_2 = 0.3 \text{ mm}$, $N_f = 100$

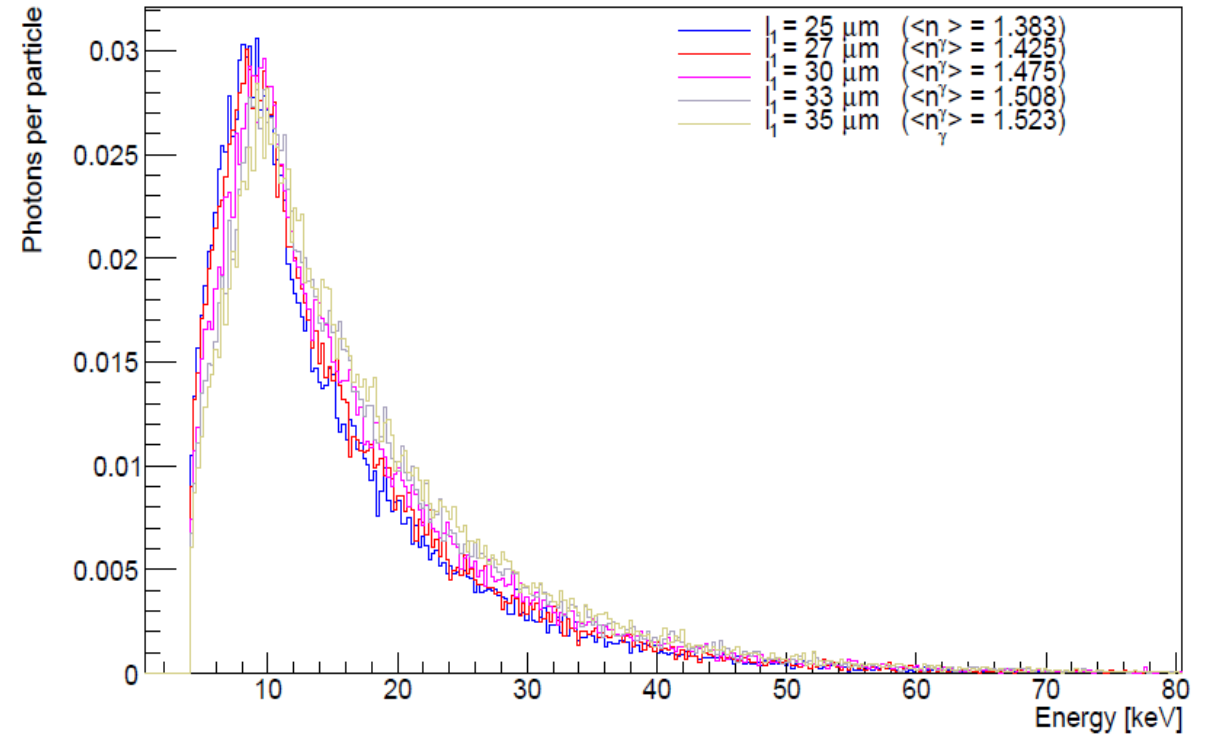


Incident and detected energy spectra, electrons 20 GeV, L2 = 400 μm , Nfoils = 100

1 m, Incident, Polyethylene, $l_2 = 0.4 \text{ mm}$, $N_f = 100$

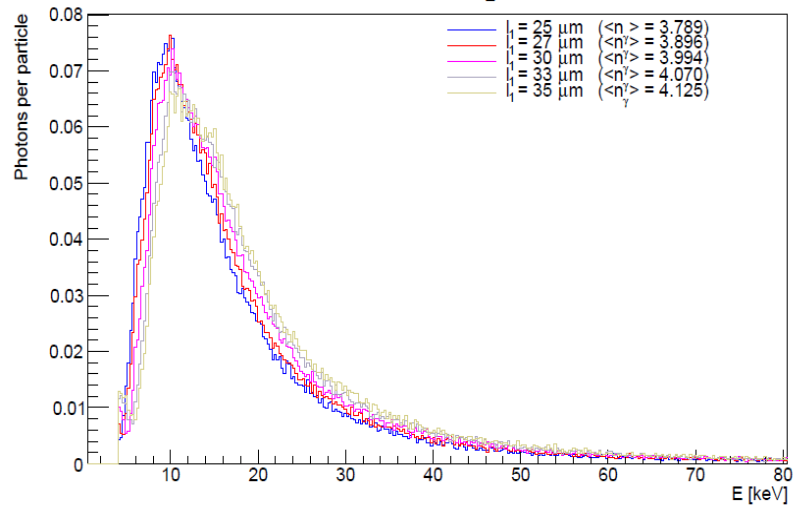


1 m, Detected, Polyethylene, $l_2 = 0.4 \text{ mm}$, $N_f = 100$

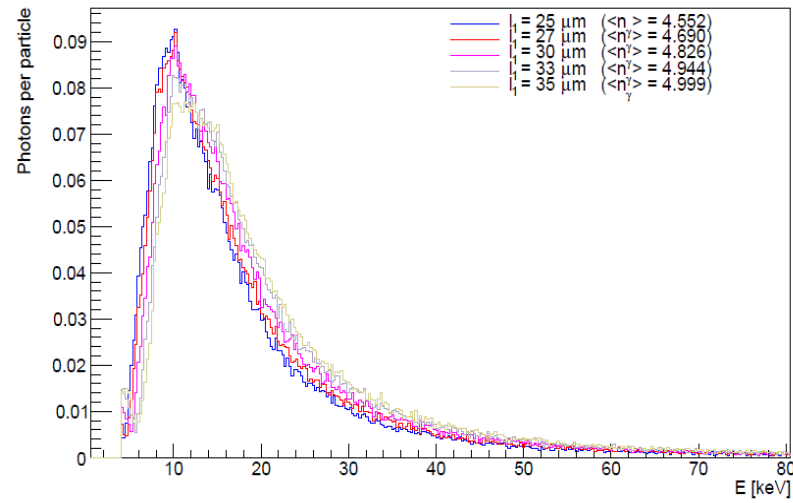


Incident energy spectra, electrons 20 GeV, Nfoils = 300

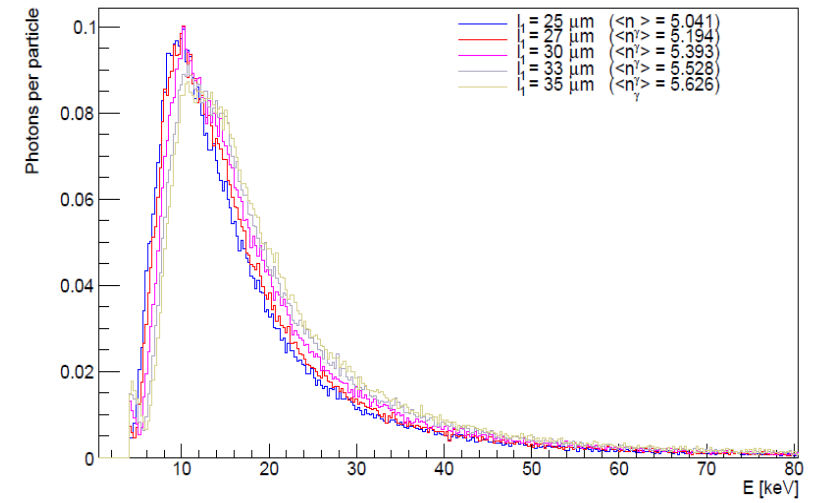
1 m, Incident, Polyethylene, $l_2 = 0.3$ mm, $N_f = 300$



1 m, Incident, Polyethylene, $l_2 = 0.5$ mm, $N_f = 300$

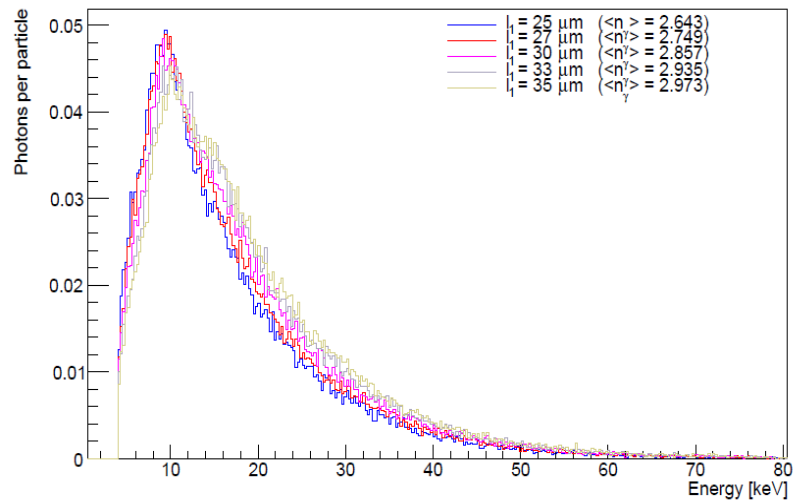


1 m, Incident, Polyethylene, $l_2 = 0.7$ mm, $N_f = 300$

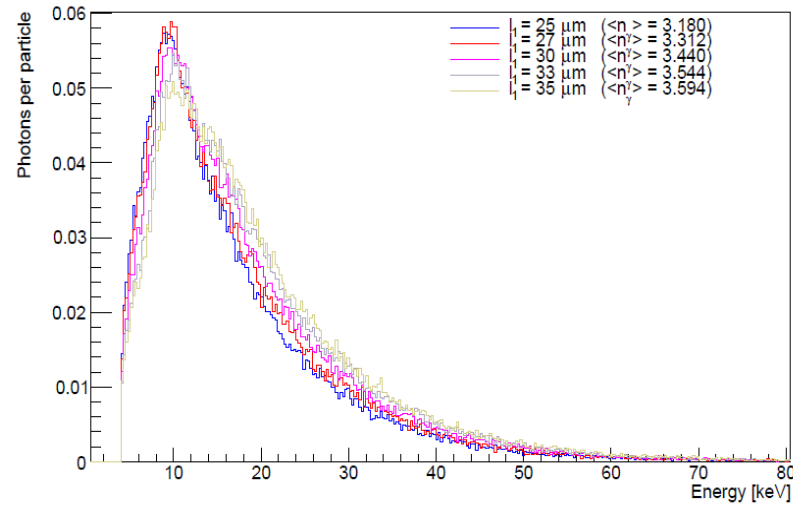


Detected energy spectra, electrons 20 GeV, Nfoils = 300

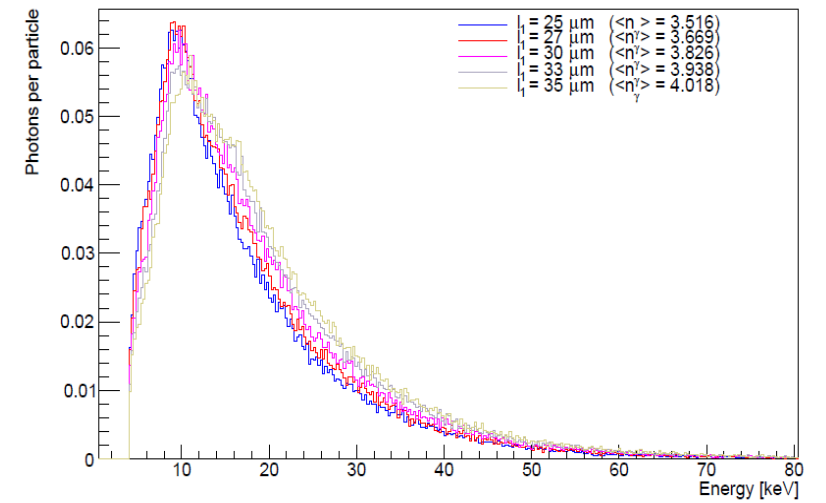
1 m, Detected, Polyethylene, $l_2 = 0.3$ mm, $N_f = 300$



1 m, Detected, Polyethylene, $l_2 = 0.5$ mm, $N_f = 300$

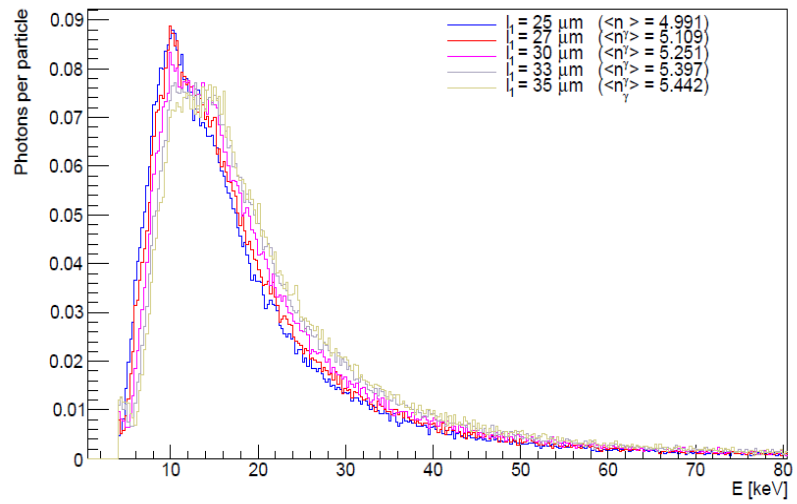


1 m, Detected, Polyethylene, $l_2 = 0.7$ mm, $N_f = 300$

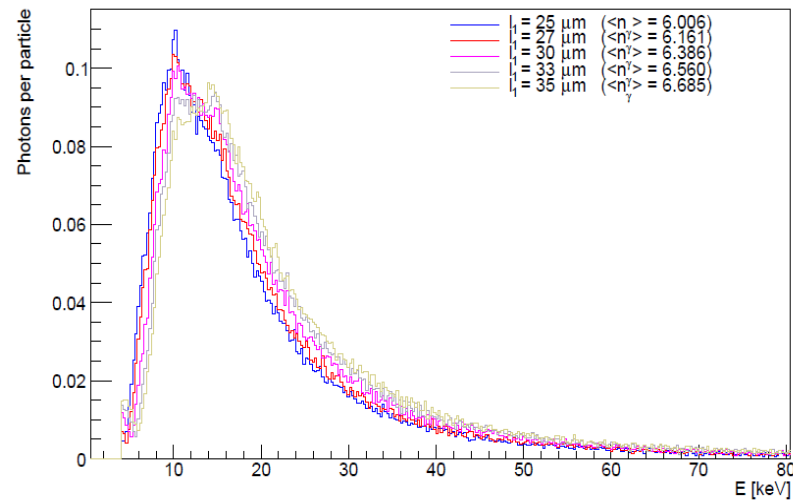


Incident energy spectra, electrons 20 GeV, Nfoils = 500

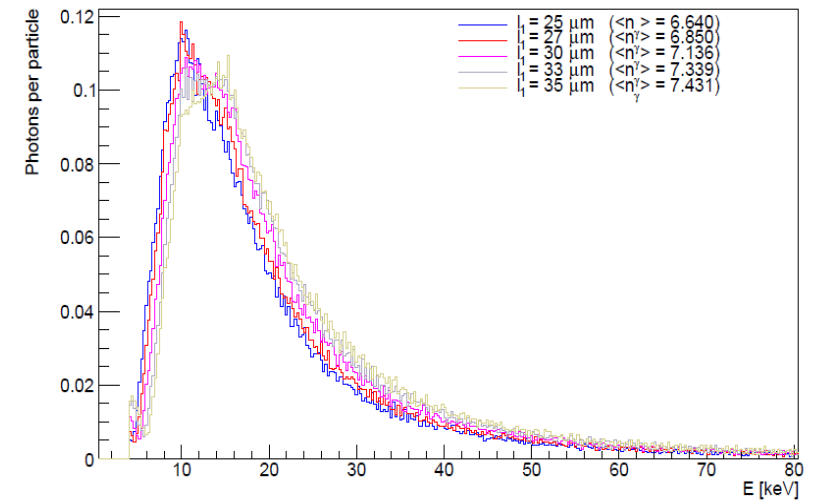
1 m, Incident, Polyethylene, $l_2 = 0.3$ mm, $N_f = 500$



1 m, Incident, Polyethylene, $l_2 = 0.5$ mm, $N_f = 500$

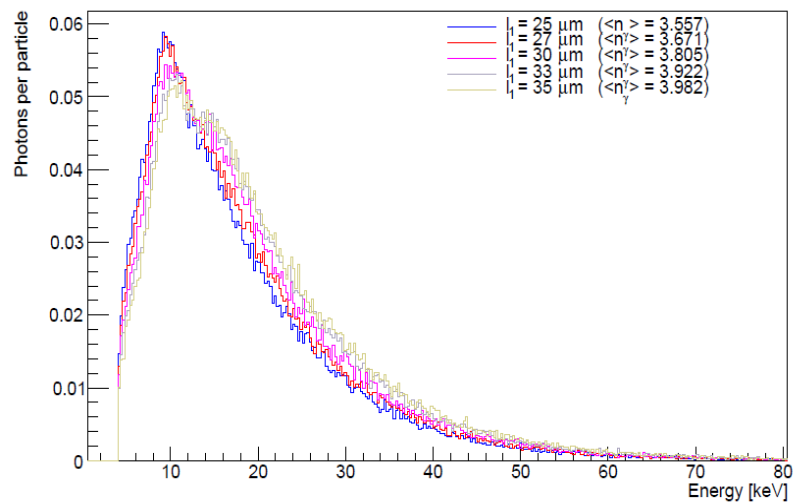


1 m, Incident, Polyethylene, $l_2 = 0.7$ mm, $N_f = 500$

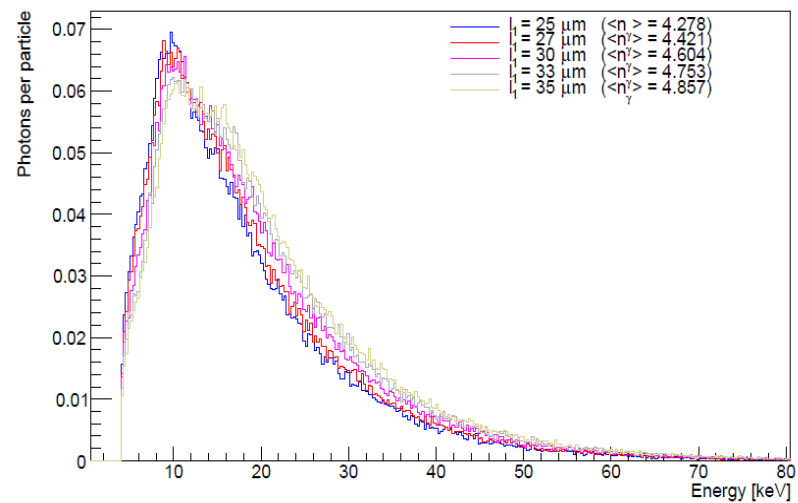


Detected energy spectra, electrons 20 GeV, Nfoils = 500

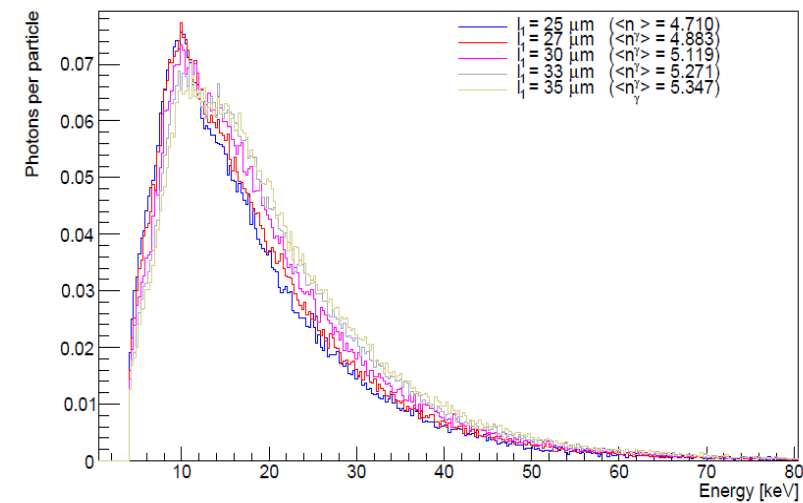
1 m, Detected, Polyethylene, $l_2 = 0.3$ mm, $N_f = 500$



1 m, Detected, Polyethylene, $l_2 = 0.5$ mm, $N_f = 500$

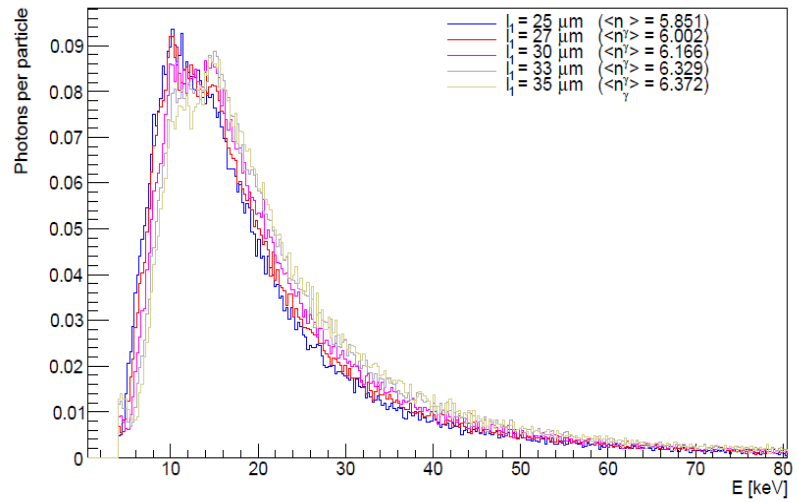


1 m, Detected, Polyethylene, $l_2 = 0.7$ mm, $N_f = 500$

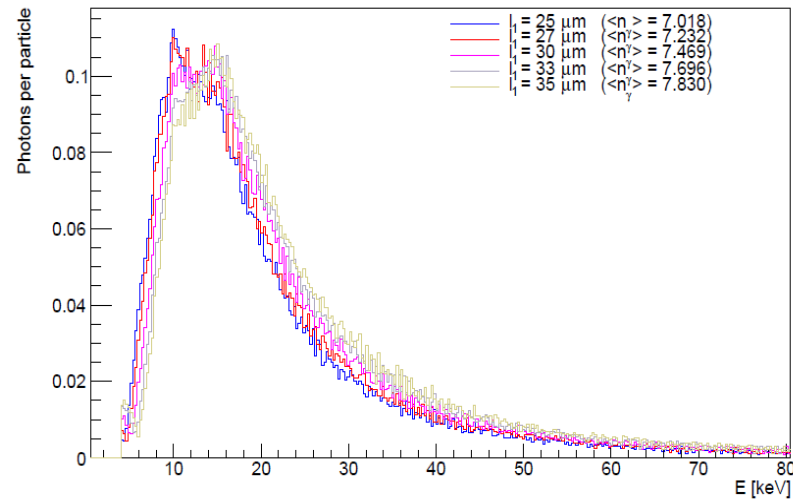


Incident energy spectra, electrons 20 GeV, Nfoils = 700

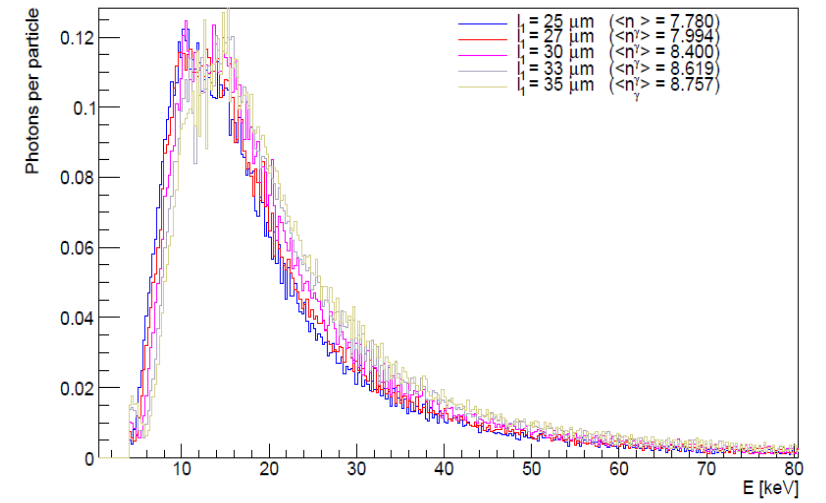
1 m, Incident, Polyethylene, $l_2 = 0.3$ mm, $N_f = 700$



1 m, Incident, Polyethylene, $l_2 = 0.5$ mm, $N_f = 700$

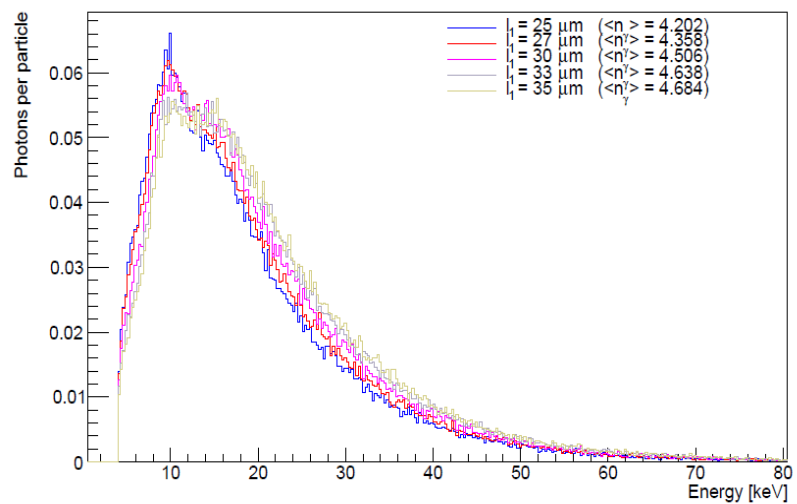


1 m, Incident, Polyethylene, $l_2 = 0.7$ mm, $N_f = 700$

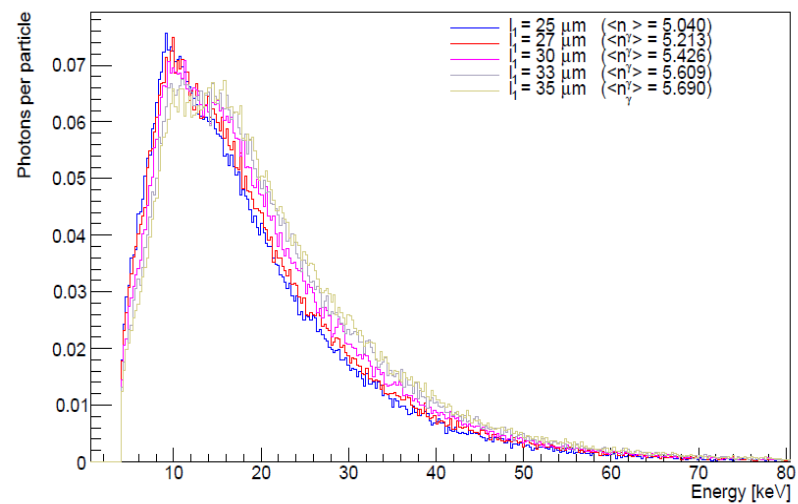


Detected energy spectra, electrons 20 GeV, Nfoils = 700

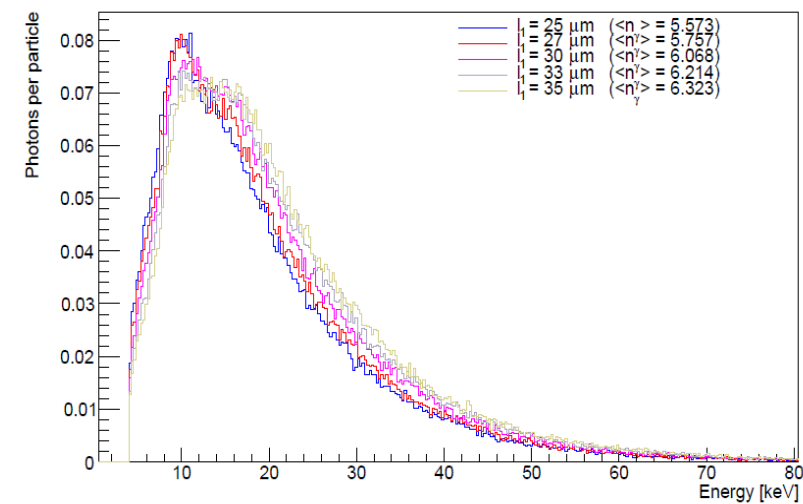
1 m, Detected, Polyethylene, $l_2 = 0.3$ mm, $N_f = 700$



1 m, Detected, Polyethylene, $l_2 = 0.5$ mm, $N_f = 700$

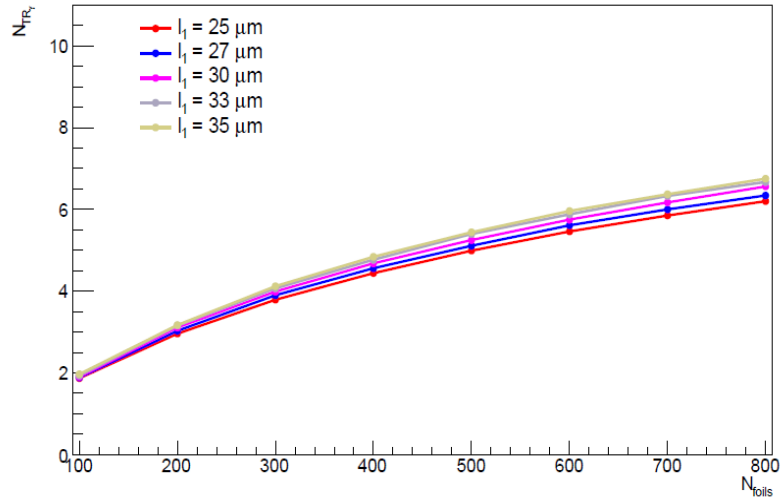


1 m, Detected, Polyethylene, $l_2 = 0.7$ mm, $N_f = 700$

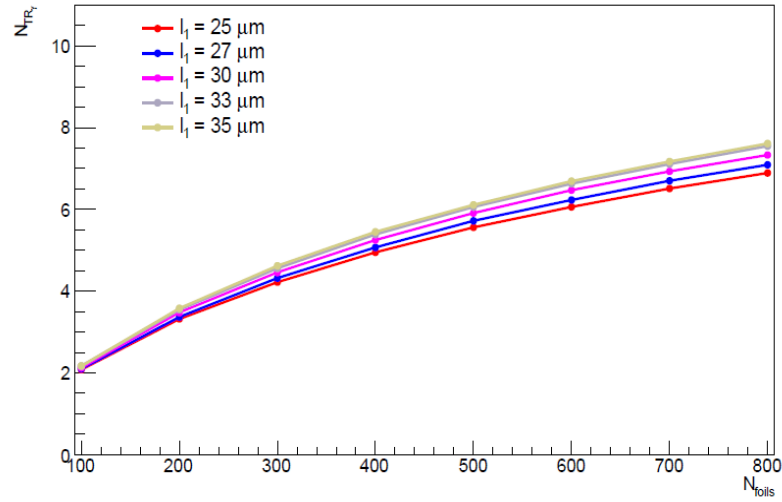


Number of incident photons as a function of Nfoils, electrons 20 GeV

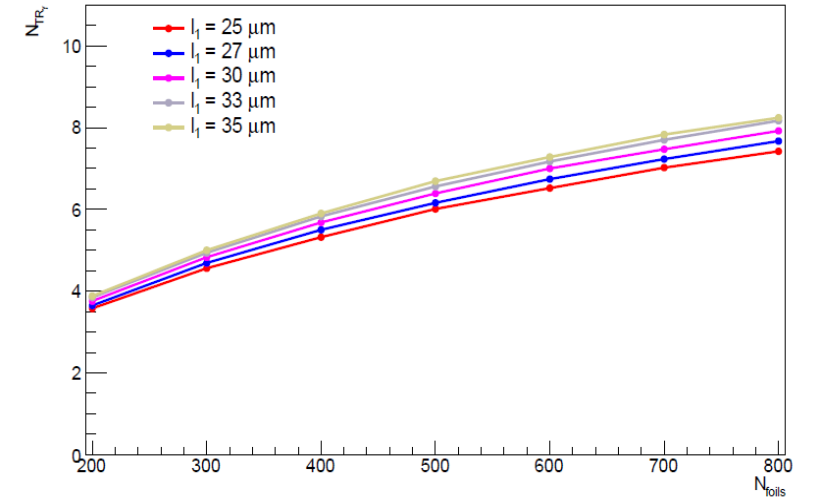
1 m, Incident, Polyethylene, $l_2 = 0.3$ mm



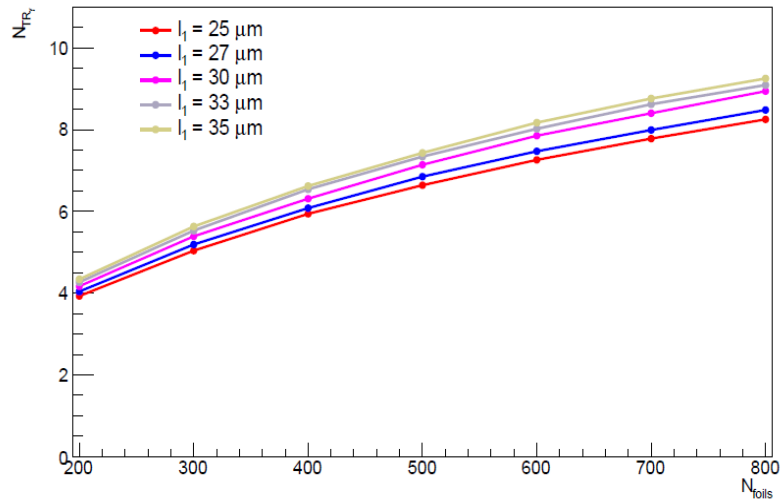
1 m, Incident, Polyethylene, $l_2 = 0.4$ mm



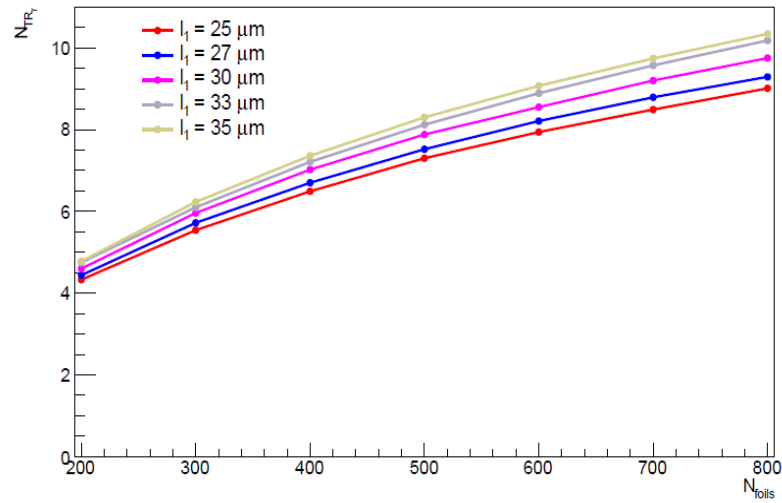
1 m, Incident, Polyethylene, $l_2 = 0.5$ mm



1 m, Incident, Polyethylene, $l_2 = 0.7$ mm

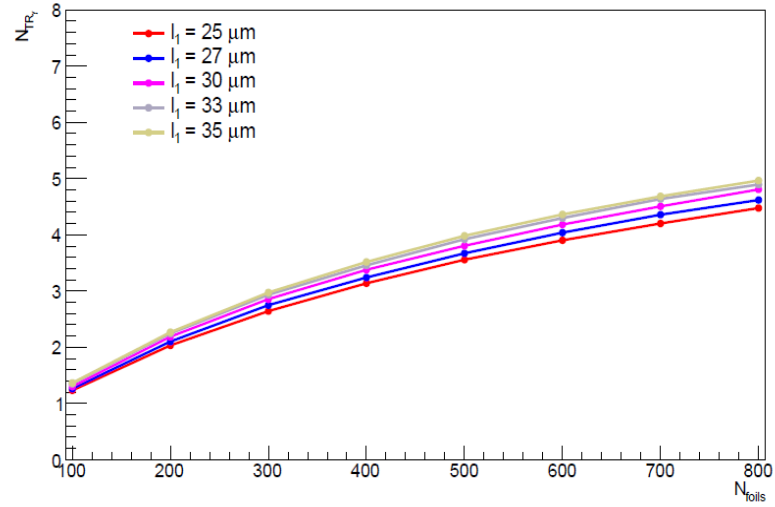


1 m, Incident, Polyethylene, $l_2 = 1.0$ mm

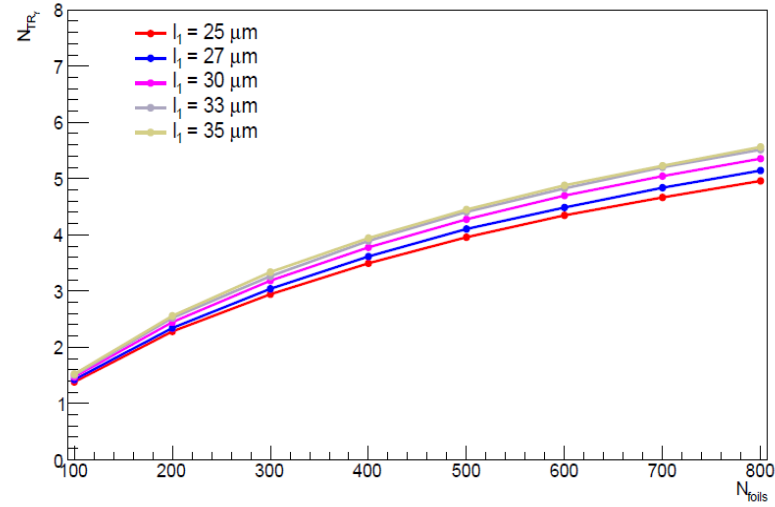


Number of detected photons as a function of Nfoils, electrons 20 GeV

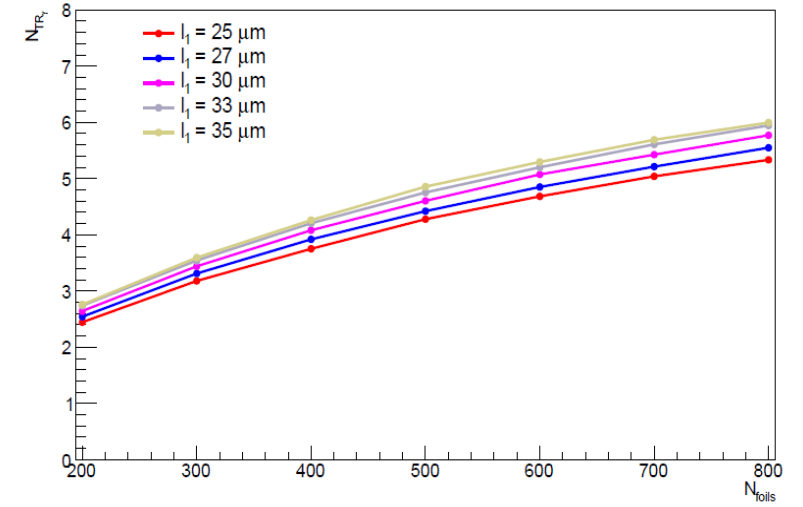
1 m, Detected, Polyethylene, $l_2 = 0.3$ mm



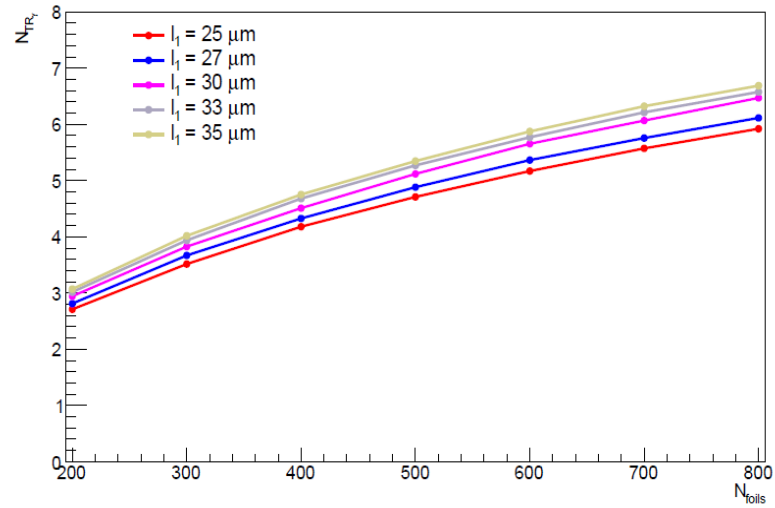
1 m, Detected, Polyethylene, $l_2 = 0.4$ mm



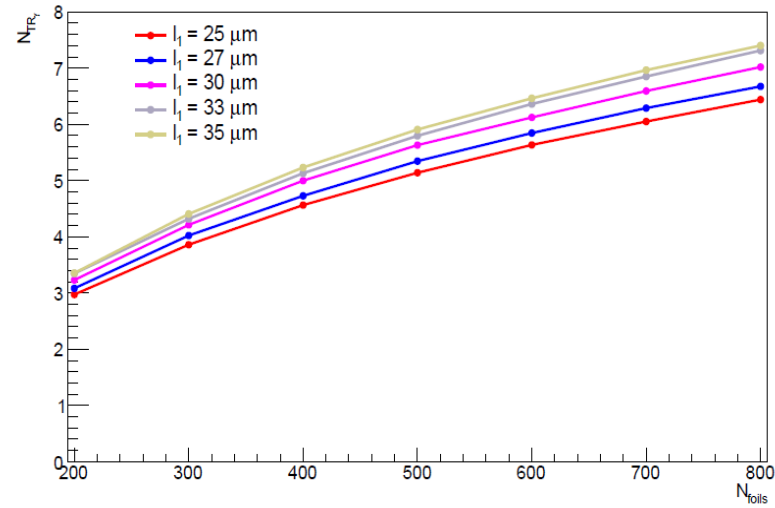
1 m, Detected, Polyethylene, $l_2 = 0.5$ mm



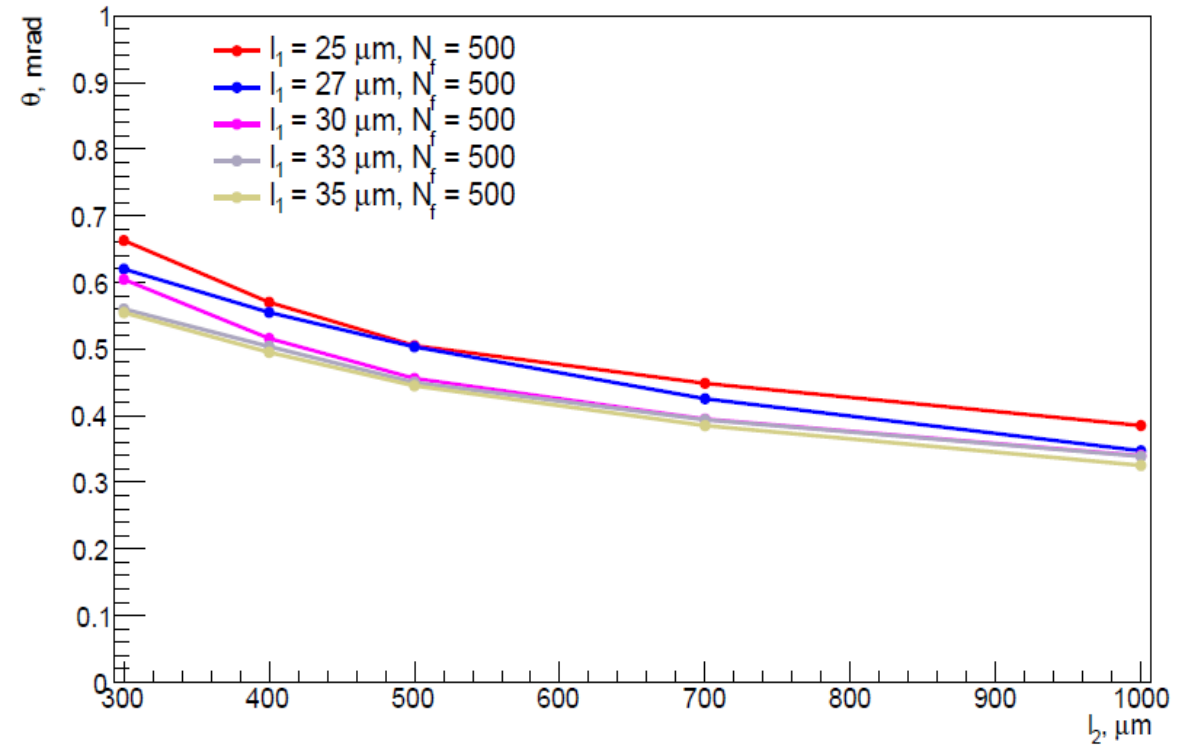
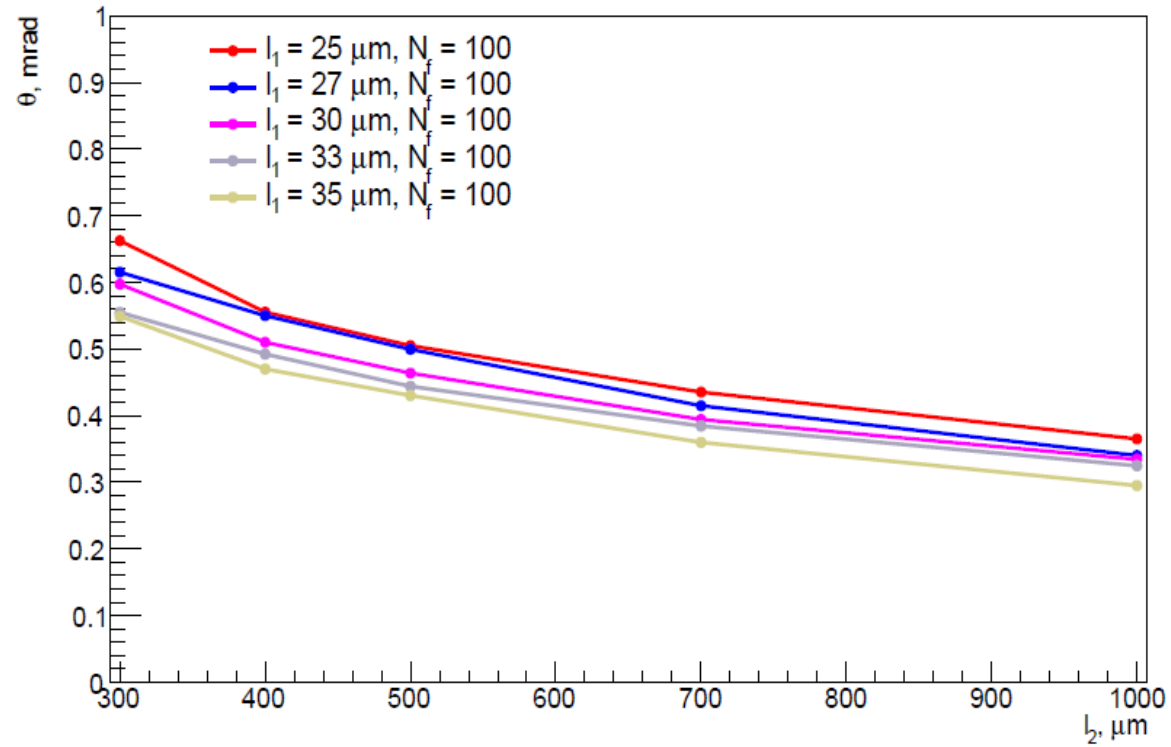
1 m, Detected, Polyethylene, $l_2 = 0.7$ mm



1 m, Detected, Polyethylene, $l_2 = 1.0$ mm

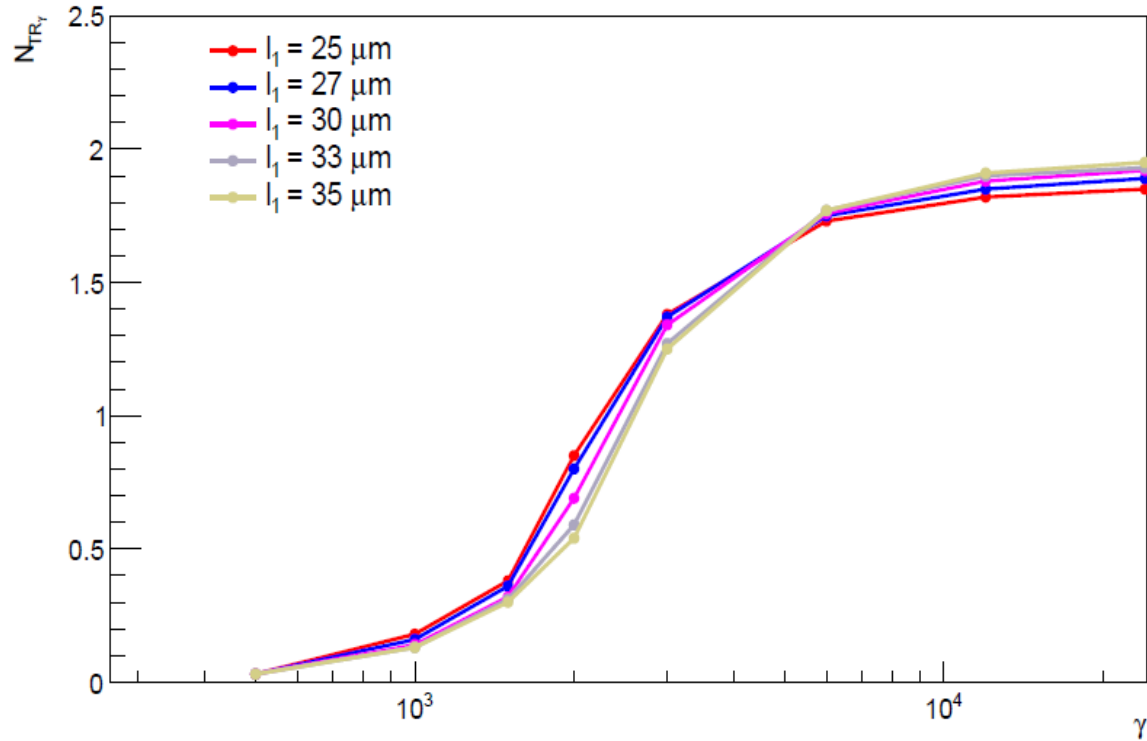


Most probable angle as a function of l_2 , electrons 20 GeV

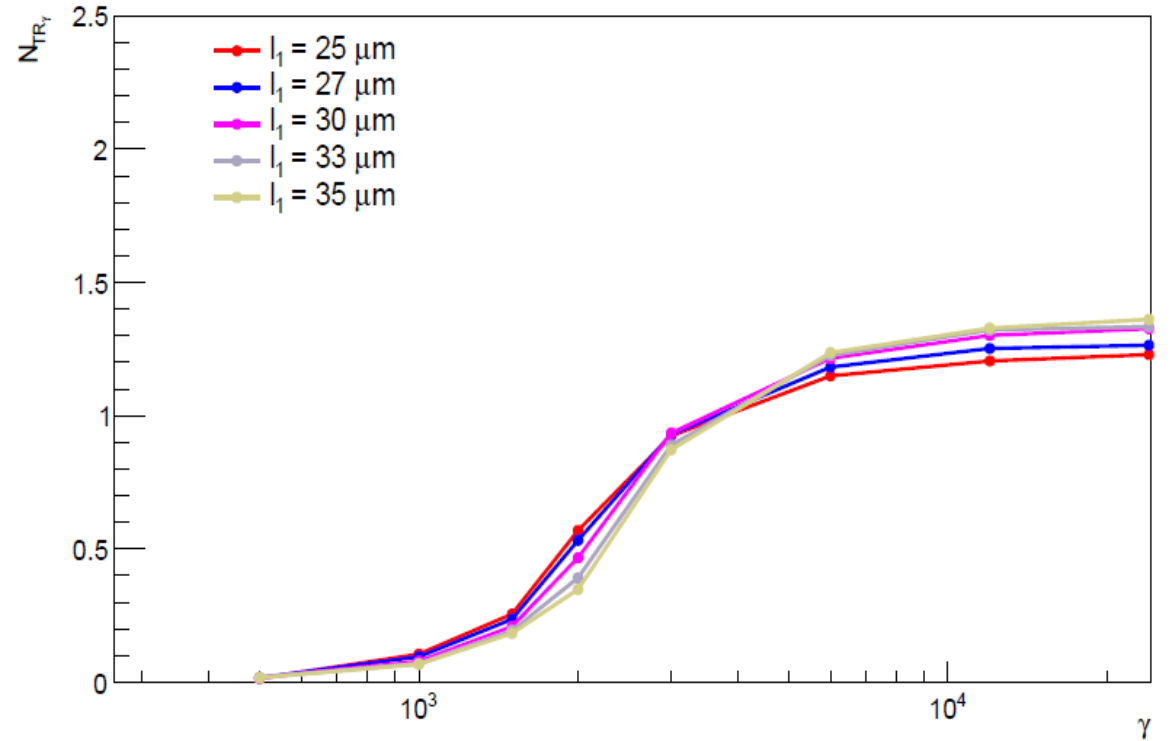


Number of photons as a function of gamma factor (Incident and Detected), L2 = 300 um, Nfoils = 100

1 m, Incident, Polyethylene, $l_2 = 0.3$ mm, $N_f = 100$

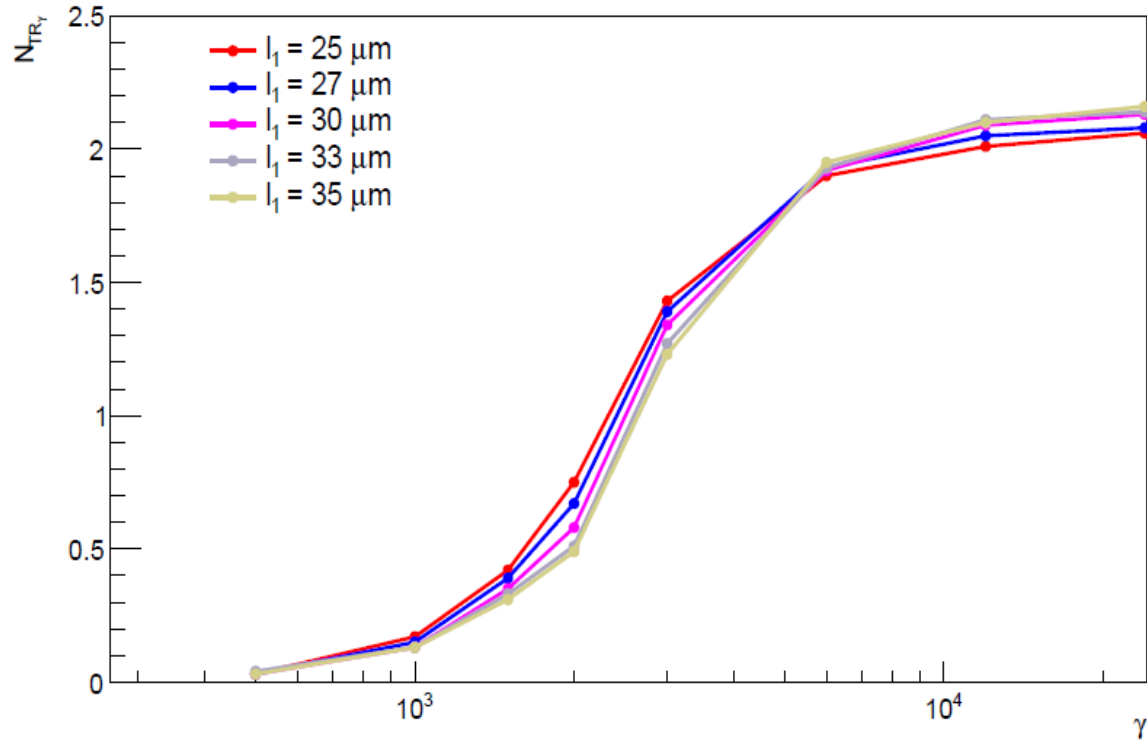


1 m, Detected, Polyethylene, $l_2 = 0.3$ mm, $N_f = 100$

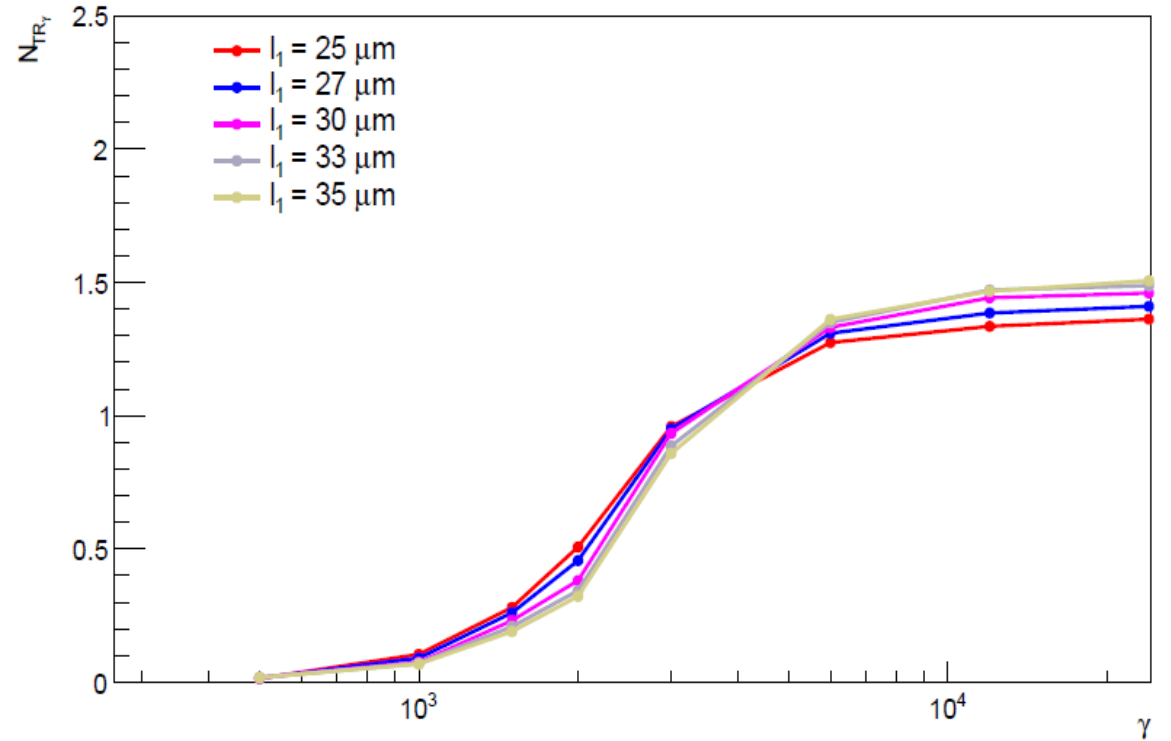


Number of photons as a function of gamma factor (Incident and Detected), L2 = 400 um, Nfoils = 100

1 m, Incident, Polyethylene, $l_2 = 0.4$ mm, $N_f = 100$

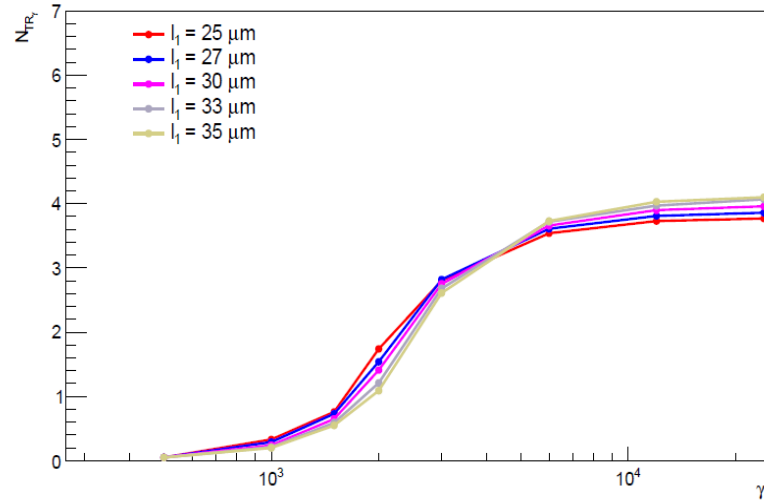


1 m, Detected, Polyethylene, $l_2 = 0.4$ mm, $N_f = 100$

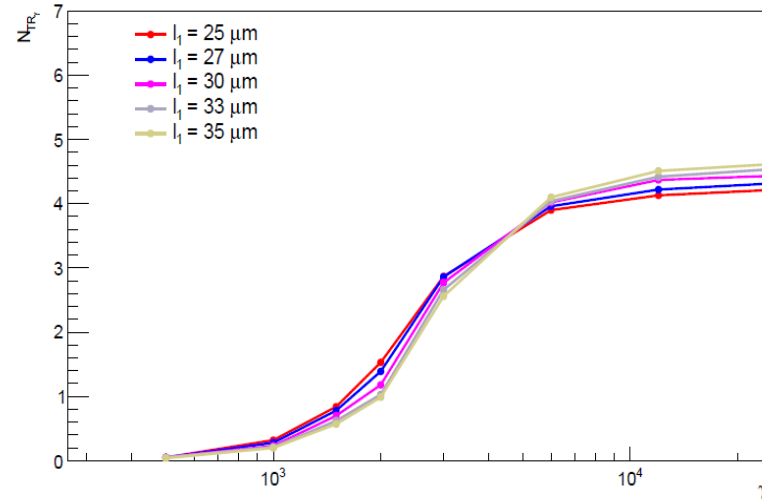


Number of photons as a function of gamma factor (Incident), Nfoils = 300

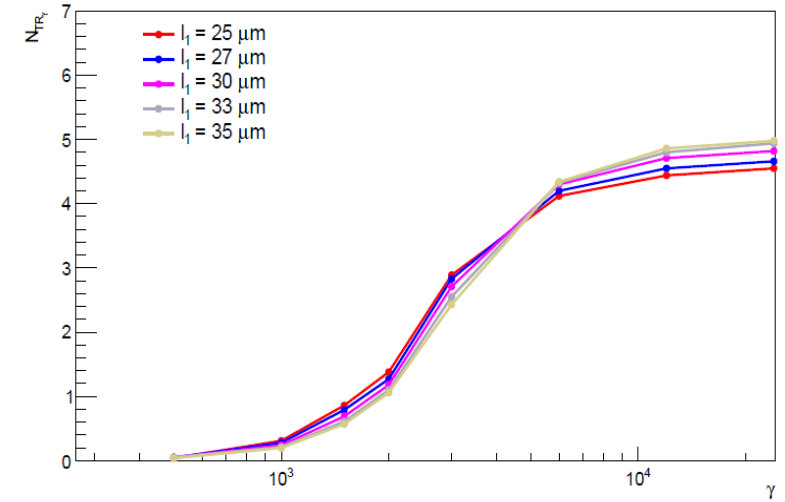
1 m, Incident, Polyethylene, $l_2 = 0.3$ mm, $N_f = 300$



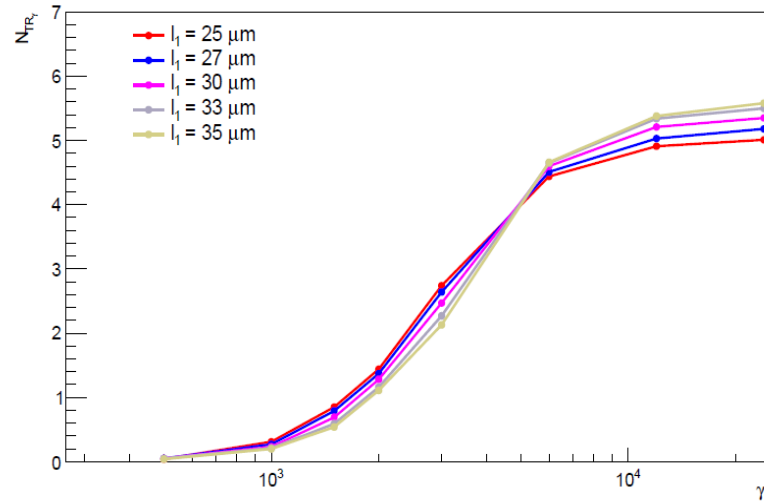
1 m, Incident, Polyethylene, $l_2 = 0.4$ mm, $N_f = 300$



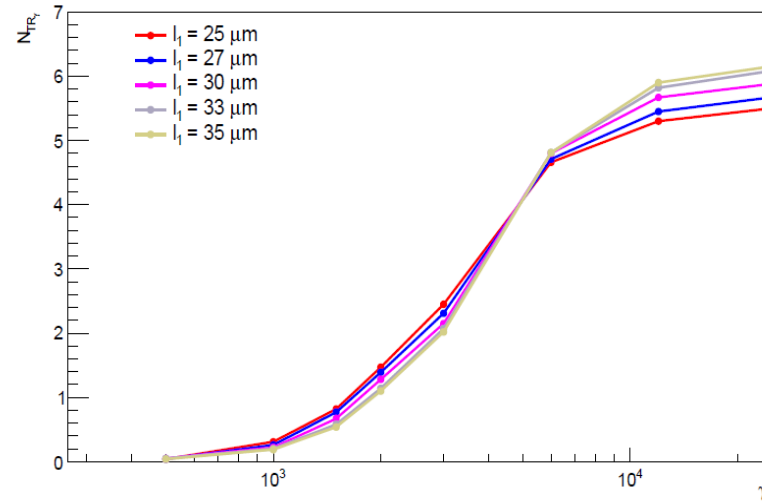
1 m, Incident, Polyethylene, $l_2 = 0.5$ mm, $N_f = 300$



1 m, Incident, Polyethylene, $l_2 = 0.7$ mm, $N_f = 300$

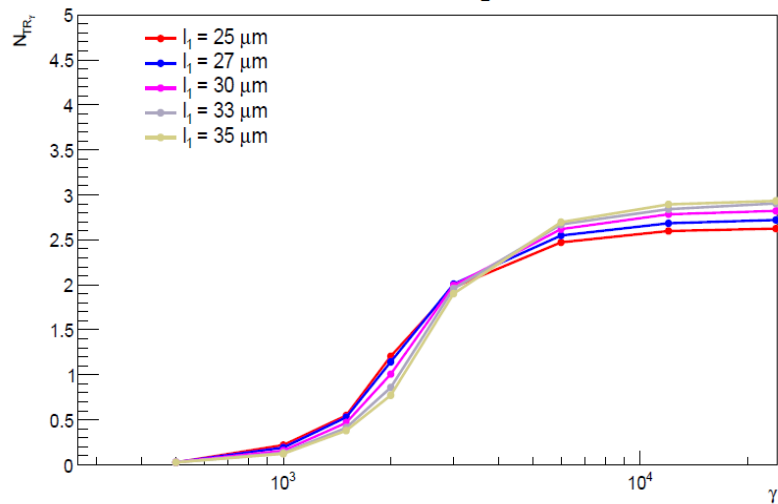


1 m, Incident, Polyethylene, $l_2 = 1.0$ mm, $N_f = 300$

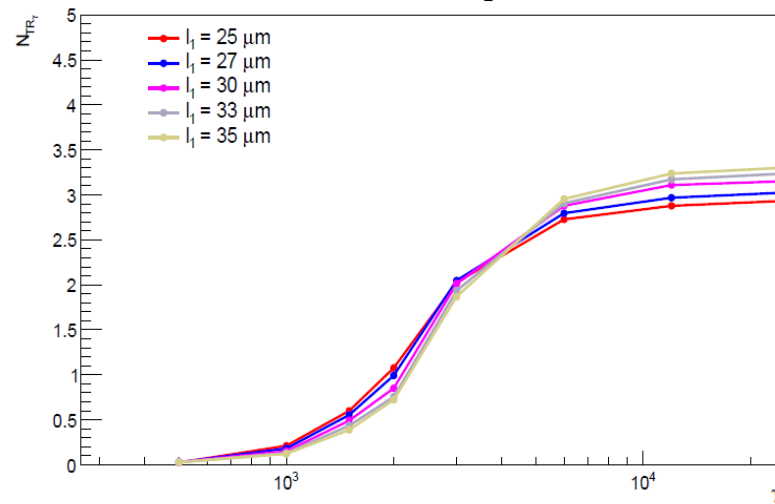


Number of photons as a function of gamma factor (Detected), Nfoils = 300

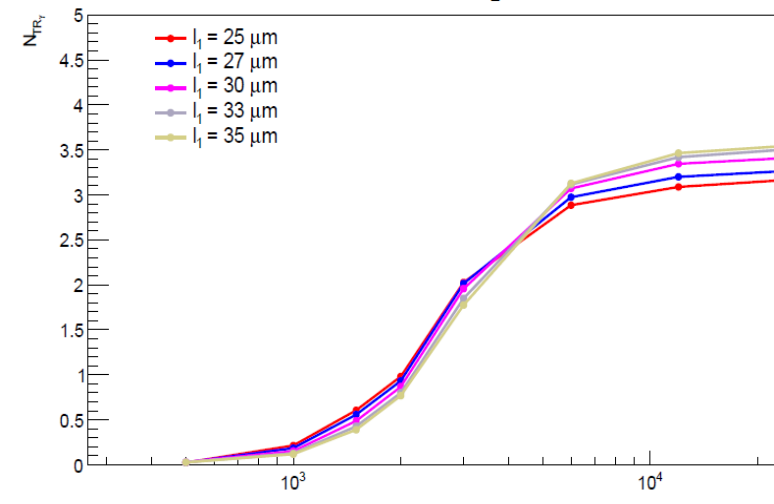
1 m, Detected, Polyethylene, $l_2 = 0.3$ mm, $N_f = 300$



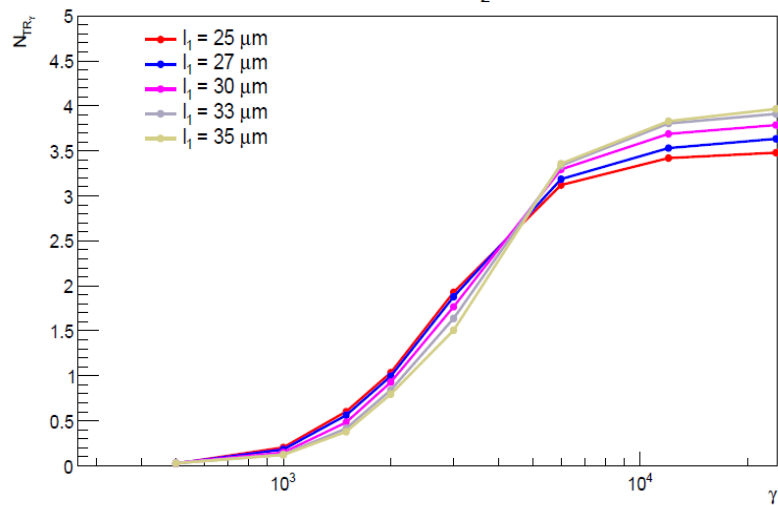
1 m, Detected, Polyethylene, $l_2 = 0.4$ mm, $N_f = 300$



1 m, Detected, Polyethylene, $l_2 = 0.5$ mm, $N_f = 300$



1 m, Detected, Polyethylene, $l_2 = 0.7$ mm, $N_f = 300$



1 m, Detected, Polyethylene, $l_2 = 1.0$ mm, $N_f = 300$

