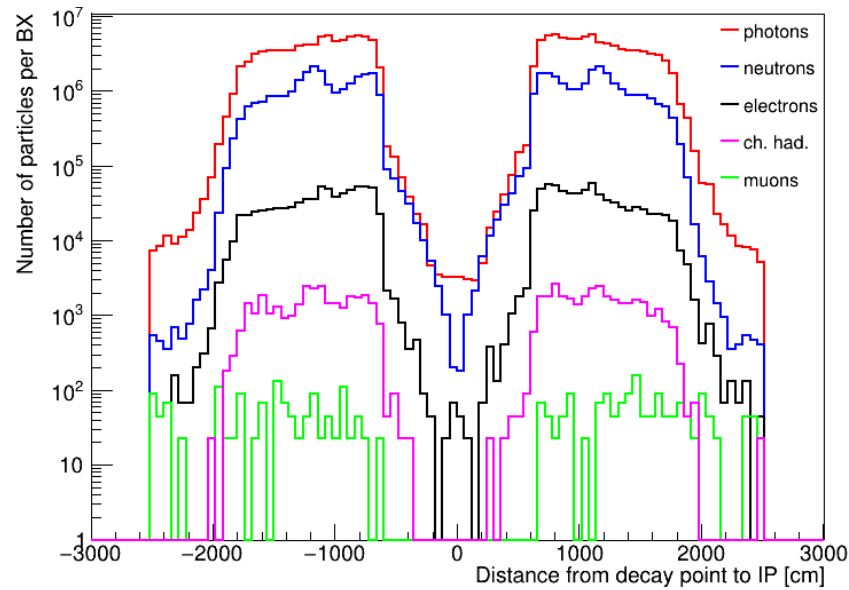
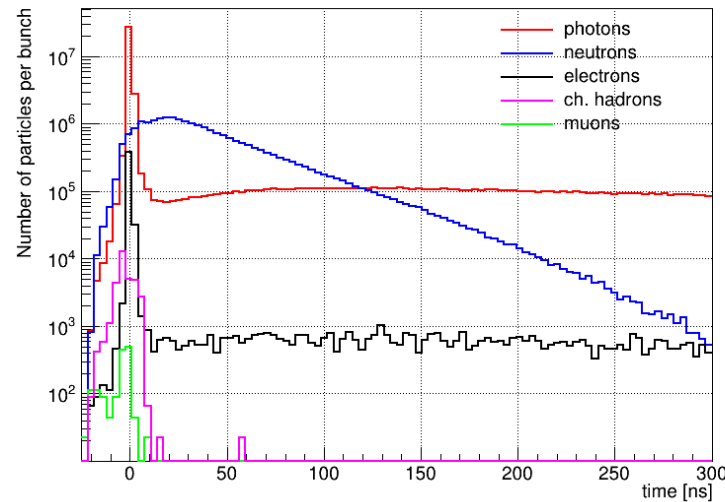
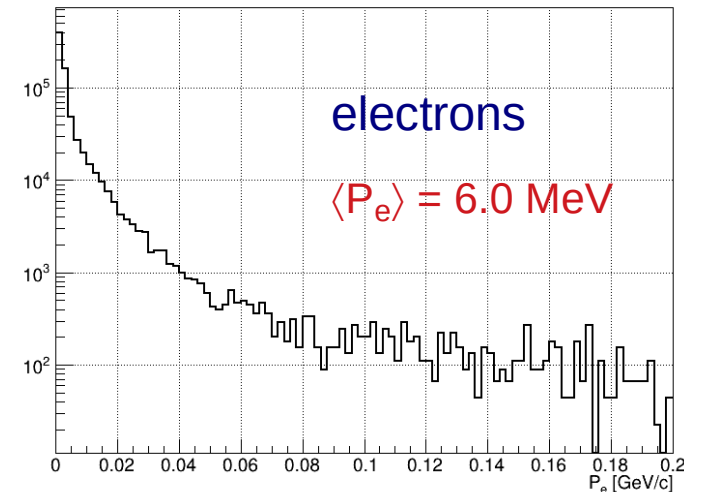
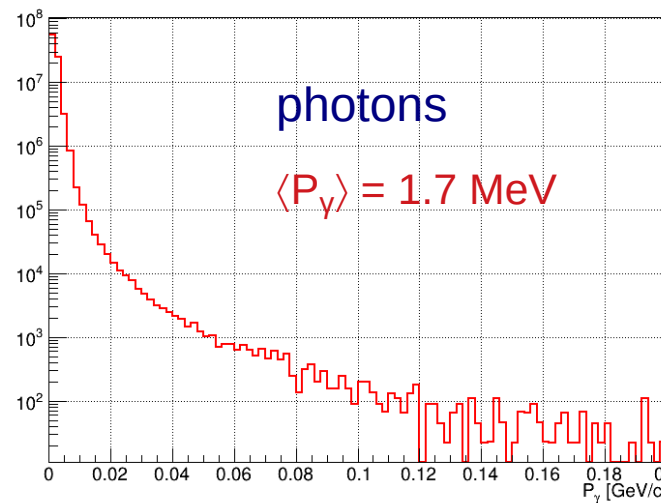


# Beam-induced background Studies at $\sqrt{s} = 1.5$ TeV

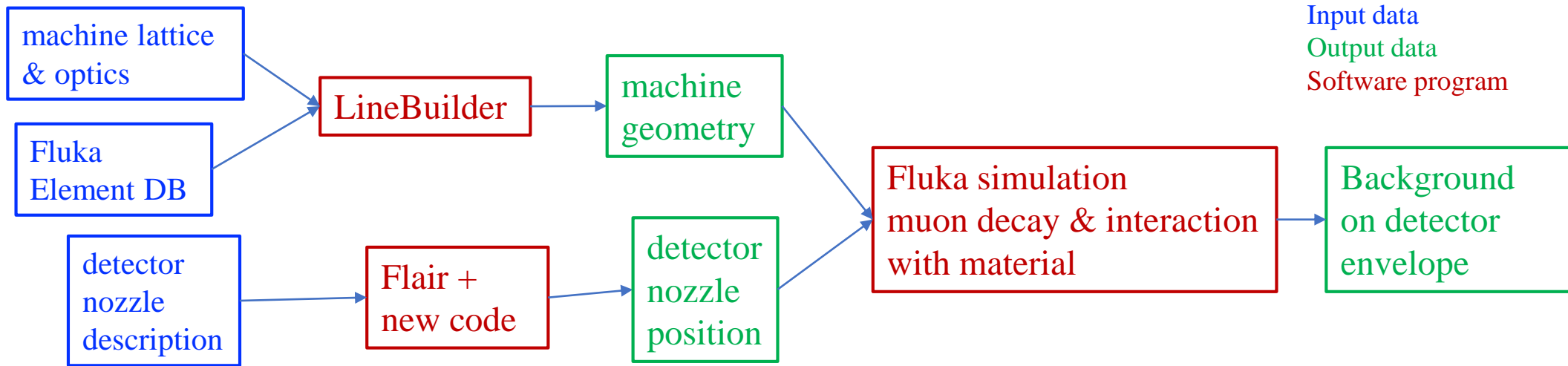


Contributions from  $\mu$  decays  $|z| > 25$  m become negligible for all background species but Bethe-Heitler muons



Secondary and tertiary particles have low momentum and different arrival time in the IP.

# The beam-induced background simulation tools



Proposal: study the beam-induced background at  $\sqrt{s} = 3$  TeV optimizing the nozzle shape

