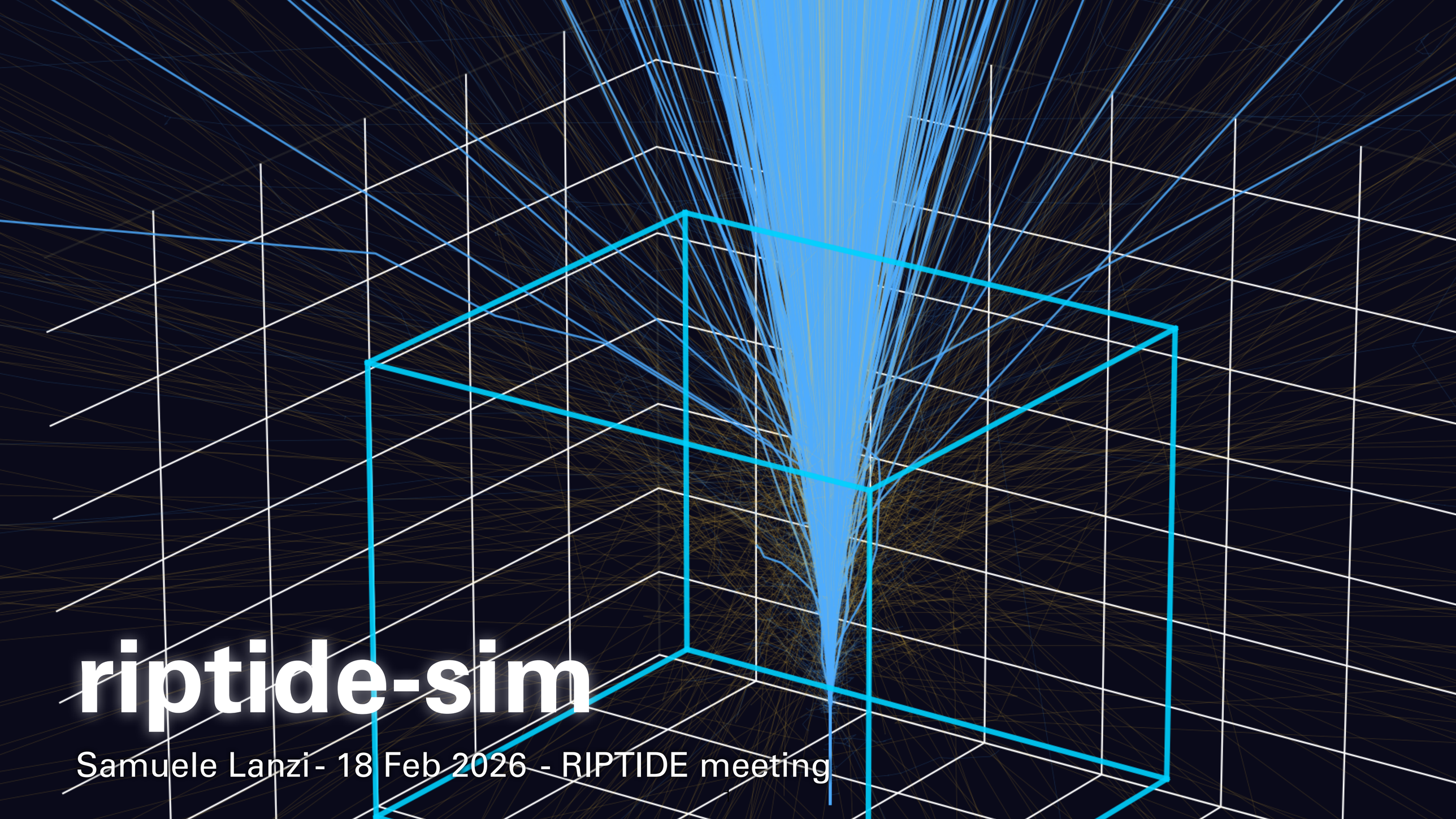
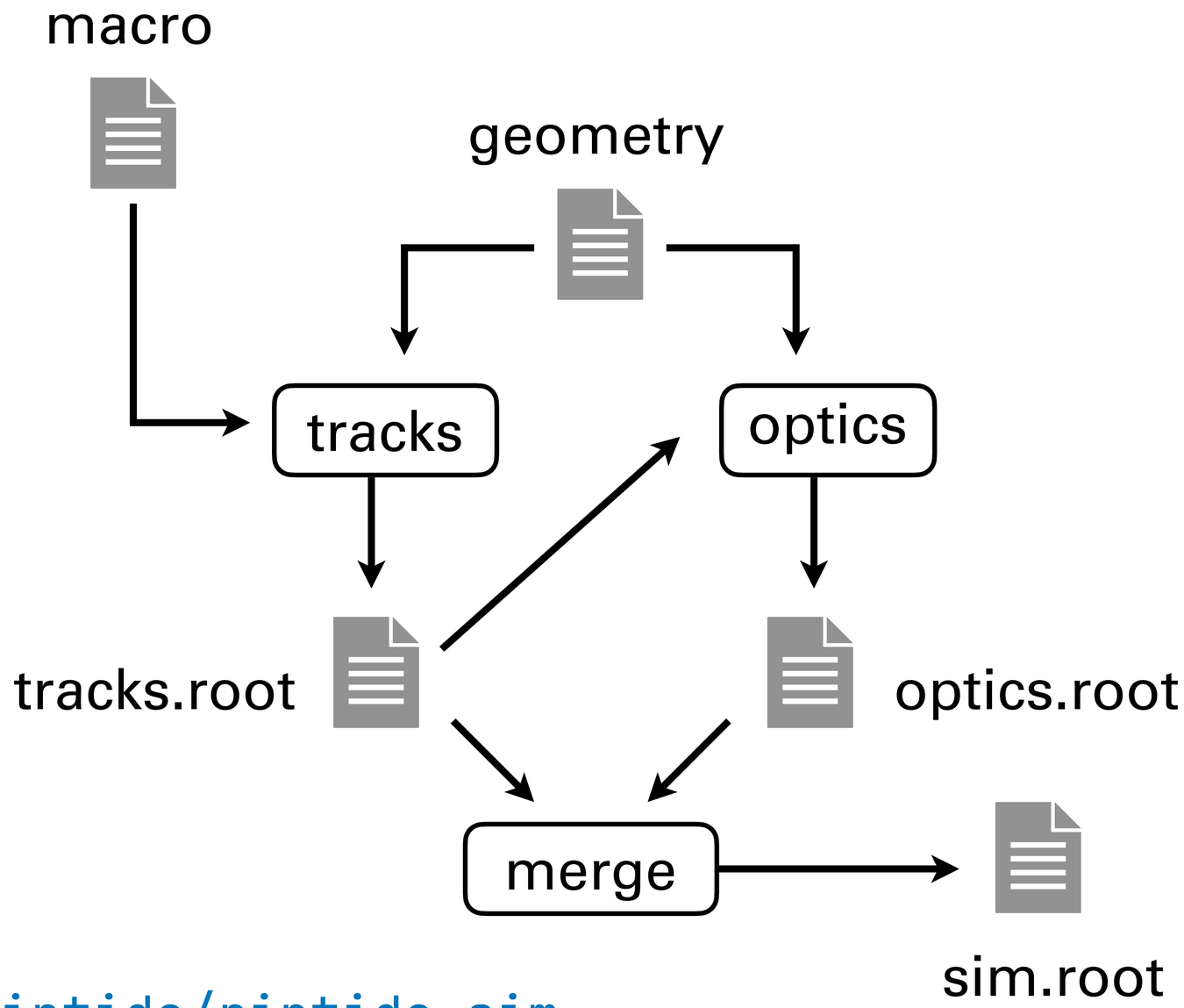


riptide-sim

Samuele Lanzi - 18 Feb 2026 - RIPTIDE meeting

Updates

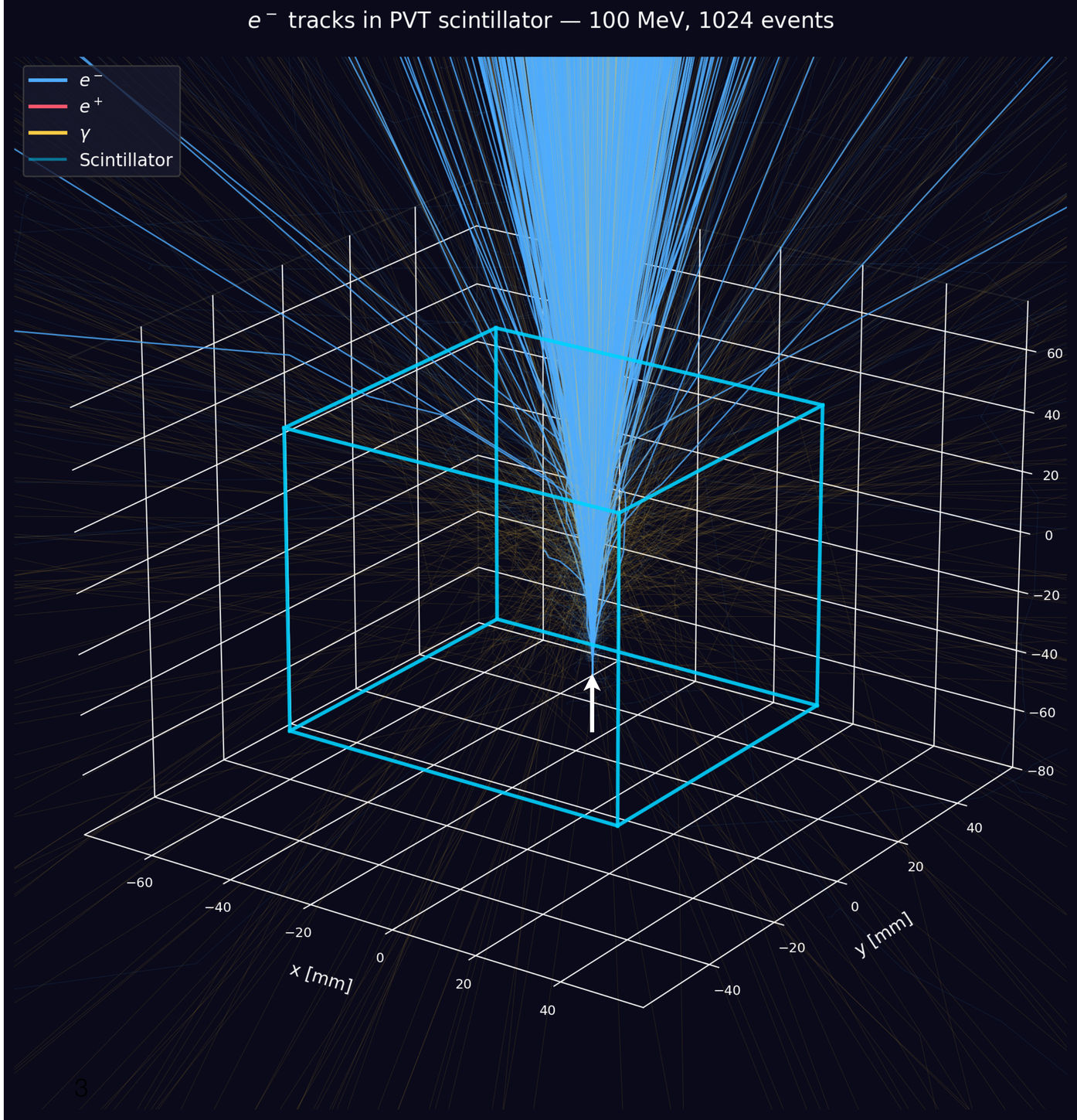


https://baltig.infn.it/riptide/riptide-sim

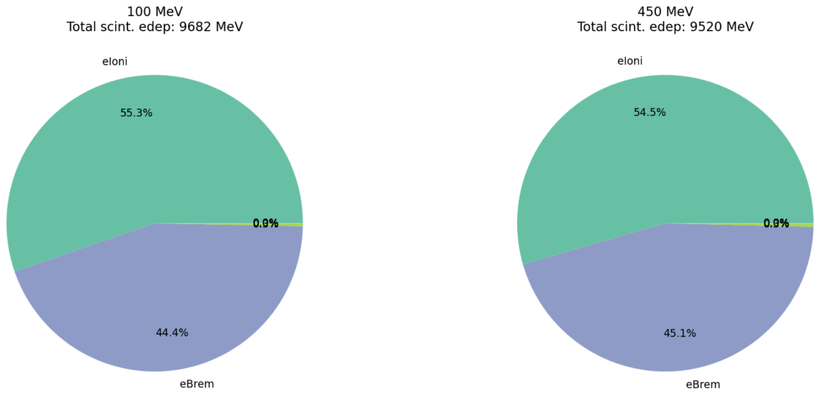
Electrons

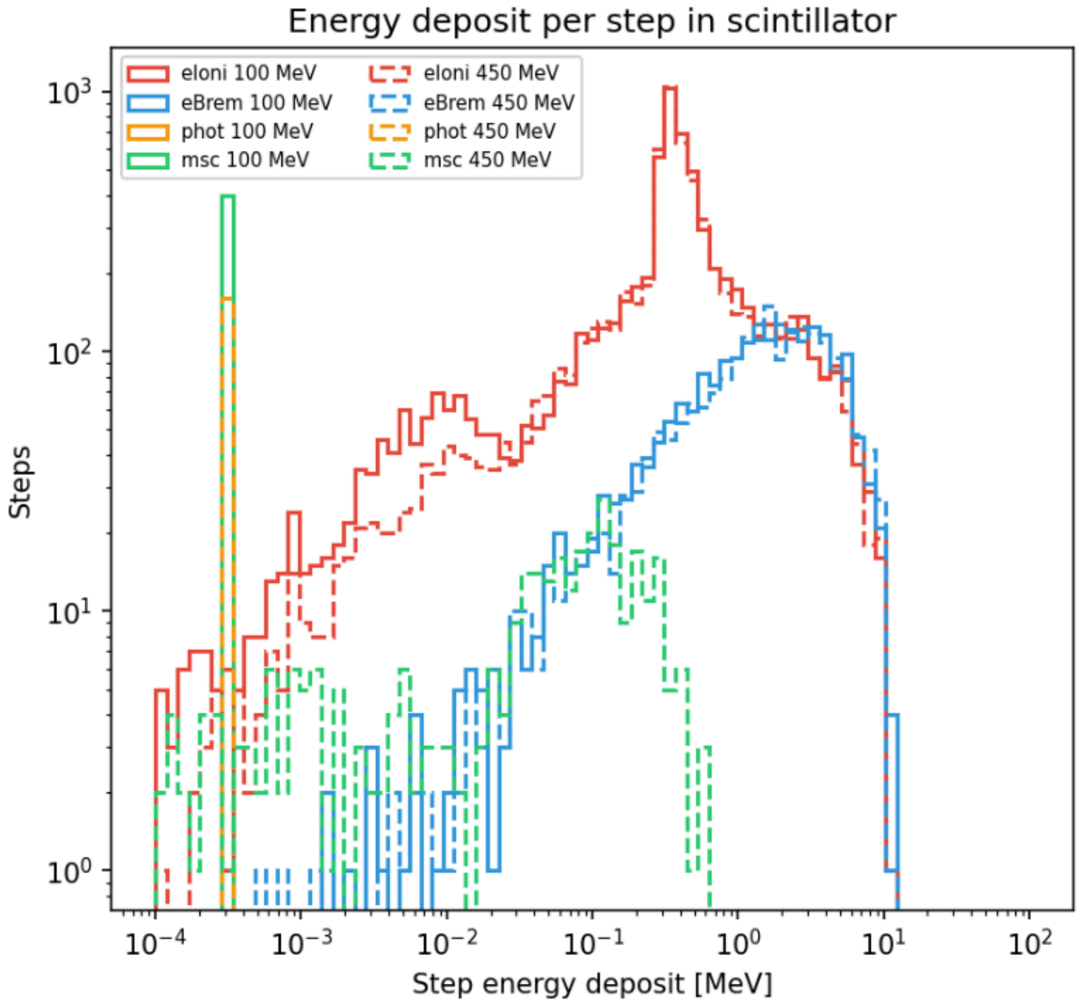
Two datasets were simulated:

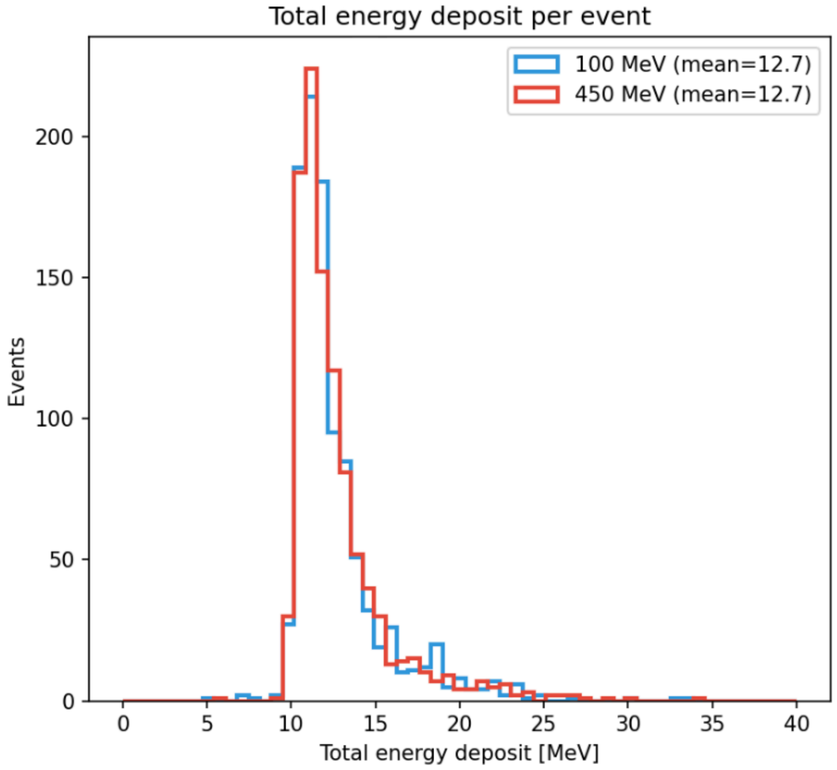
- 1k electrons 100 MeV
- 1k electrons 450 MeV



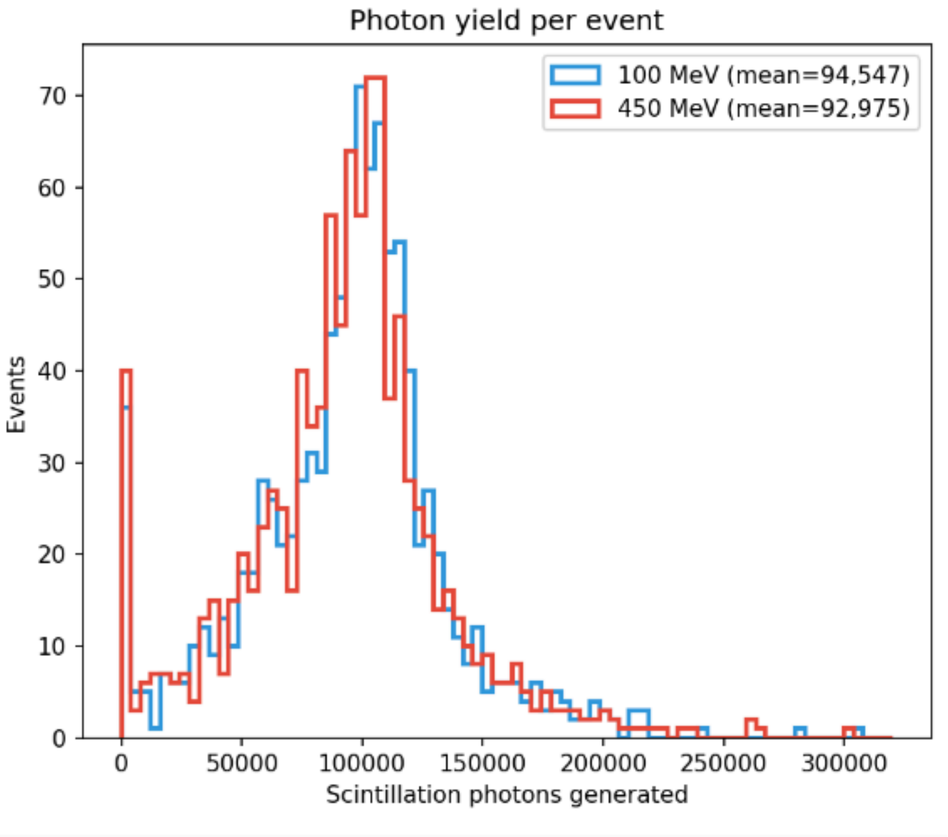
MC events analysis

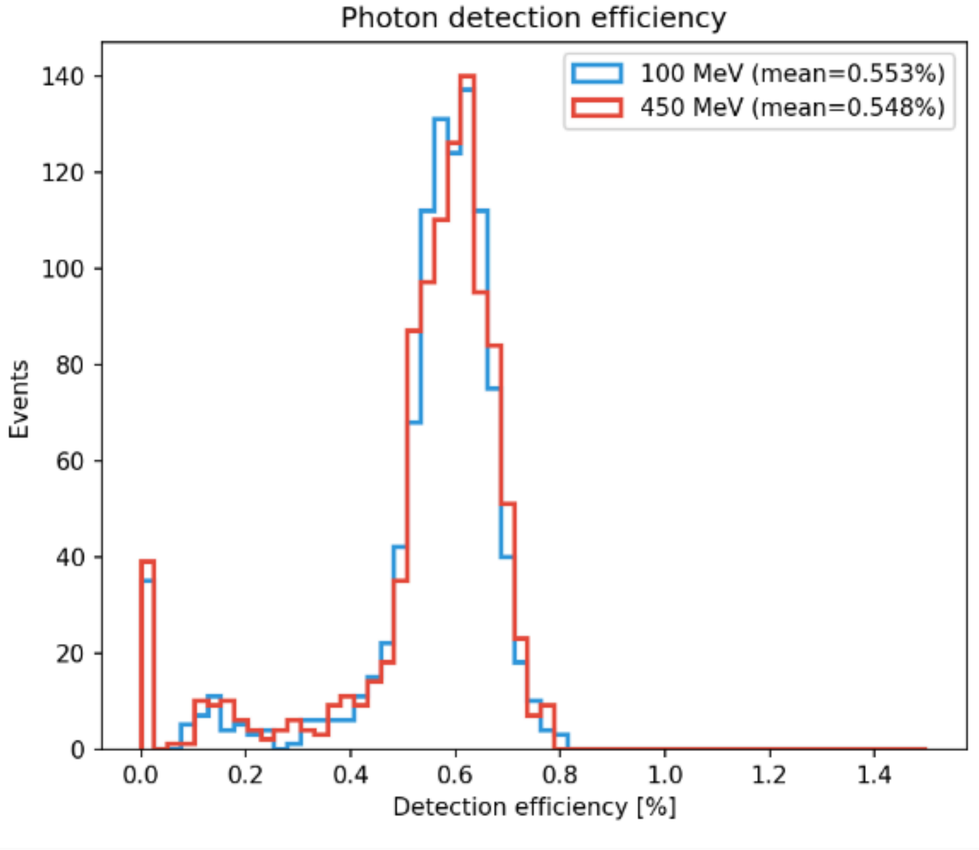




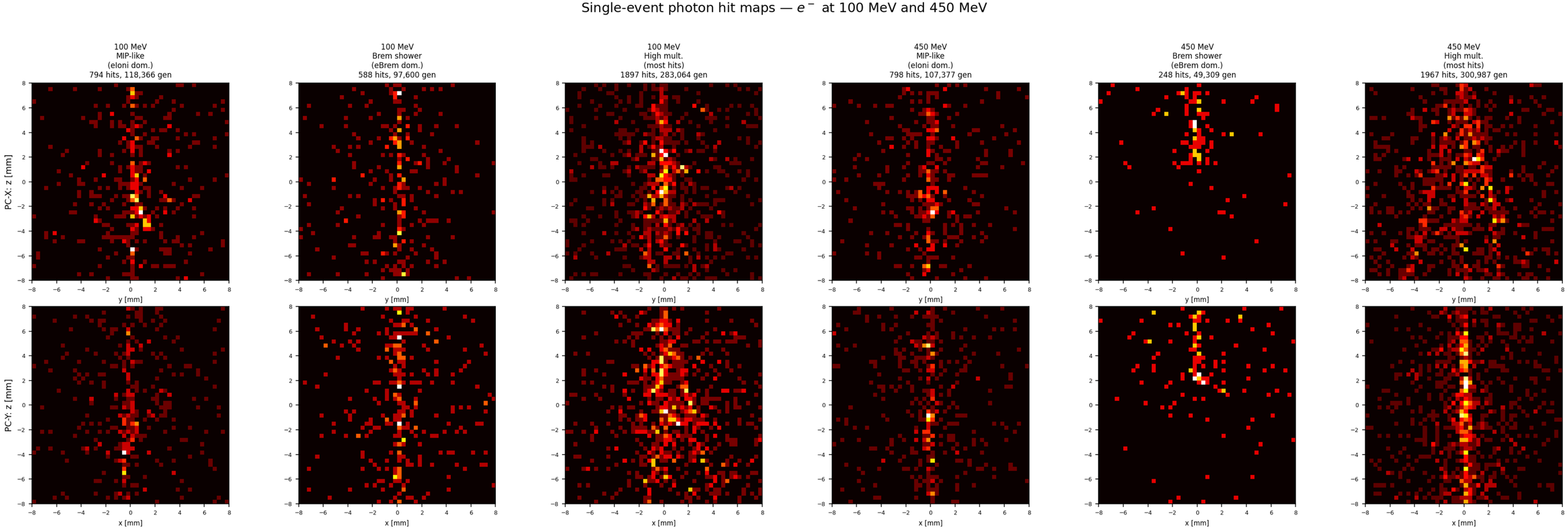


MC events analysis





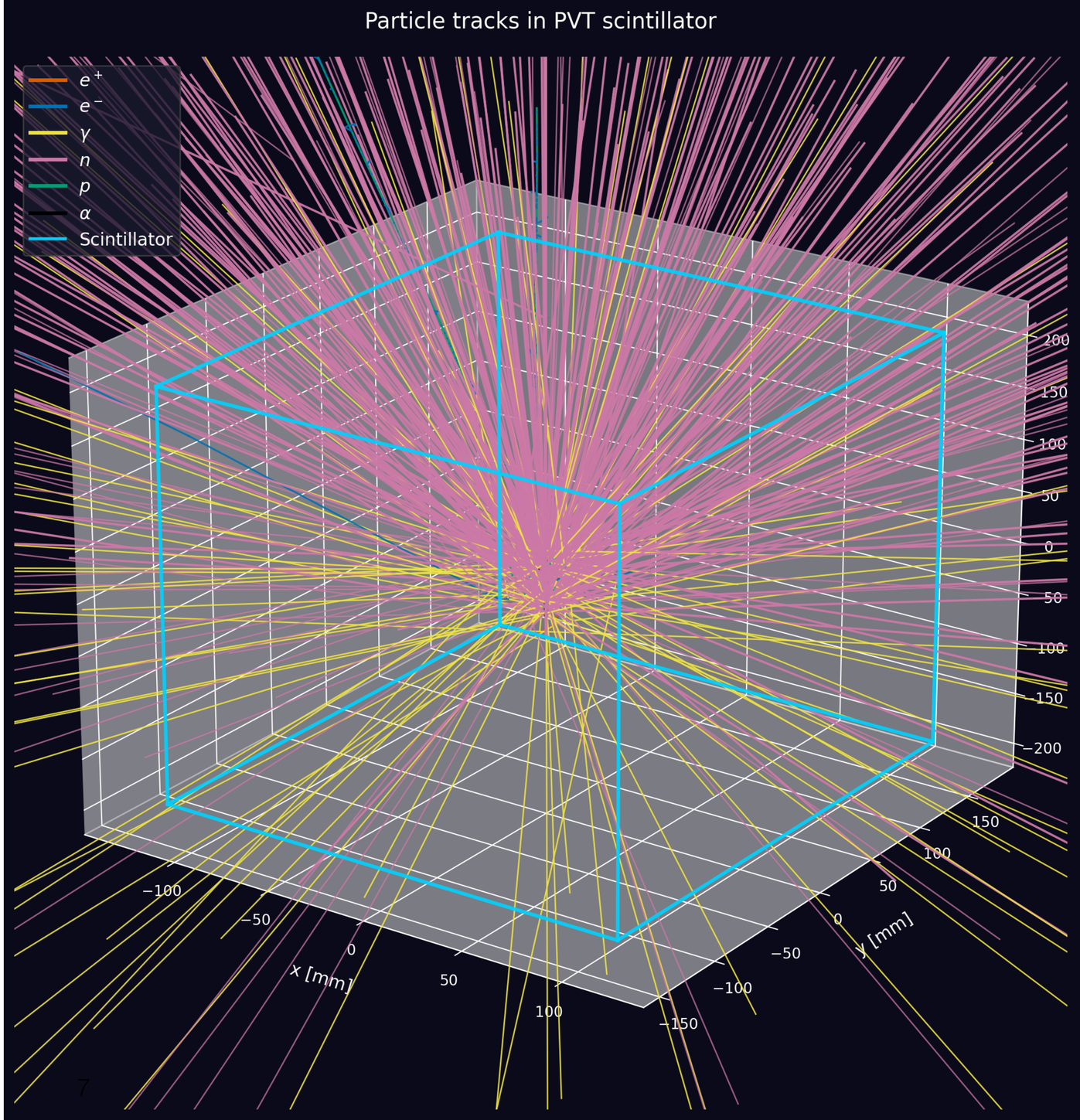
MC events analysis



Neutrons

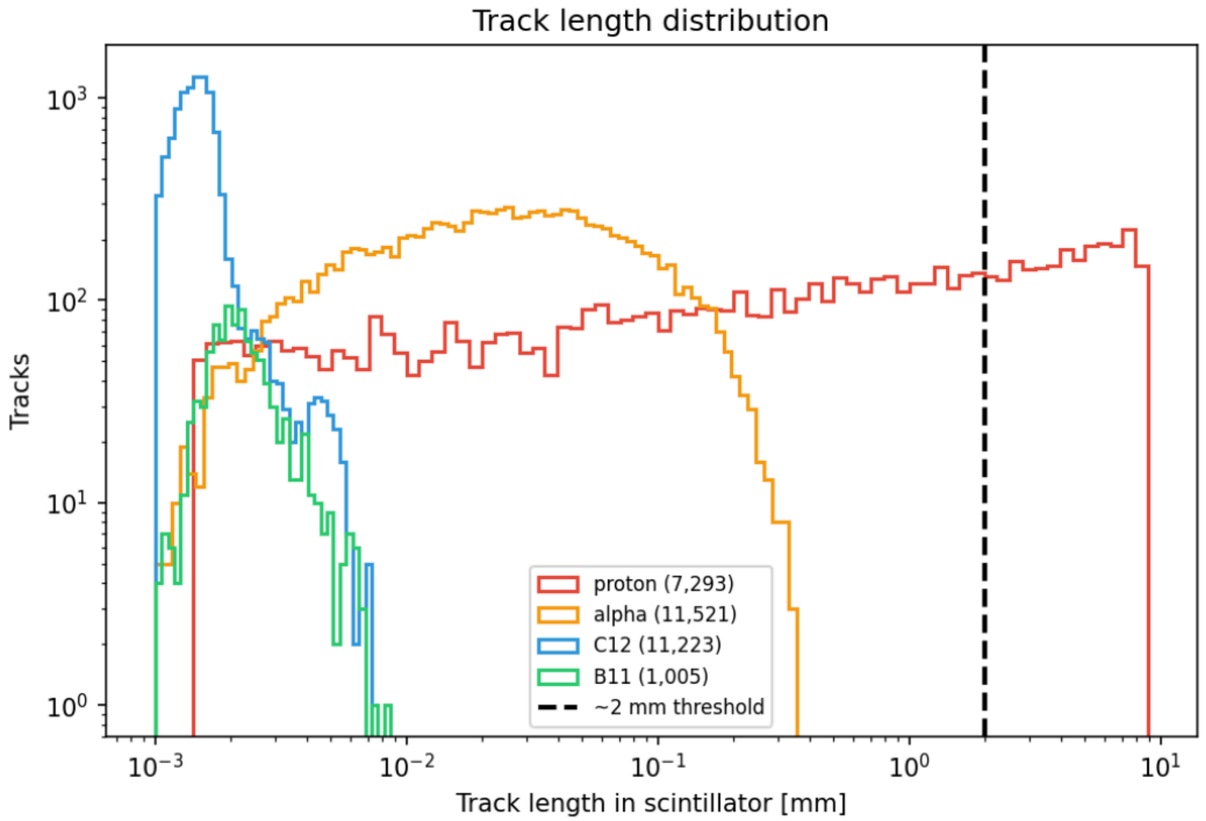
1M at 30 MeV neutrons were simulated:

- tracks simulation execution time ~10 s
- Optics simulation execution time ~3 h



First analysis track length

Length of the charge particles tracks in the scintillator in order to determine what we can see in the MCP screen



Conclusions

- Simulation is updated in order to separate tracks and optical photon propagation
- A preliminary analysis is done for electrons at 100 MeV and 450 MeV
- A very preliminary analysis is done for 1M neutrons at 30 MeV
- For the future: Simulate tracks also for CsI(Tl) and conclude the two analyses