

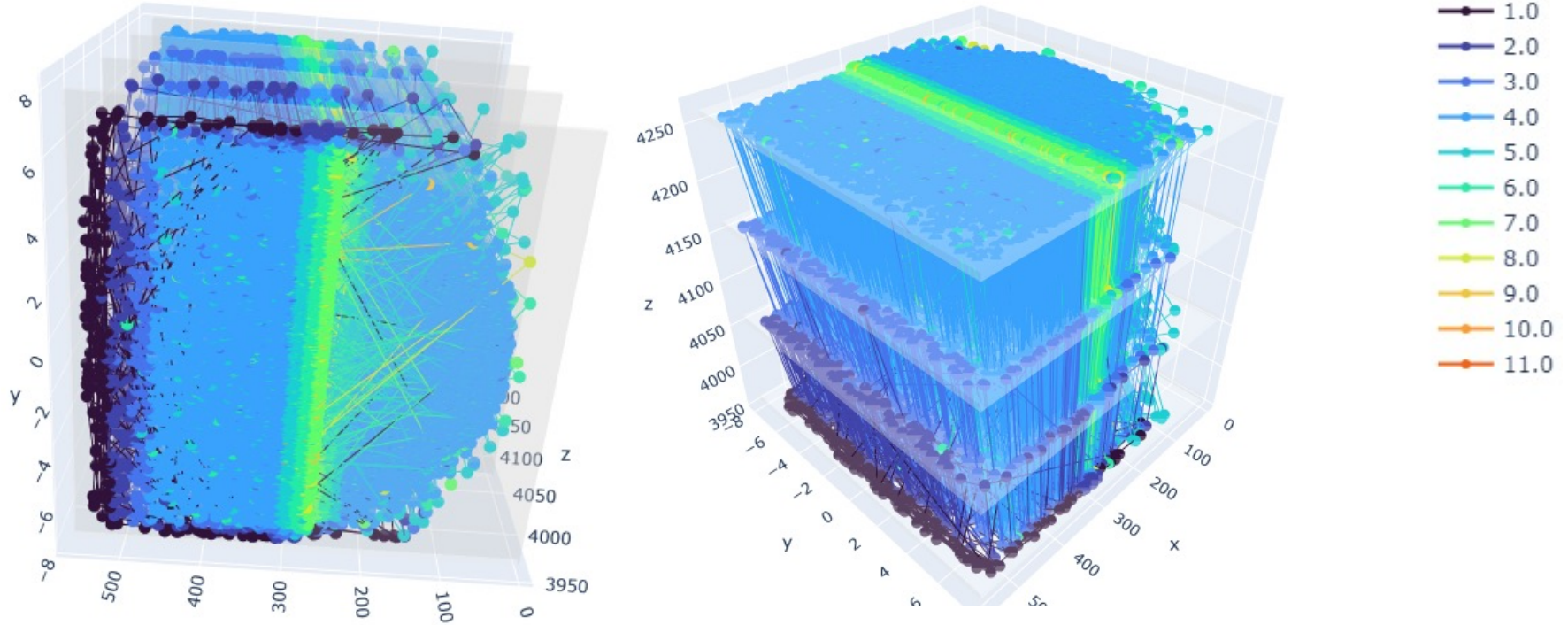
# FPGA for real-time tracking at LUXE experiment

LUXE Simulation

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SFT meeting 07/09/2023

# Summary of simulations

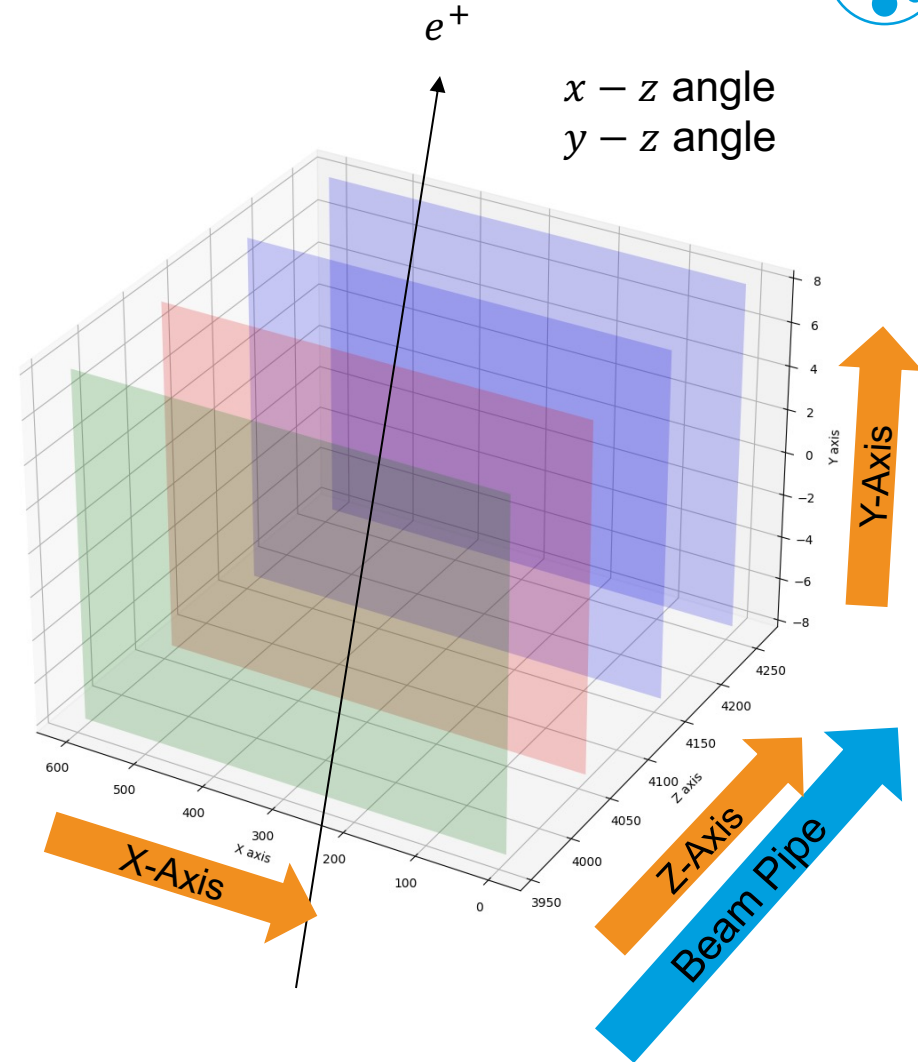
Less is more



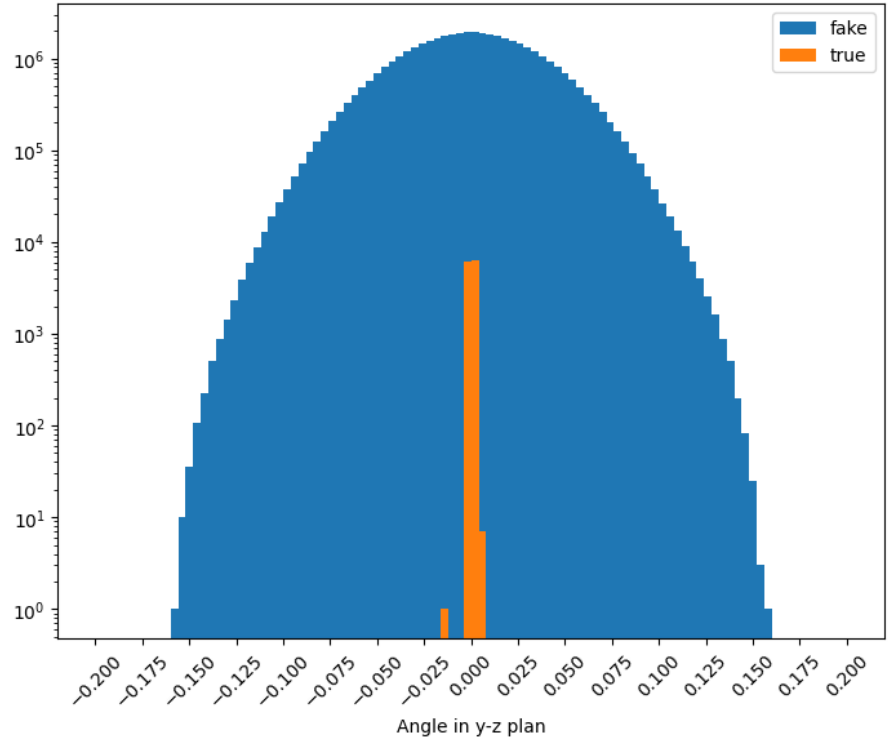
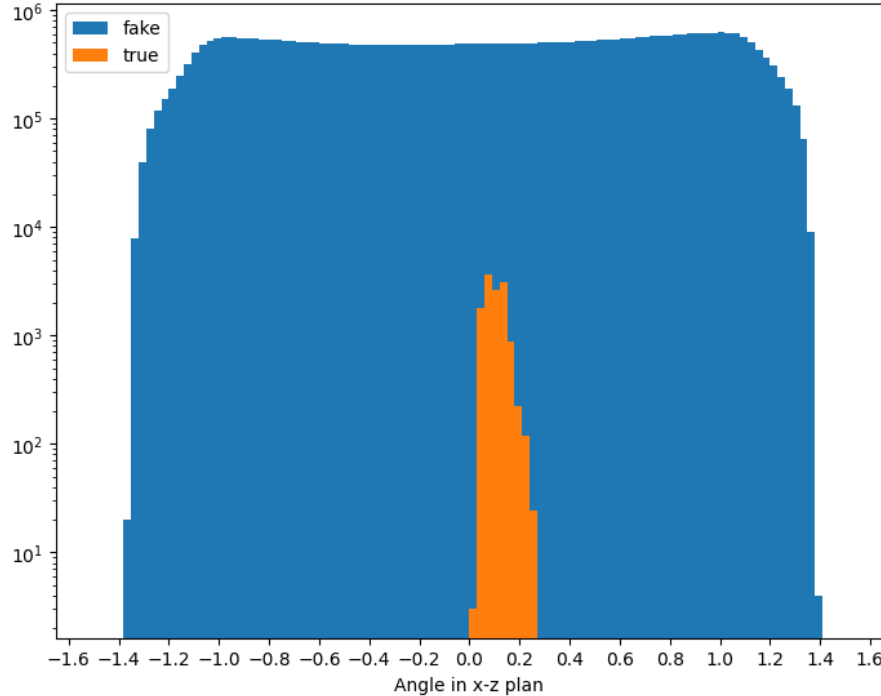
# Coordinate system

## For graph building

- For graph building, we would choose every two hits that are potentially from the same track
- In order to make the graph efficient, we should make the selection window as narrow as possible
- A hit-pair should be selected if the two hits are within:
  - Two different consecutive layers (keep in mind the staves)
  - A window of cone around the expected direction of possible tracks
- Building a graph considering all the hits is not possible, even if we apply the preselection



# Angular distributions of segements



Allowing small window in the X-Z angle

Slicing the detector in plans in Y would ultimitly help and open the window to efficiently consider GNNs

# Hamburg