

# Summary of ongoing background studies at the inclusive PWG

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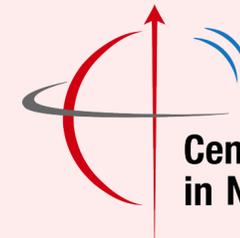


UNIVERSITY OF  
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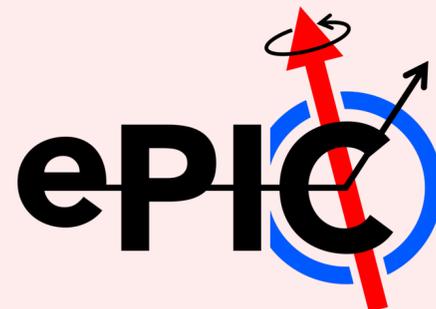


Stony Brook  
University



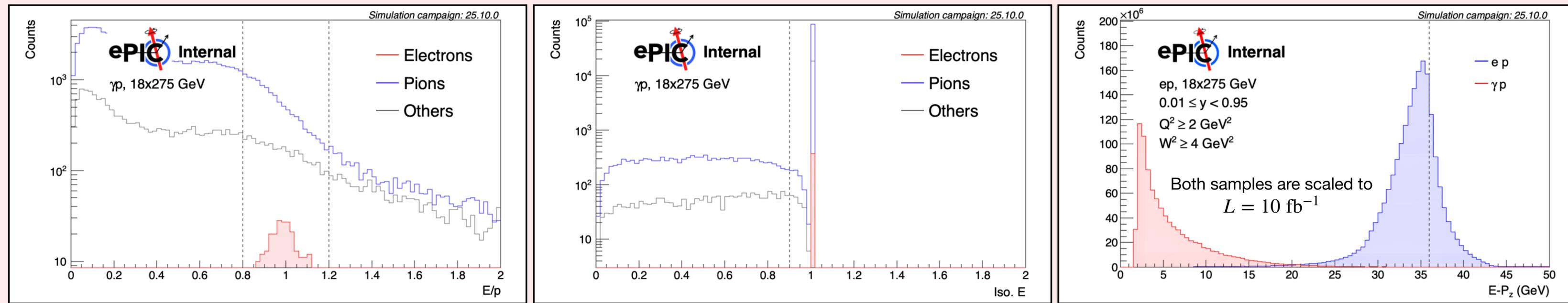
Center for Frontiers  
in Nuclear Science

PAC Meeting 03/03/2026



- ▶  $\pi$  from photoproduction can have large impact on the eID purity
- ▶ Analysed ep 18x275 GeV low  $Q^2$  samples generated using Pythia 6
- ▶ Need to compare with Pythia 6 DIS simulation with full kinematic range
- ▶ Did not find existing simulations in campaign. Will generate new samples
- ▶ Planning to continue the study at 10x100 GeV to get some estimates on the pion contamination for early science

Plots shown at collaboration meeting Jan 2026



- ▶ Effect on eID at 18x275 GeV is small; need to understand  $E$  and  $p$  resolution better (low resolution might be due to other problem in current simulation and analysis)
- ▶ Need to look at impact on kinematic reconstruction
- ▶ 10 GeV beam electron is expected to have larger impact. Will show study soon.

Plots shown at collaboration meeting Jan 2026

