Los Alamos NATIONAL LABORATORY EST.1943

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EIC physics program status and plans at Los Alamos National Laboratory

Xuan Li on behalf of
Los Alamos National Laboratory

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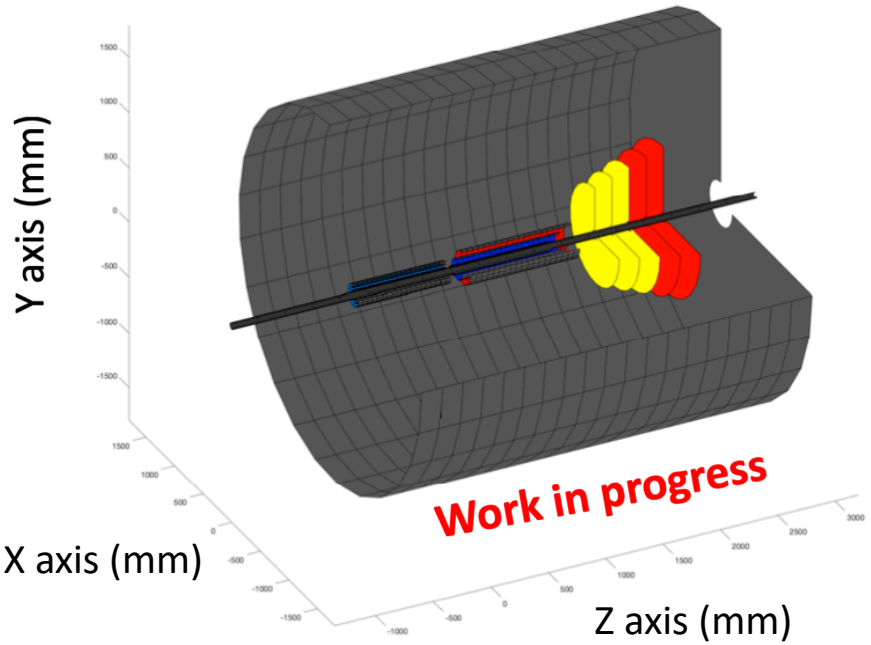
LANL EIC program status and plan (I)

- Status:
  - Theoretical developments are underway.
  - Initial studies in fast simulation to evaluate the proposed Forward Silicon Tracking (FST) performance are under way.
  - Forward-rapidity silicon tracking detector (FST): 3 barrel layers of MAPS + other silicon detector and 5 forward planes of MAPS + other silicon detector.

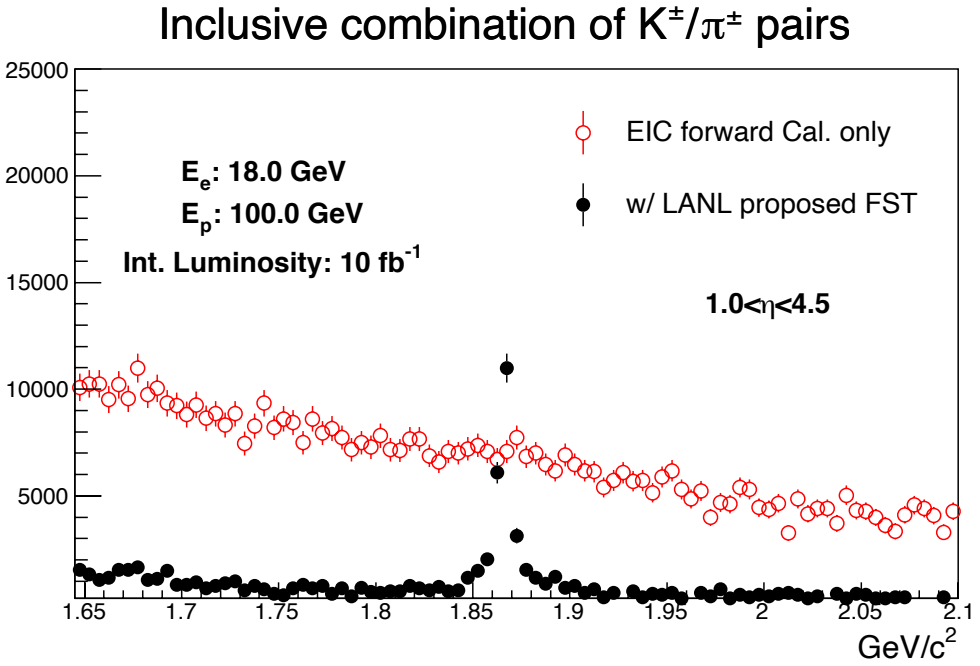


B = 3T

$1.0 < \eta < 4.5$

LANL EIC program status and plan (II)

- Status:
  - Theoretical developments are underway.
  - Initial studies in fast simulation to evaluate the proposed Forward Silicon Tracking (FST) performance are under way.



- Mass distributions of inclusive $K^{\pm}/\pi^{\pm}$ pair combination in PYTHIA8 simulation with momentum and spatial resolution smeared.
- Clear D peak with the help of the initial FST design.

  - The silicon R&D lab is being set up.

LANL EIC program status and plan (III)

- The Plan for the upcoming 6 months:
  - Will work on the detector simulation with different geometries and different detector options.
  - Will work on the reconstruction of the proposed heavy flavor and jets measurements with the EIC official software.
  - Will setup the R&D lab and characterize the proposed silicon techniques.
  - We look forward to collaborate on the above items.