EICGENR&D2023_16: Development of Double-Sided Thin-Gap GEM-μRWELL for Tracking at the EIC

FY22 Progress Report & FY23 Proposal

EIC GENERIC R&D REVIEW MEETING

Kondo Gnanvo on behalf of Thin Gap MPGD Consortium

October 31, 2023

Jefferson Lab

Outline

FLORIDA TECH

UNIVERSITY of VIRGINIA

Yale University

VANDERBILT UNIVERSITY

TEMPLE UNIVERSITY

Jefferson Lab

FLORIDA TECH

FY23 Progress Report

UNIVERSITY of VIRGINIA

Yale University

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FY22 Progress Report – UVa

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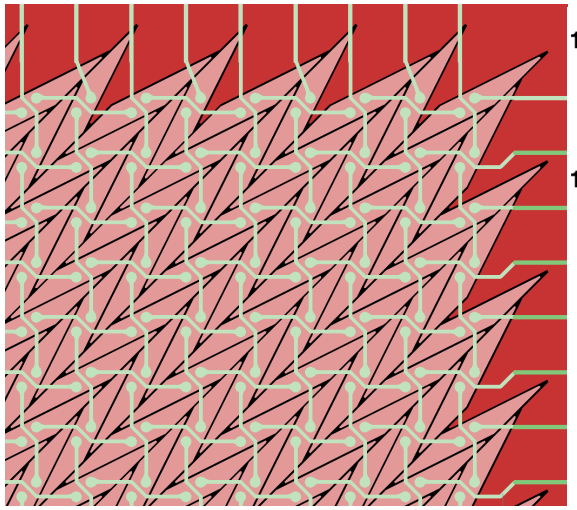
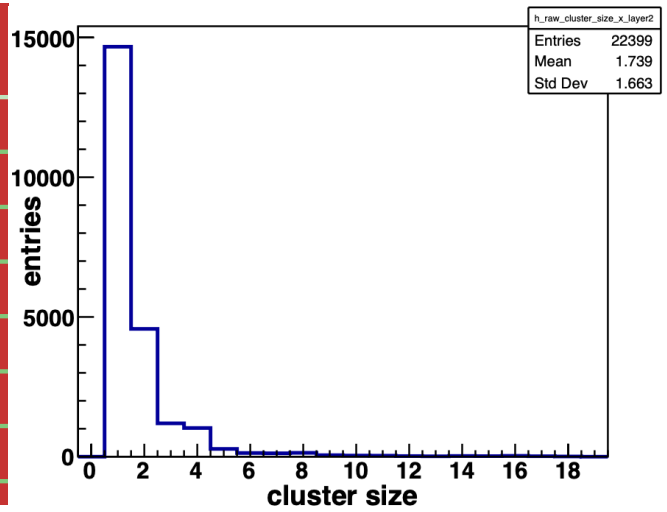
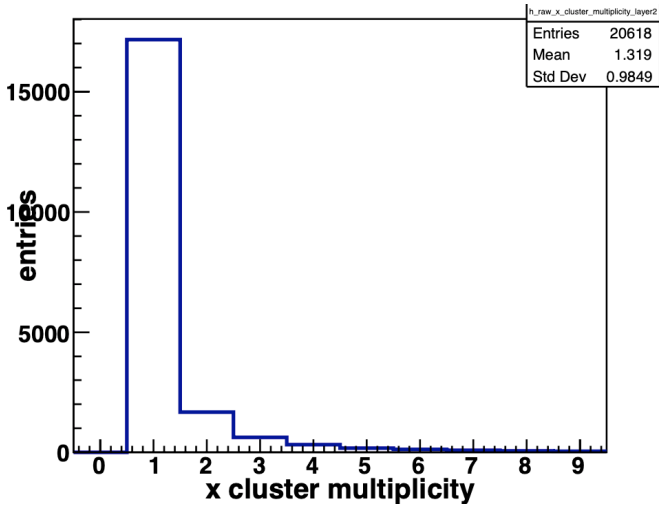
FY22 Progress Report – JLab

FY22 Progress Report - VU

Type of Prototypes	Specifications	Data taken (Fermilab test beam)
GEM +MMG	• Active area = 10 cm x10 cm • Drift gap = 1 mm • Transfer gap = 1 mmm • 2D chevron R/O with 1.6 mm pitch	• ArCO2 gas (HV scan + track angle scan) • KrCO2 gas (HV scan + track angle scan)
GEM + μRwell	• Active area = 10 cm x10 cm • Drift gap = 1 mm • Transfer gap = 0.5 mm • 2D chevron R/O with 1.6 mm pitch	• ArCO2 gas (HV scan + track angle scan) • KrCO2 gas (HV scan + track angle scan)
μRwell	• Active area = 10 cm x10 cm • Drift gap = 1 mm • 2D chevron R/O with 1.6 mm pitch	No data taken







- Only single strips are getting fired most of the time
- Challenging to decipher hot channel with real hit
- Ongoing analysis

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FY22 Progress Report – Yale U.

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FY23 Proposal

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FY23 Proposal - Florida Tech

FY23 Proposal – UVa & Vanderbilt

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FY23 Proposal – Jefferson Lab

FY23 Proposal: Budget Request

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