



Low Energy Neutron Background – LDMX @ Fermilab

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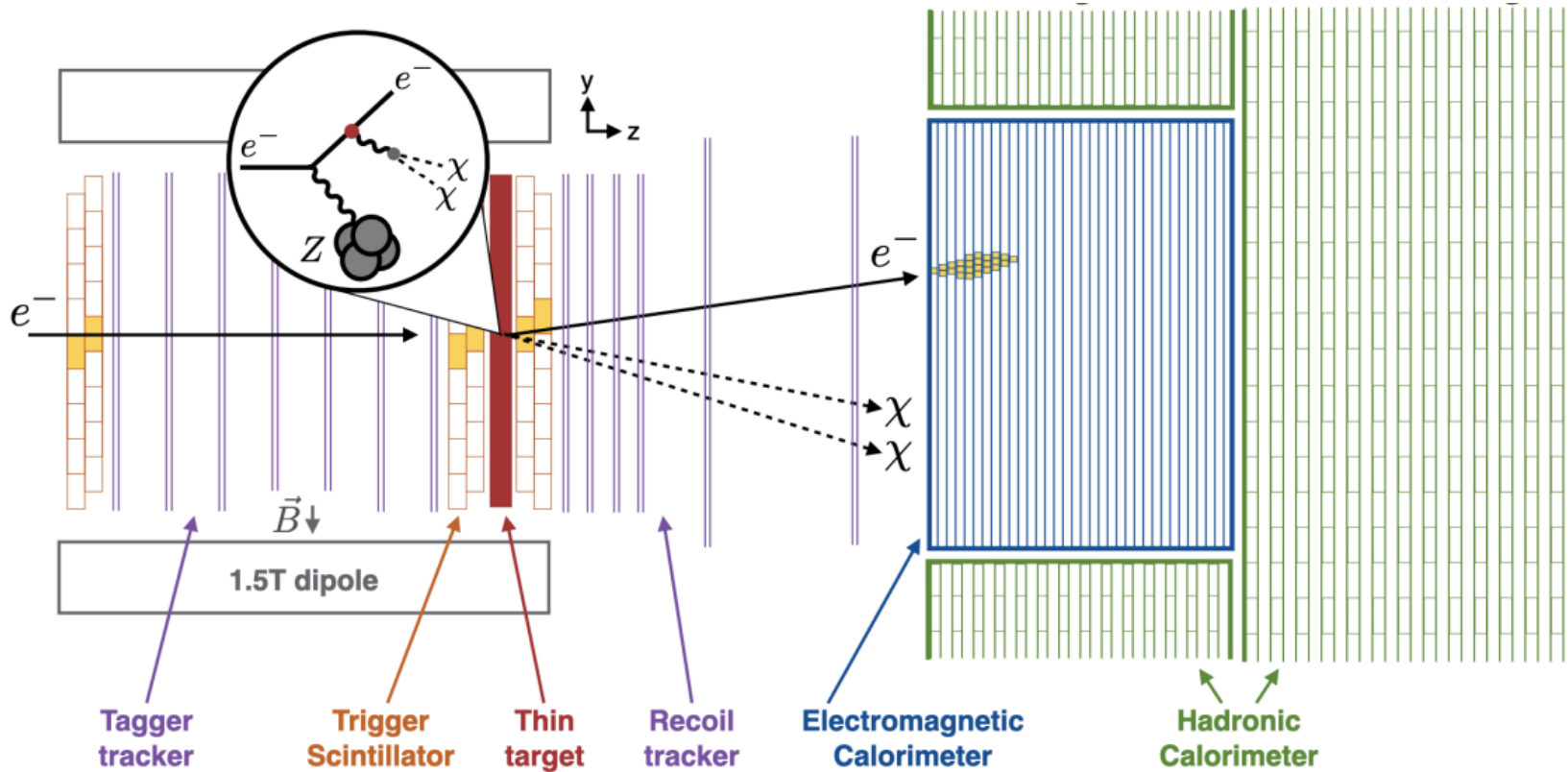
Supervisor: Dr. Cristina Mantilla Suarez

5 Minutes 5 Slides

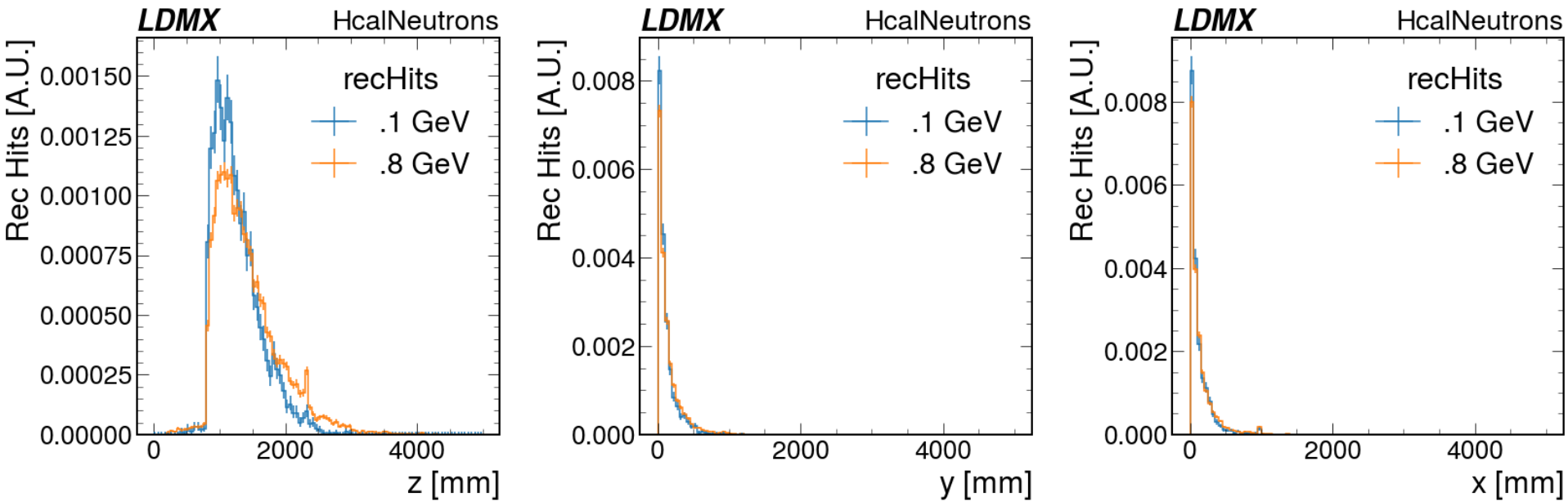
15 June 2022

What is LDMX?

Using Missing Momentum Methods to Detect Light Thermal DM

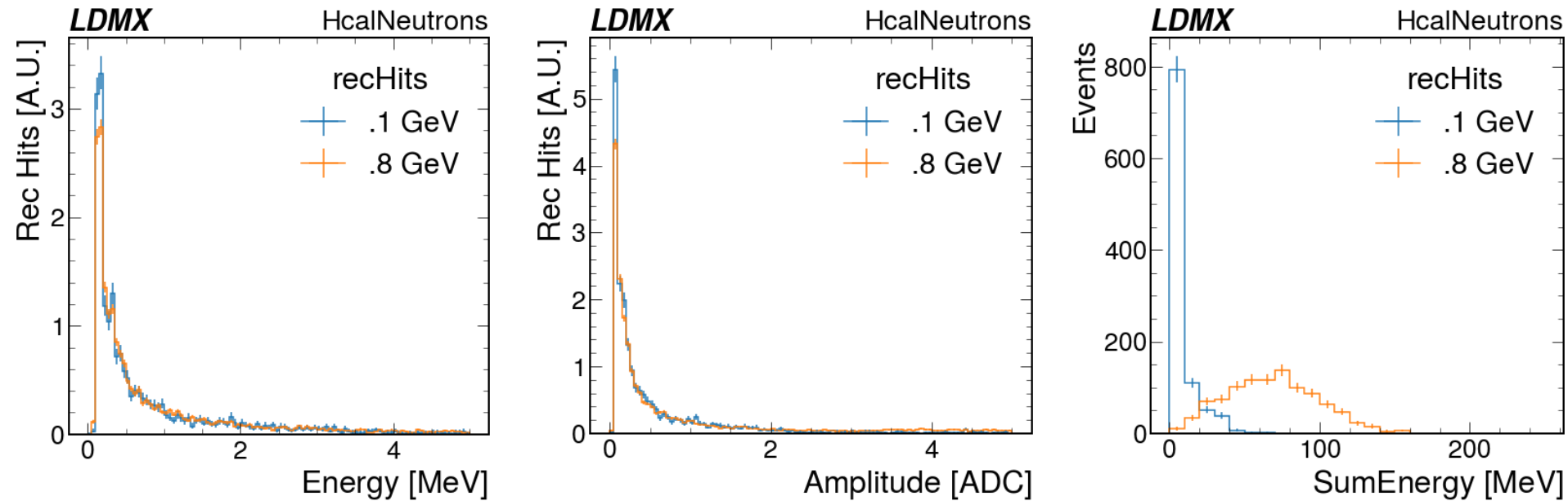


Preliminary Plots



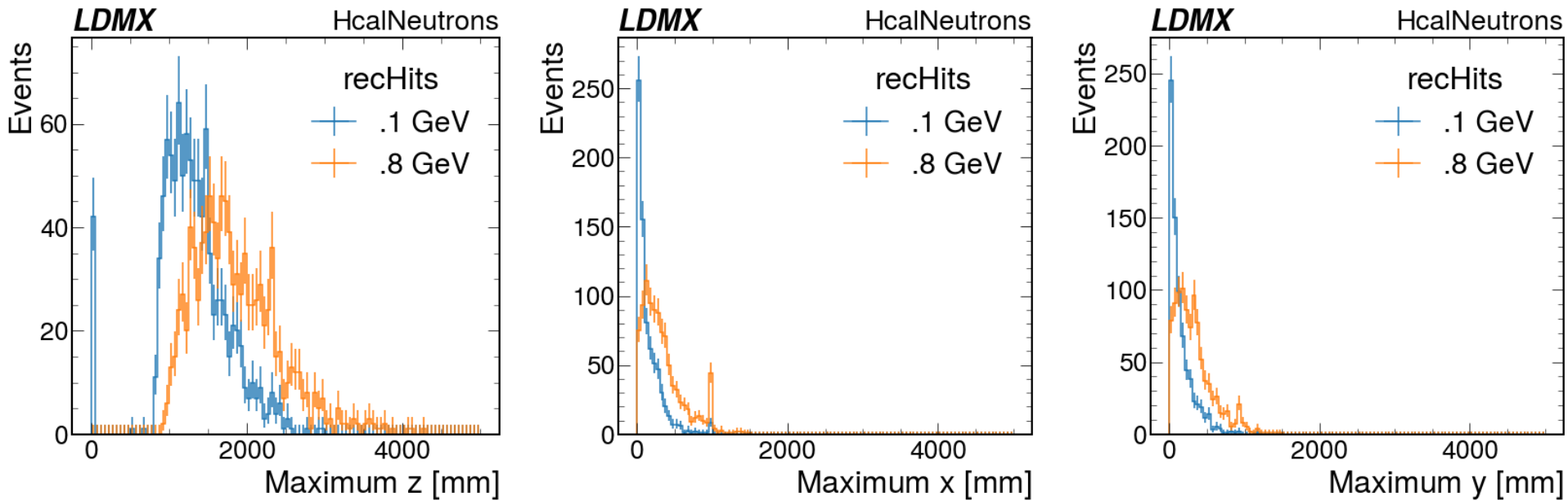
Standard RecHit distribution observed along the detector z axis.

Preliminary Plots



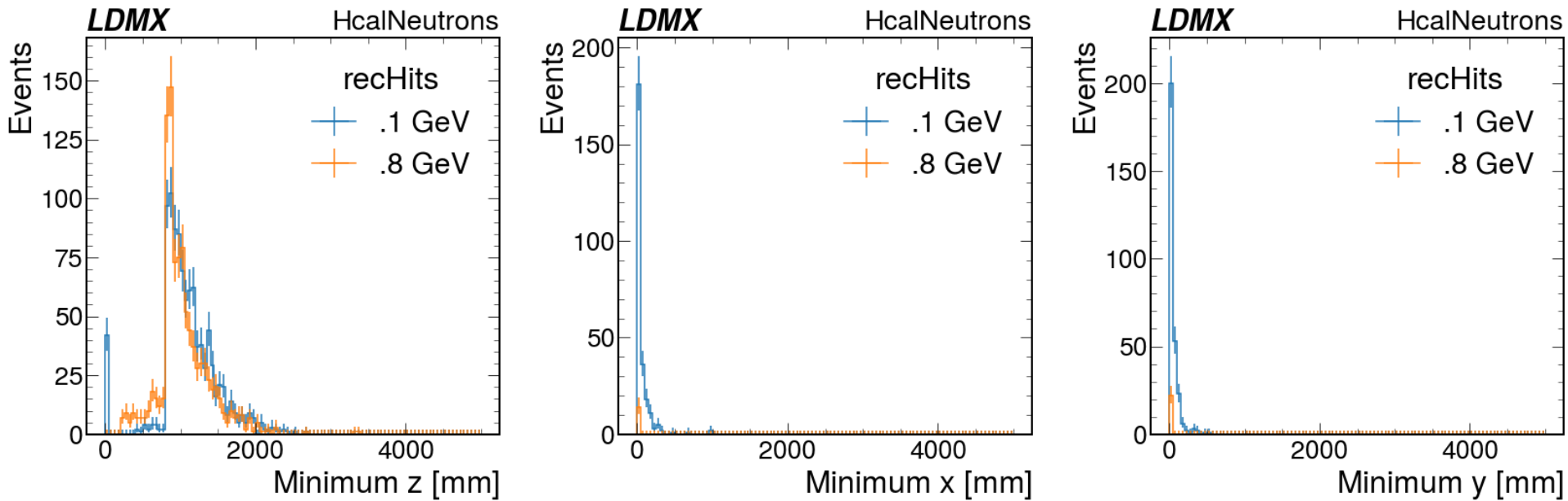
The energy blips up at .1 and .8, as seen on the first and third graphs. We observe regular distribution tails. Sum Energy should be about 10% of gun.

Preliminary Plots



Null events are binned to zero, we want to explore the threshold of detection.

Preliminary Plots



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Next Steps?

Now we'll do some more processing in our analysis.

- Find which layers and scintillator bars are hit
- Process hit location on bar
- Group hits into events
- Probe low energy boundaries of detection