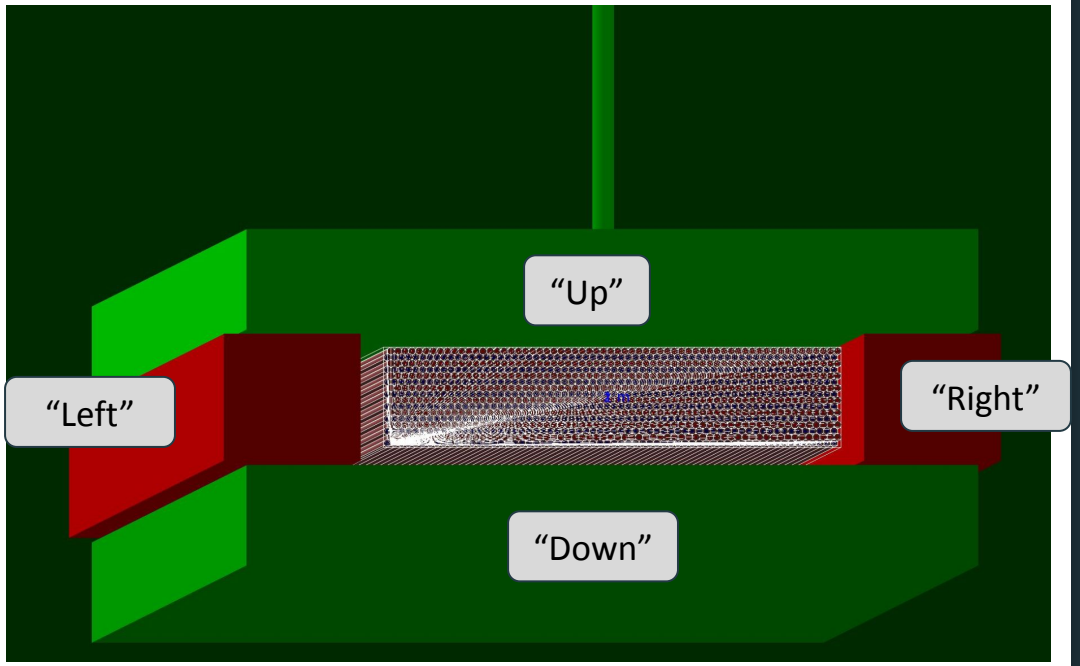
HiDRa Simulation Updates

Andrea Pareti - 24/05/2024

Mini-module leakage

Estimate energy losses outside mini-module volume with 20 GeV e^+, point-like beam (0 cm radius)

To try reducing leakage:
1 deg rotation around vertical axis
0.5 deg rotation around horizontal axis
Rotation around a point 14.5 cm deep inside calorimeter front face (~shower maximum)



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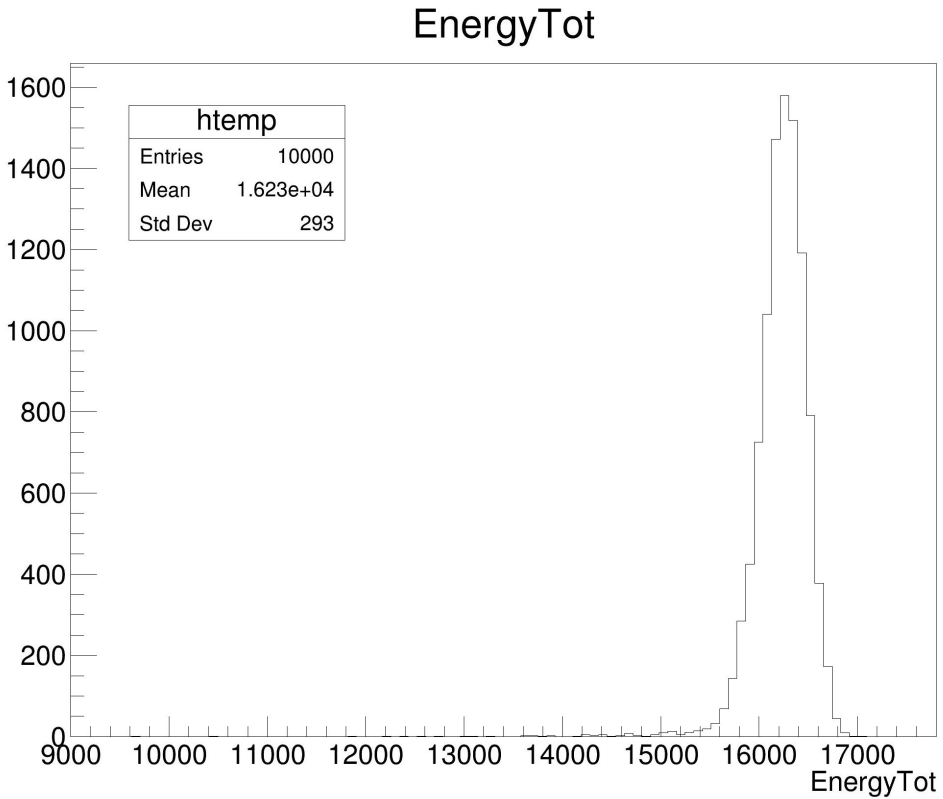
Total energy deposited inside mini-module volume



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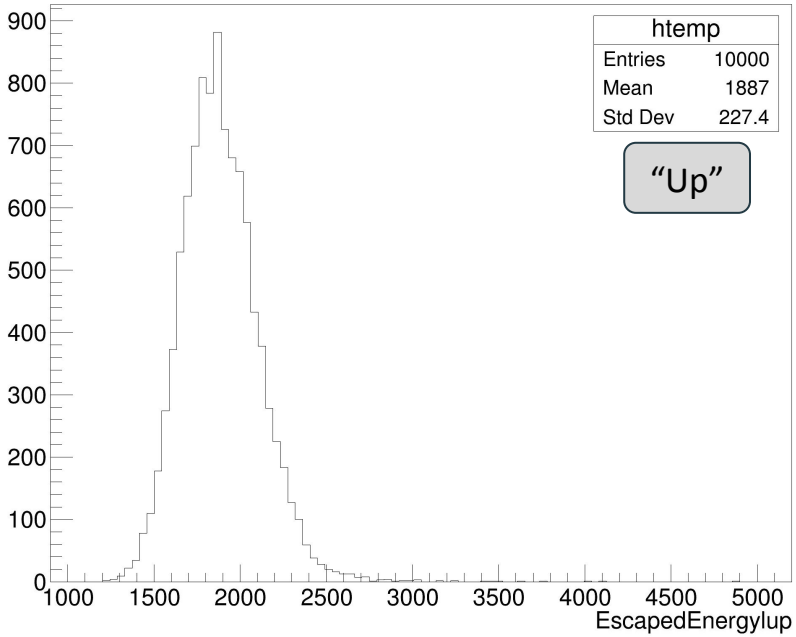
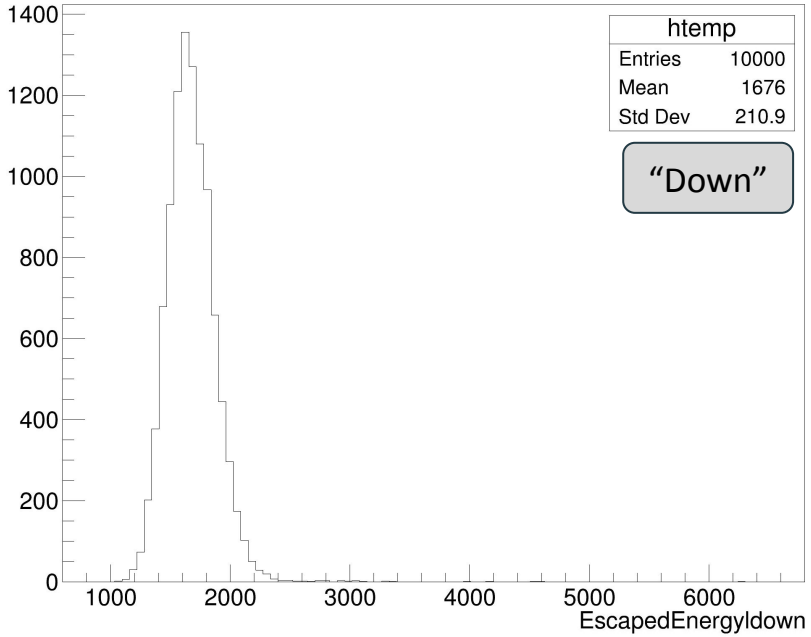
EscapedEnergylup



EscapedEnergyldown



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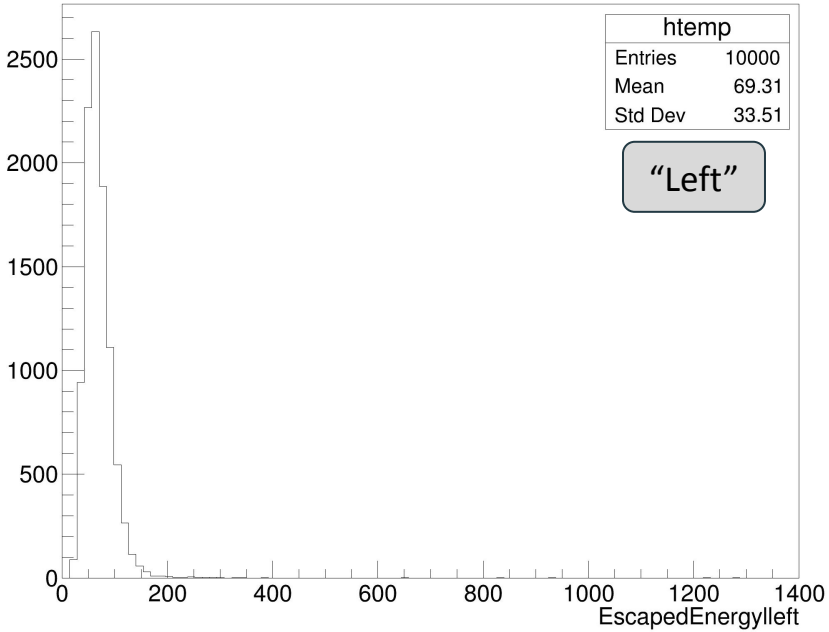
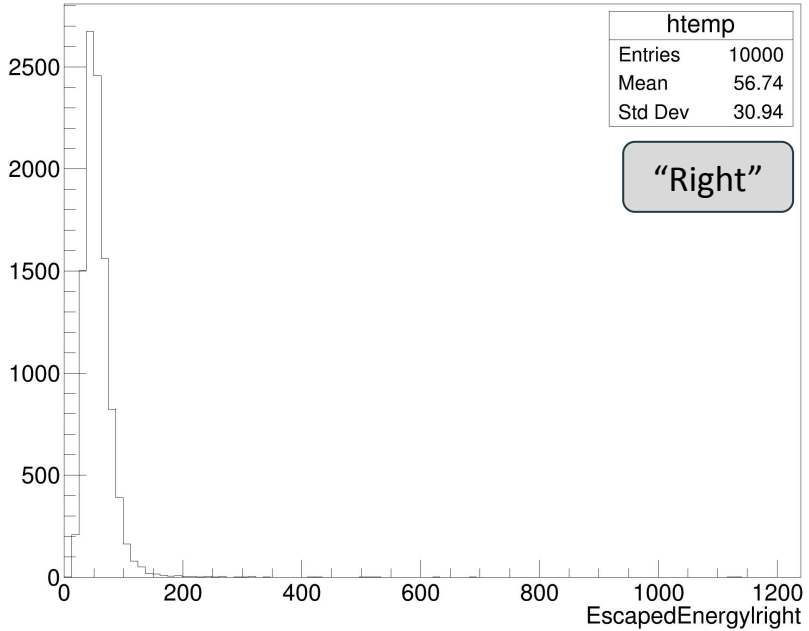
EscapedEnergylleft



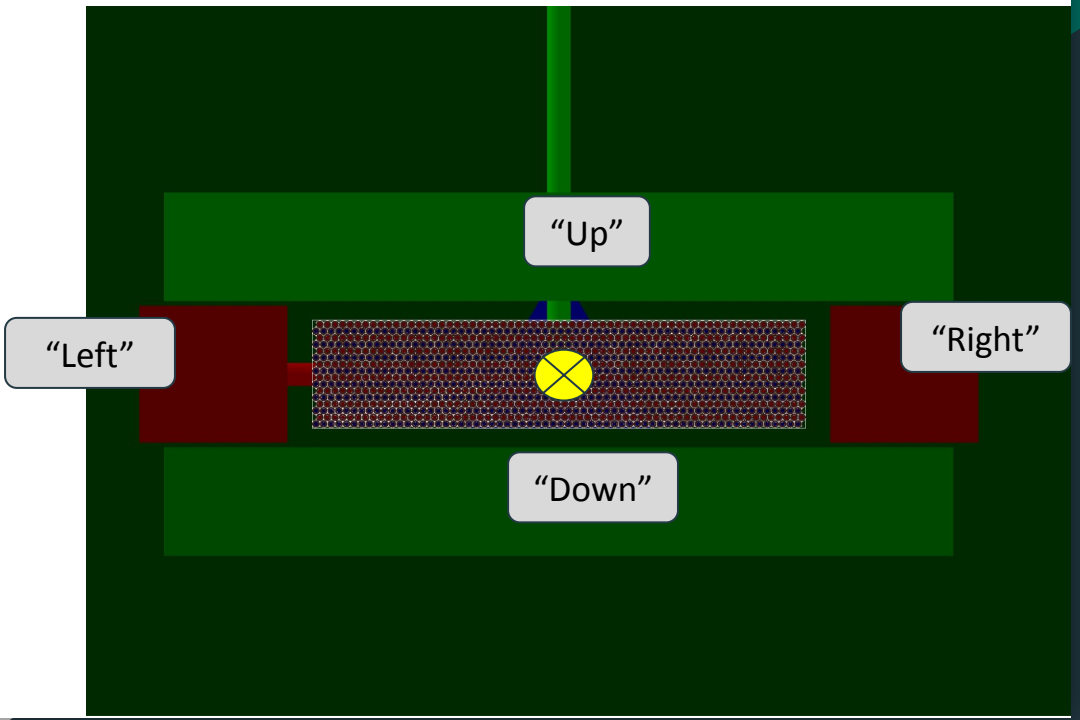
EscapedEnergylright



Mini-module leakage

Estimate energy losses outside mini-module volume with 20 GeV e^+, point-like beam (0 cm radius)

Now without rotation

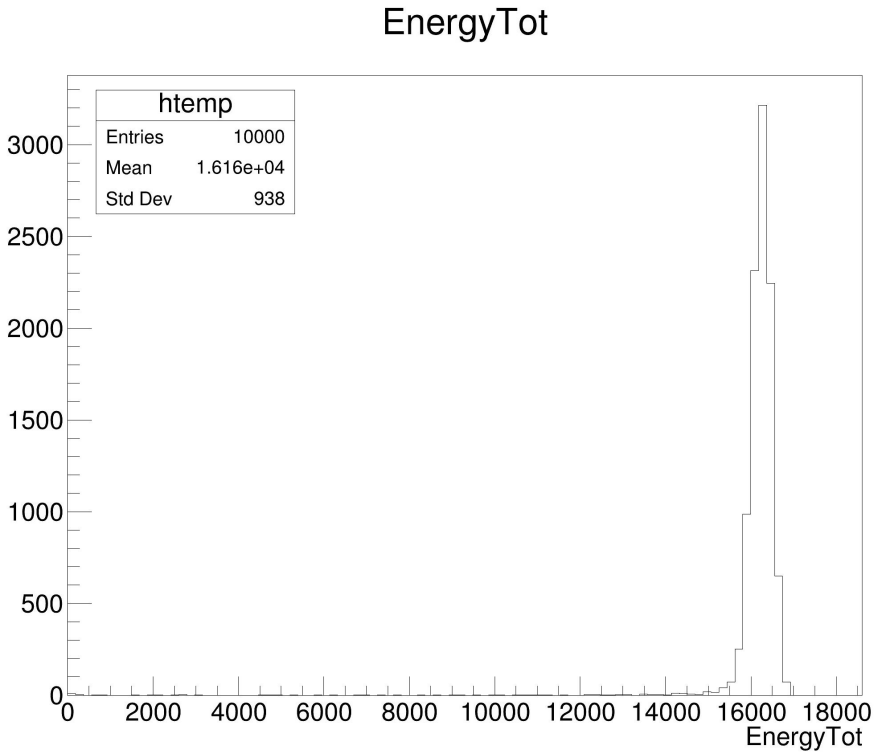


Mini-module leakage

Estimate energy losses outside mini-module volume with **20 GeV e^+**, point-like beam (0 cm radius)

Without rotation

Total energy deposited in mini-module volume



Mini-module leakage

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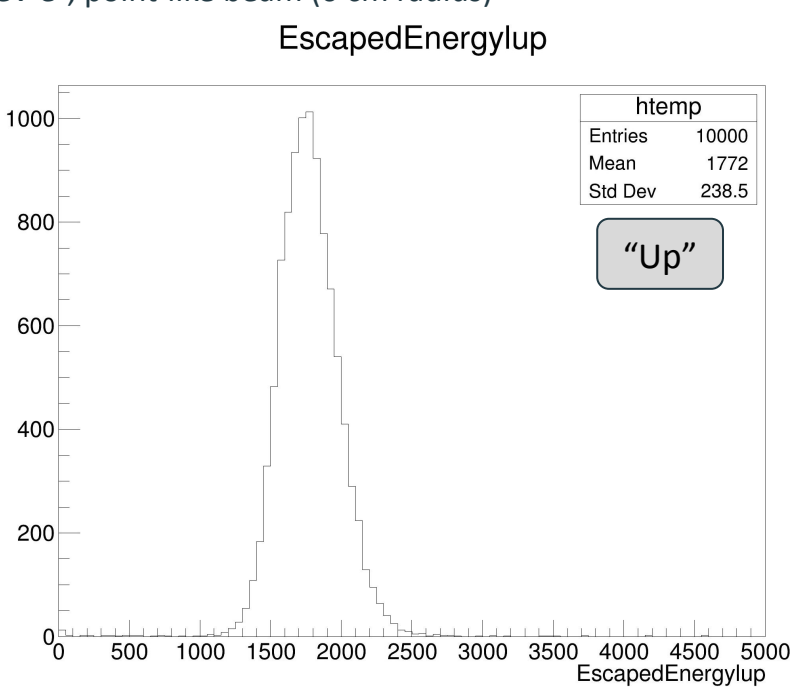
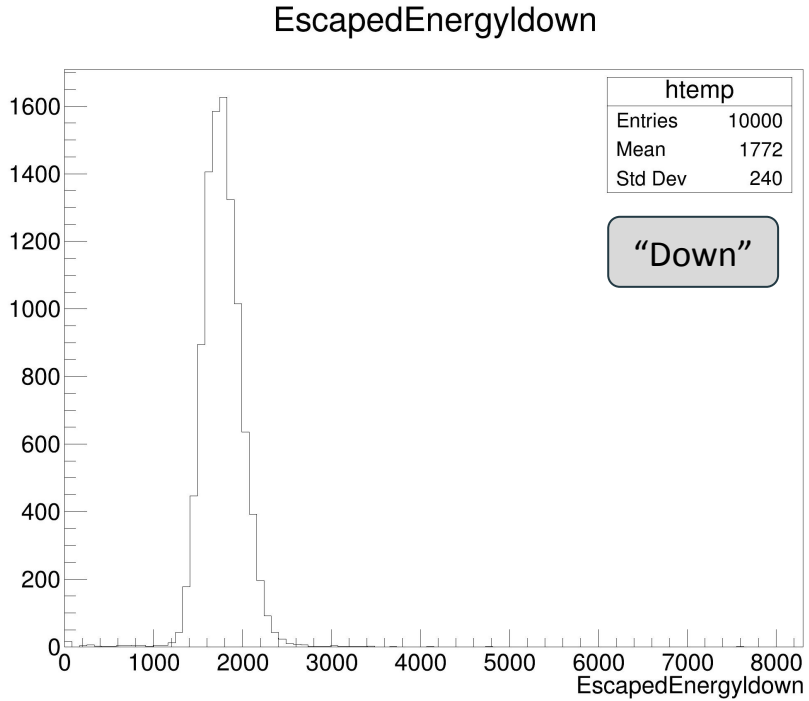
Without rotation





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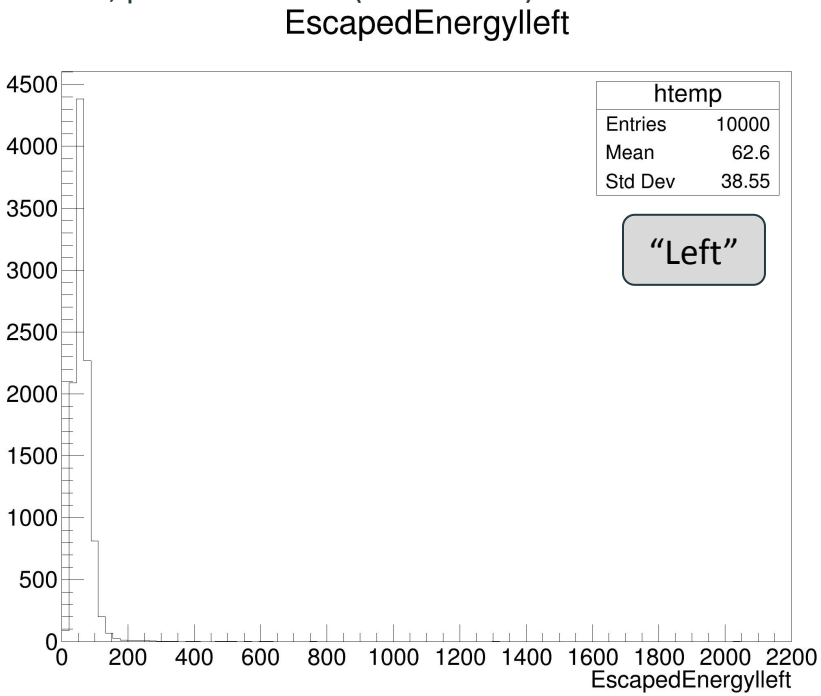
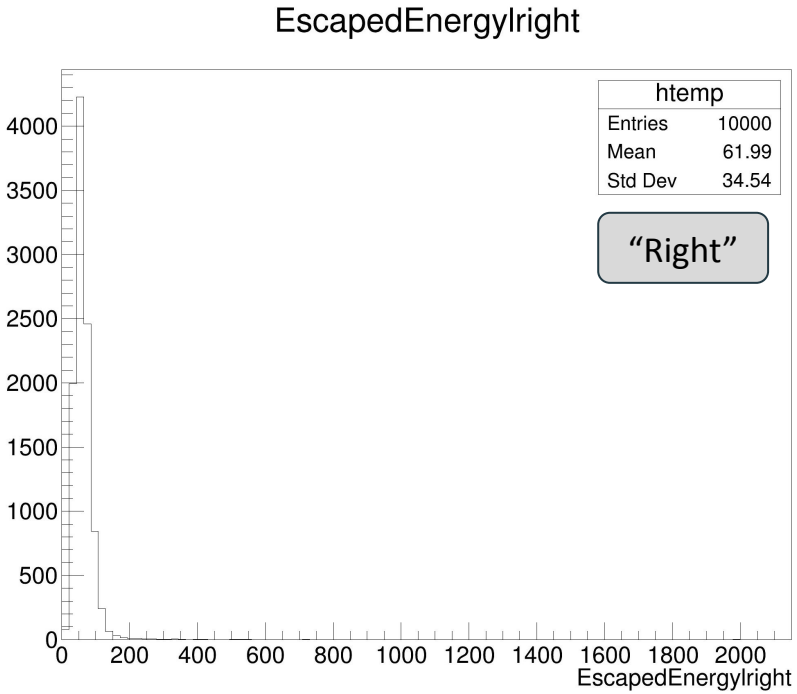
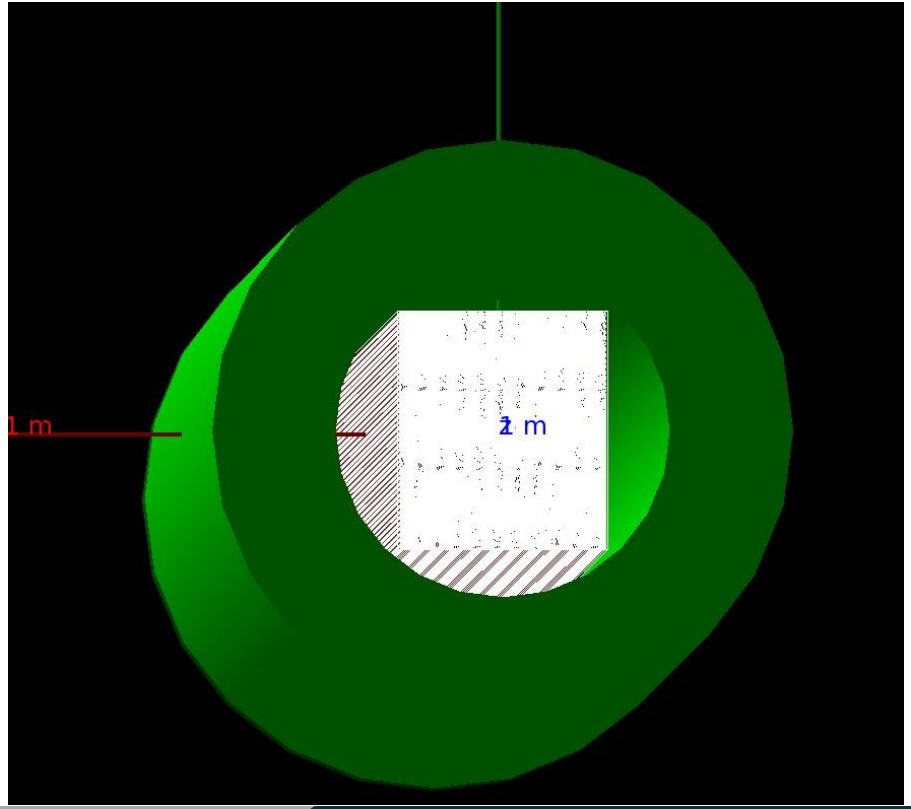




DRAGO

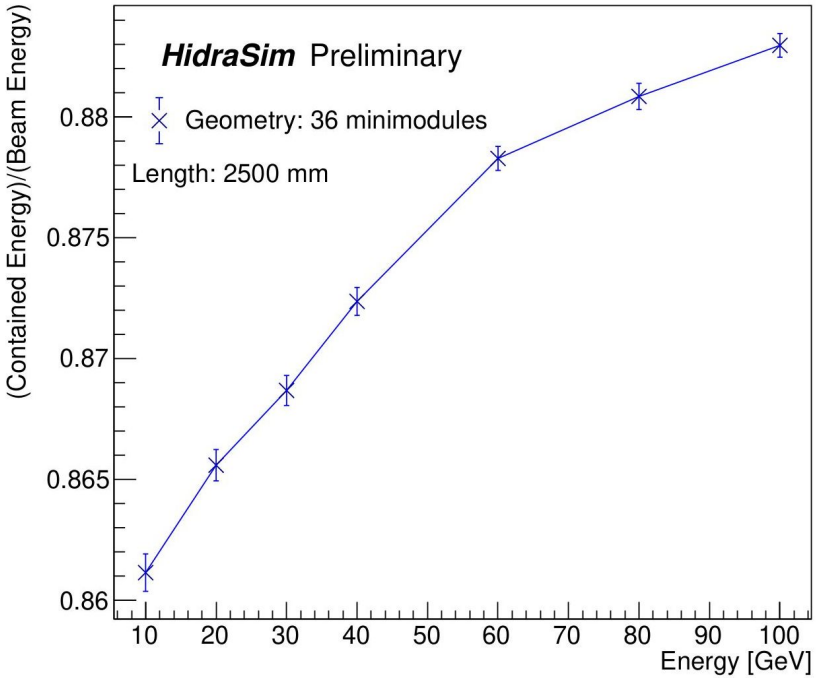
Dual-Readout Almost Granular Object



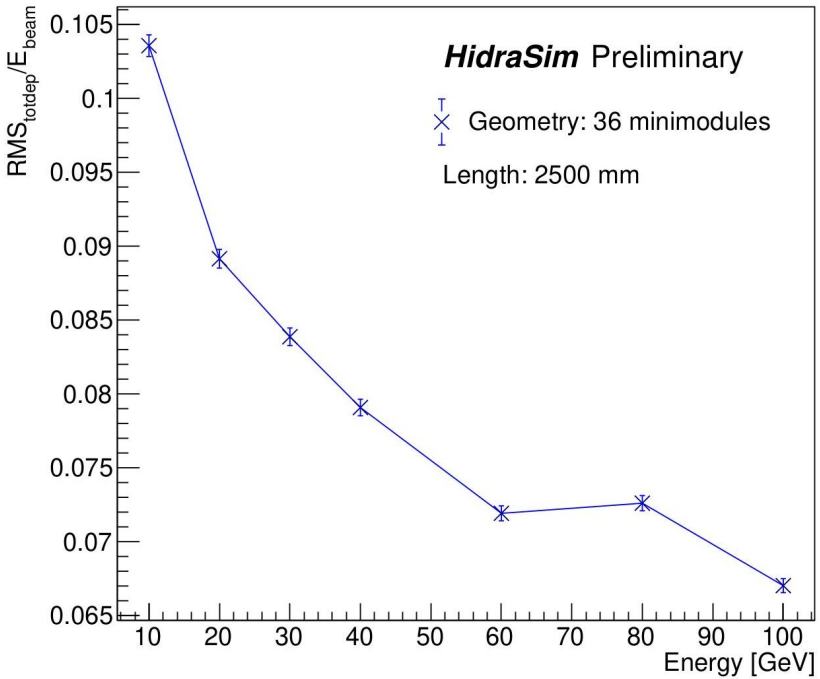
DRAGO

Dual-Readout Almost Granular Object

Pion Containment in [10, 100] GeV Range

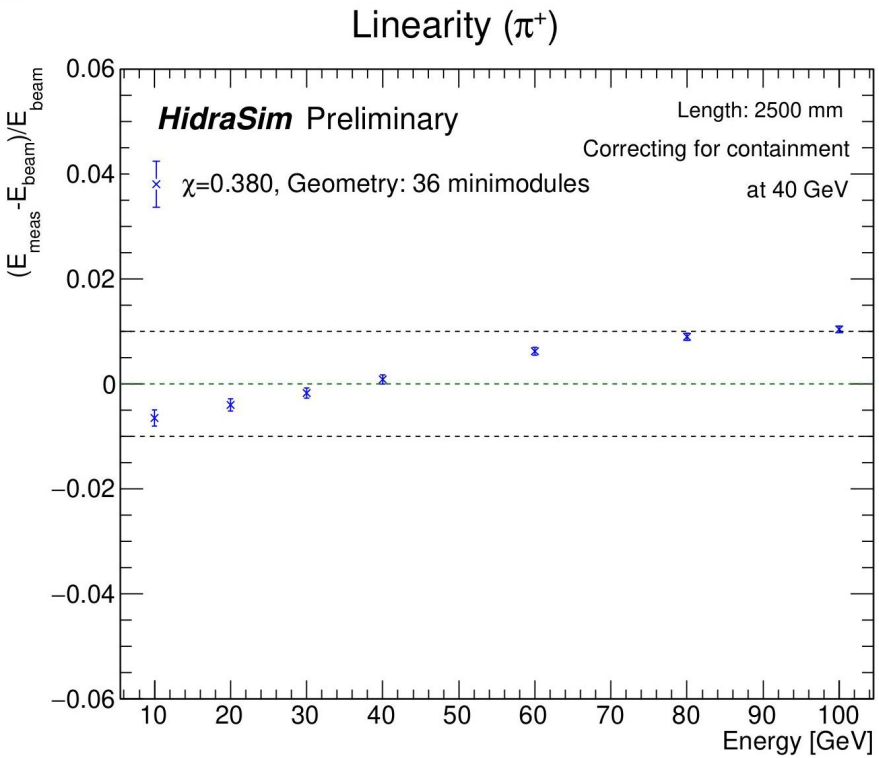


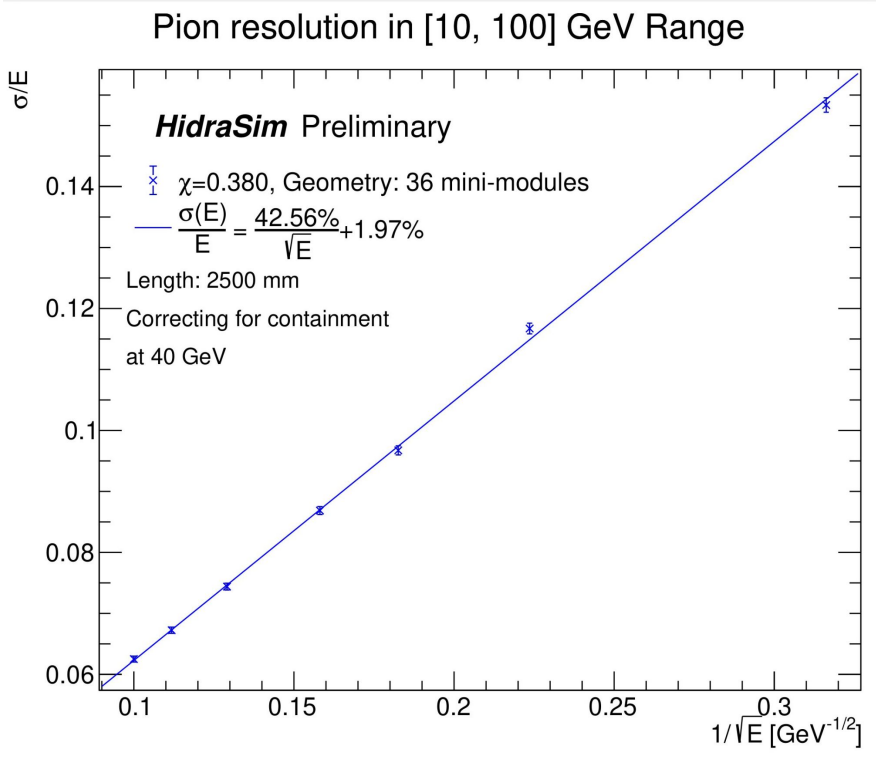
RMS of deposited energy



DRAGO

Dual-Readout Almost Granular Object





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