

# EMR Simulation

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DPNC



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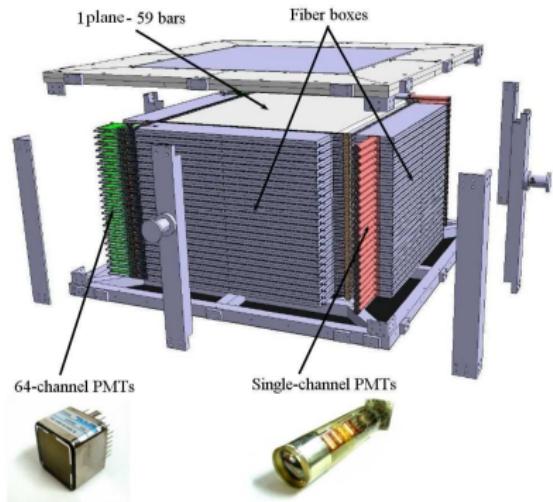
# Outline



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# EMR Parameters



## Parameters

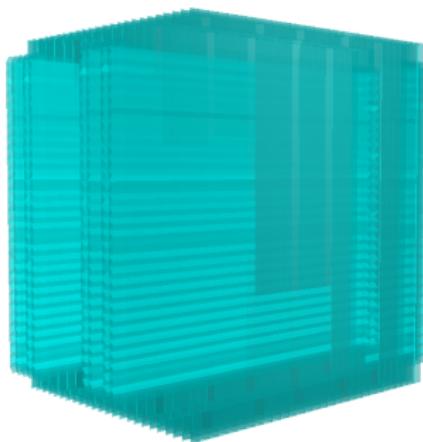
- ▶ 24 X-Y modules, each containing 2 layers
- ▶ 48 layers
- ▶ 59 extruded scintillator bars per layer



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# The Whole Picture



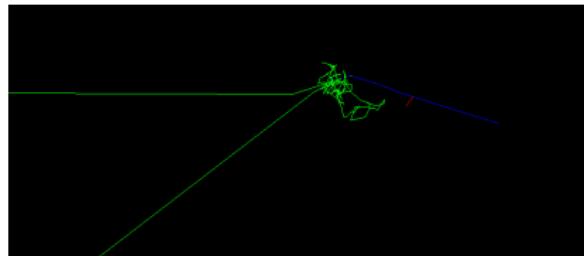
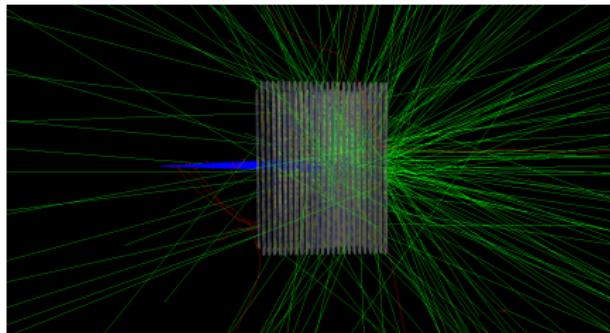
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# Simulated events

For developing/testing purpose the EMR is simulated without the upstream beamline and detectors.

Single muon is shot just before the detector.



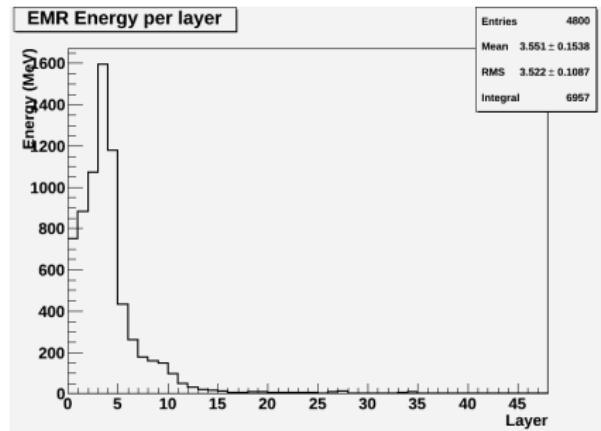
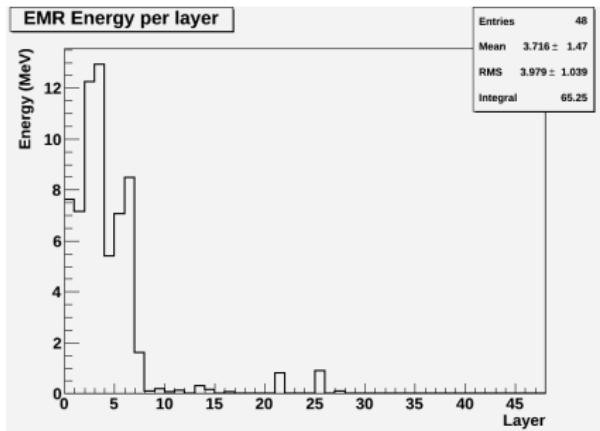
Green lines are neutral particles, blue are positive,  
red - negative; red dots represent hits in the EMR



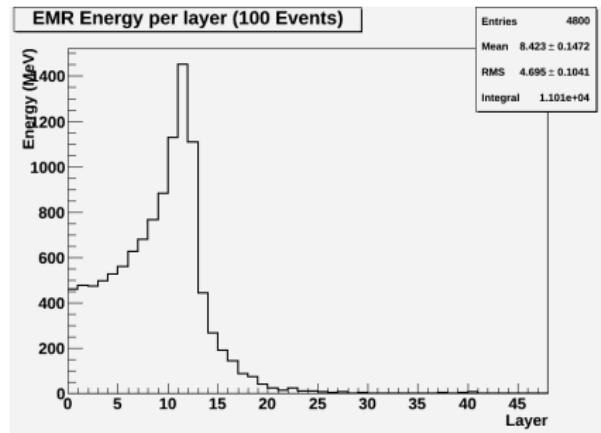
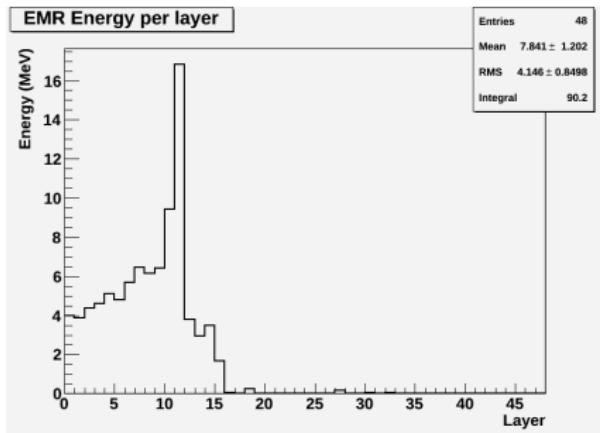
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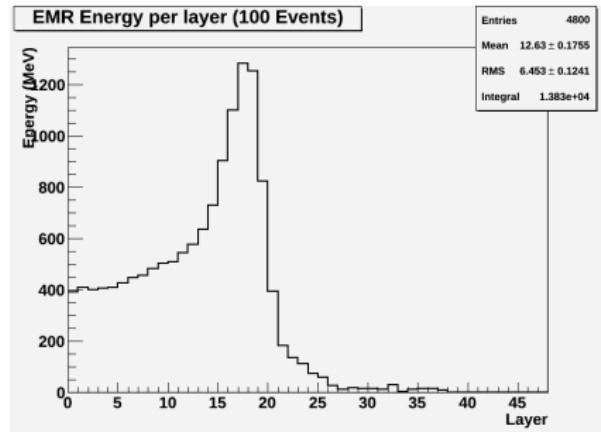
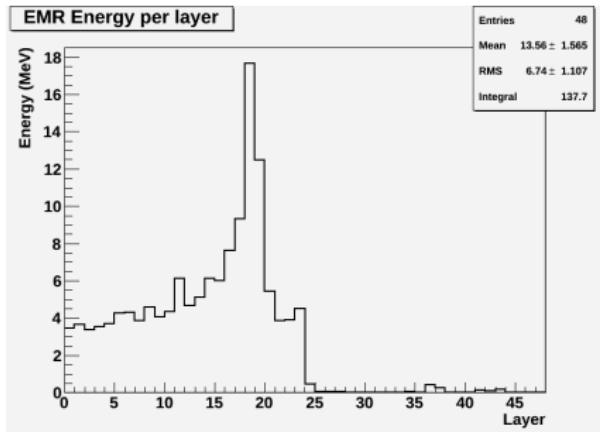
# 100 MeV Muons



# 150 MeV Muons



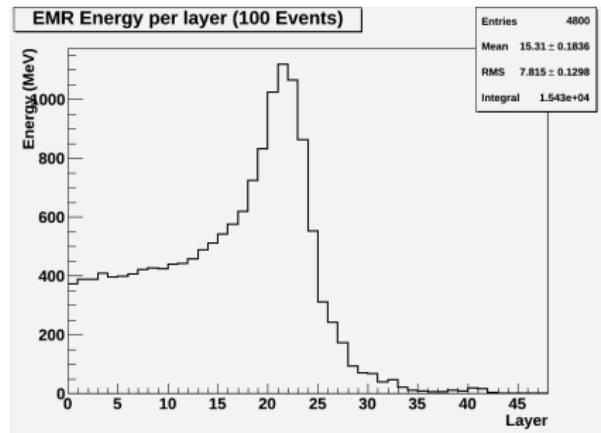
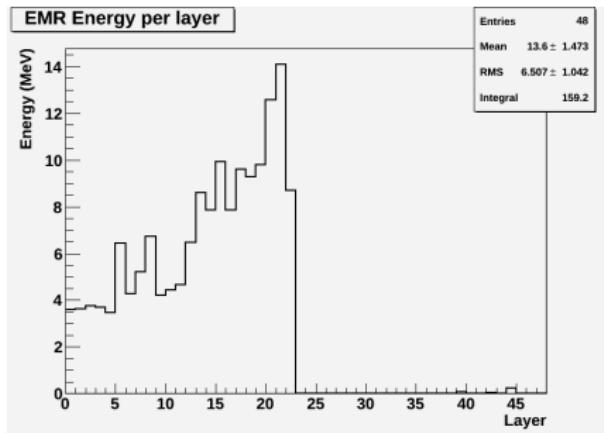
# 180 MeV Muons



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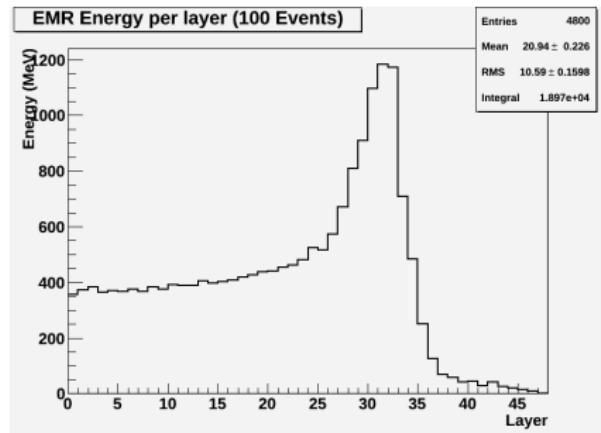
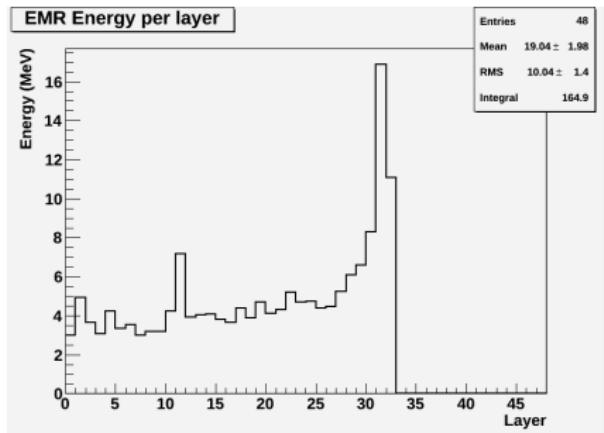
# 200 MeV Muons



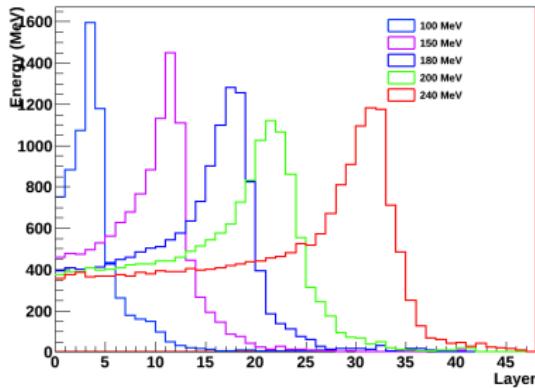
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# 240 MeV Muons



EMR Energy per layer (100 Events)



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# Future

## TODO:(before July 2011)

- ▶ Simulate muon decay
- ▶ Simulate with the full beamline
- ▶ Commit to CVS
- ▶ Write documentation
- ▶ Write tests (need help on that)

I will pass the EMR software torch to Yordan and Ruslan  
after end of June.