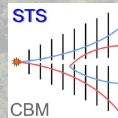
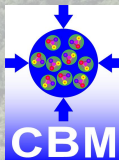


Silicon Tracking System at Compressed Baryonic Matter Experiment

by

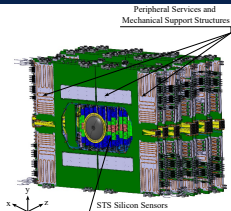
M. Shiroya*, A. Toia, V. Freise, F. Uhlig

for the CBM Collaboration

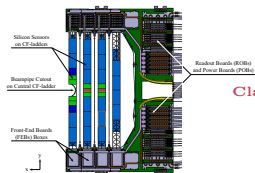


January 31, 2025

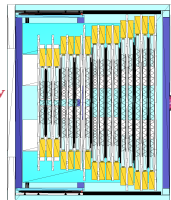
From CAD geometry model to ROOT simulation geometry



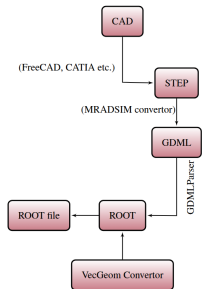
STS detector CAD geometry



Classical approach for simulation geometry

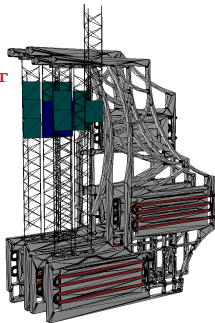


Primitive solid based STS simulation geometry

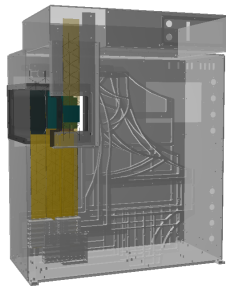


Procedure for CAD model to ROOT geometry

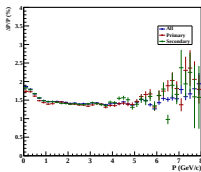
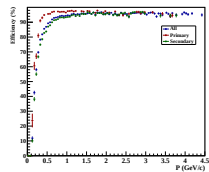
Direct from
CAD to ROOT



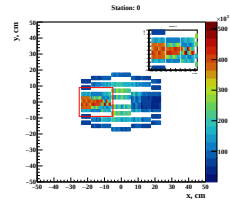
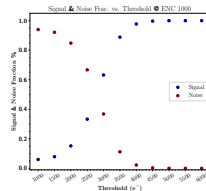
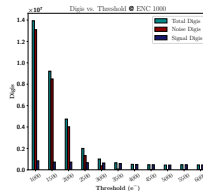
Tessellated solid based mSTS geometry imported directly from CAD model



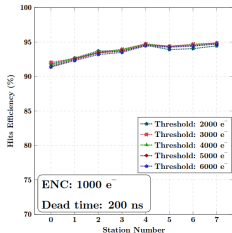
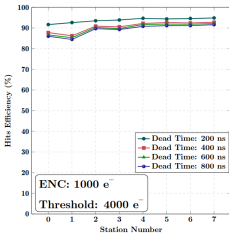
Simulation Performance of the STS



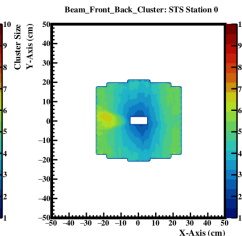
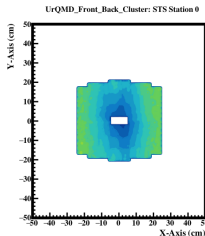
Efficiency and Momentum resolution



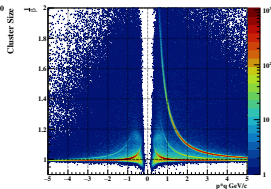
Data rates study



Hits to MC points efficiency at the different threshold and dead time



Mean cluster size for the STS station 0, for both UrQMD and Beam Transport



Particle Identification using STS and TOF

