SuperB: Update on DCH FullSim Studies



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Outline

- Step-Size problem reminder
- New samples description
- Occupancy vs. Step size

Visualization of Step Sizes





Same 200 events (>5deg) with tracks 1.5MeV < E < 150MeV, hits with depE > 0 only

New Samples

- Created ~200G of new samples (still need to make the various geometries)
- Odeg Bhabhas (Bruno) use 1mm step size.
 File size is ~2 times larger than default.
- Rad. Bhabhas (Bhwide) use 10mm step size. File size is ~10 times larger for 1mm!
- With smaller step-sizes, each instance of deposited energy counts as one "hit" on whichever wire is closest (axial wires only)

Method to Determine Occupancy



Odeg (Bruno) vs. Step Size



Bhwide vs. Step Size



Occupancy vs. Step Sizes Occupied cells (%)/ μ second Step Size my default sample 6 - 1 mm Steps 10 mm Steps 5 cm Steps 5 -- no stepSize 4 3 2 0 15 20 25 30 35 5 10 40 Wire Layer, increasing with radius

Less Phi Dependency



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Occupancy vs. Geometries







Conclusions

- Less assumptions (hopefully) required with the new samples.
- Still need to make the other geometries.
- BAD pretty much updated with new samples. Will post when other geometries are processed.