

Simulation production of 3DST + TPC with 1.5 cm cube size

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Old geometry and production

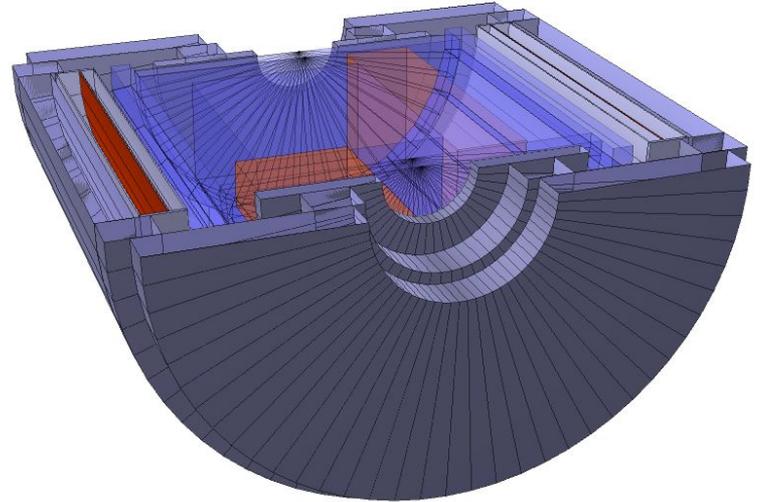
Was using 1 cm cube size for geometry

Processed with

- GENIE (can be different version and tunings, 2.12 and 3.06 have been used)
- G4 (can be different models, default one is BERT, Anna, Pierre and Sara are looking at a INCL cascade model)

We have a full digitization for 3DST + TPC

We have a full reconstruction for 3DST + TPC (Clark is the hero!)



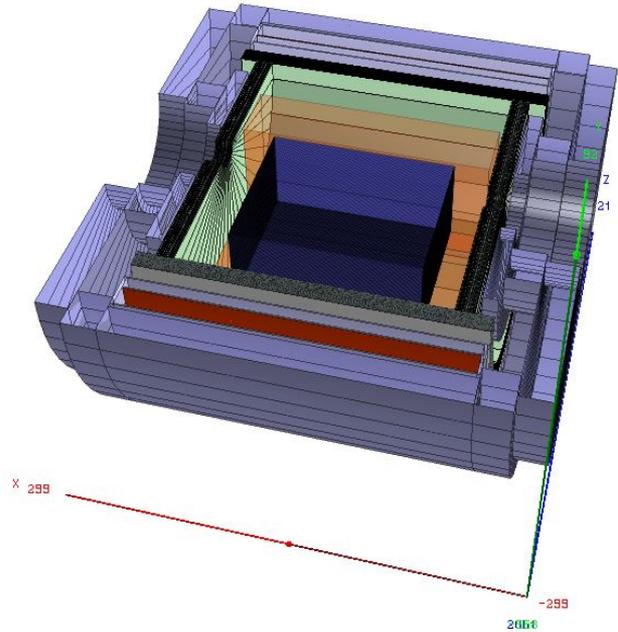
New cube size

Cube size -> 1.5 cm

To preserve 240 cm x 224 cm x 192 cm active volume, new number of cubes will be 160 x 150 x 128 (total active volume 240 cm x 225 cm x 192 cm)

All other parts are not changed

My buffer is not large enough to show individual cubes -> you have to trust me.



Particle bomb

Good news!

Went through the whole chain without a problem -> straightforward for cube size change in simulation production

Particle bomb production done:

- Clark is evaluating tracking efficiency with new cube size

RHC interaction production done:

- Sunwoo and Kiyoungh are evaluating the neutron detection with new cube size

