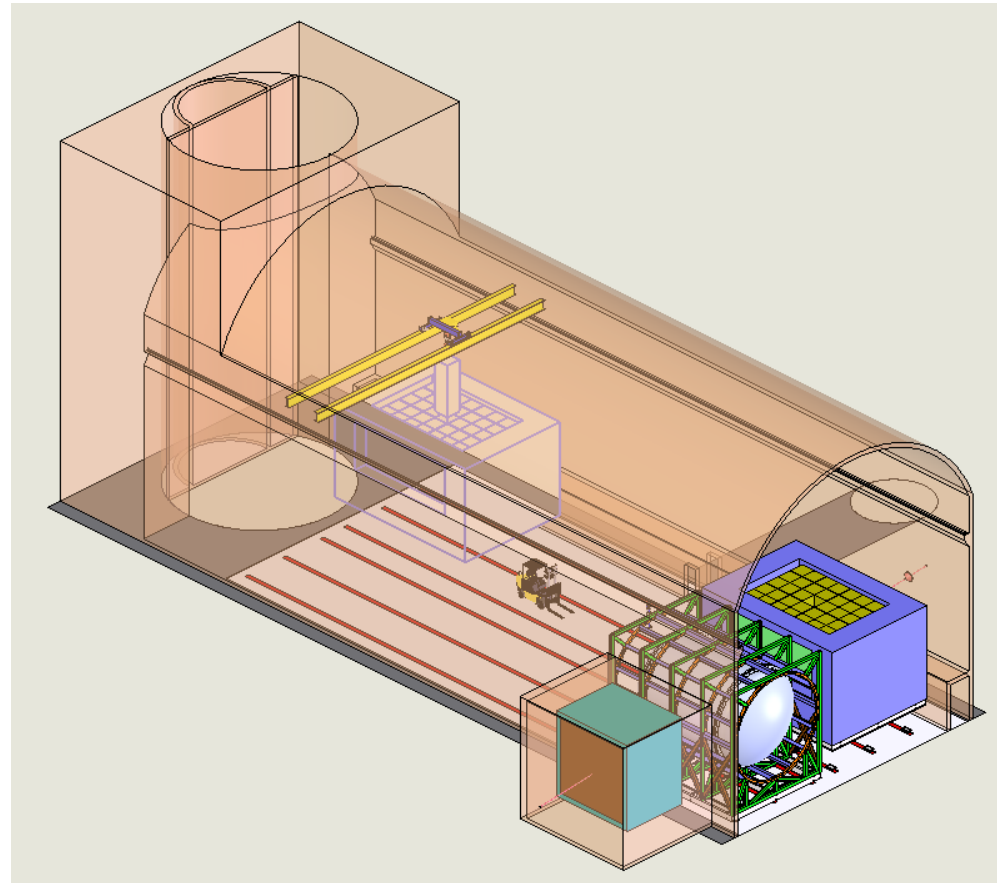




3DST-S update

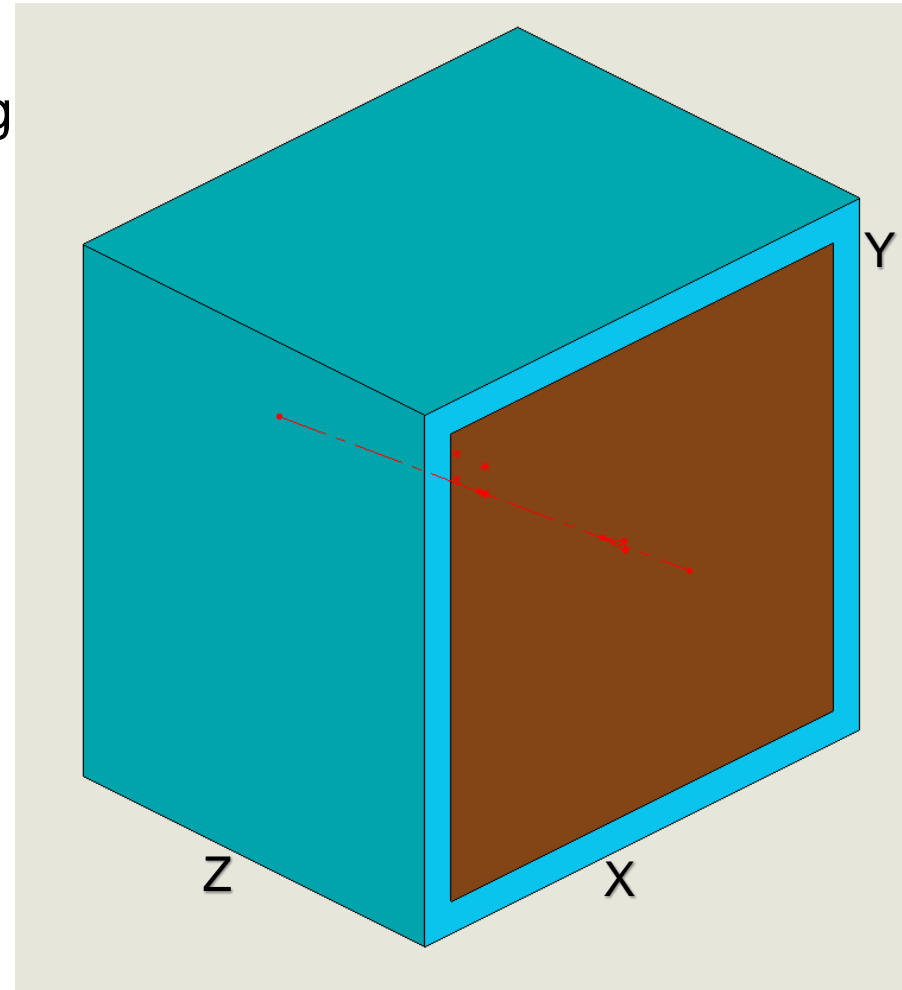
3DST-S in the ND Hall

- 3DST-S shown in the Near Detector Hall down stream from the MPC & LAr detector

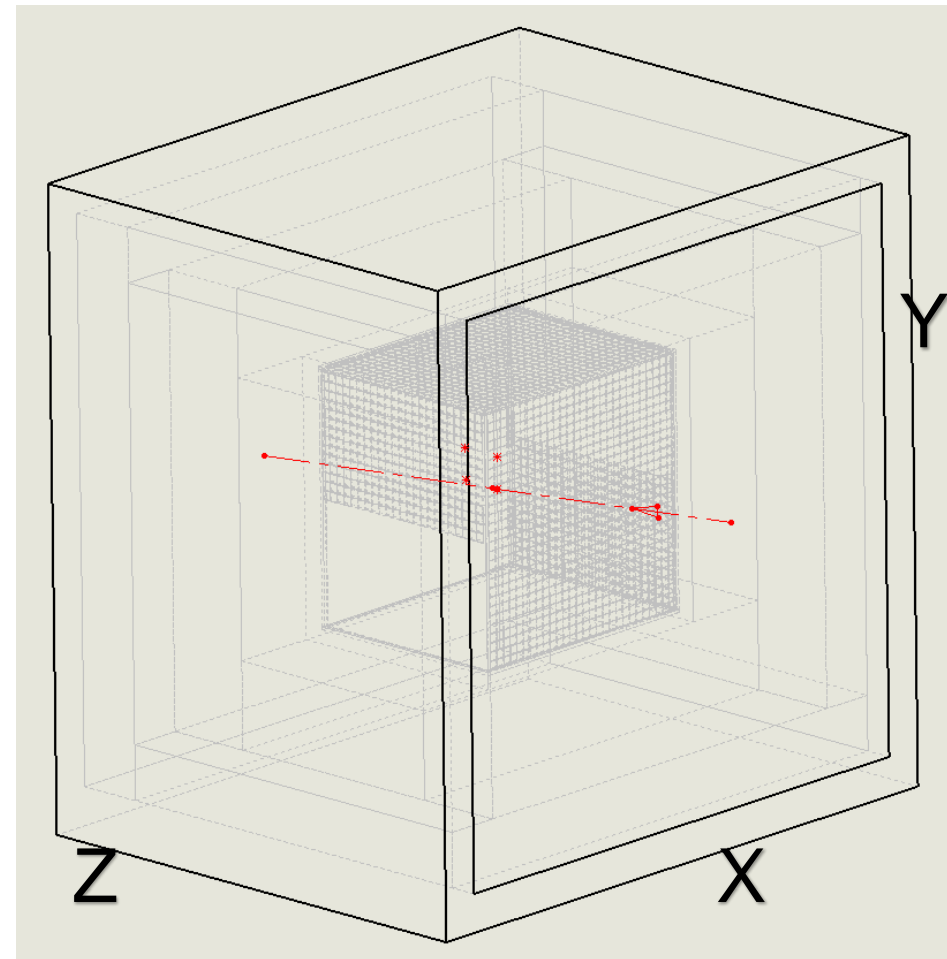


3DST-S

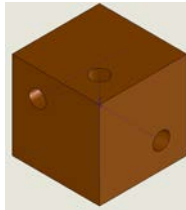
- The 3DST-S showing estimated volumes of the magnet surrounding the ECAL
- Approx size- 5.84 x 5.84 x 4.59m
(X) (Y) (Z)
- Using coordinate system shown, Z is along beam



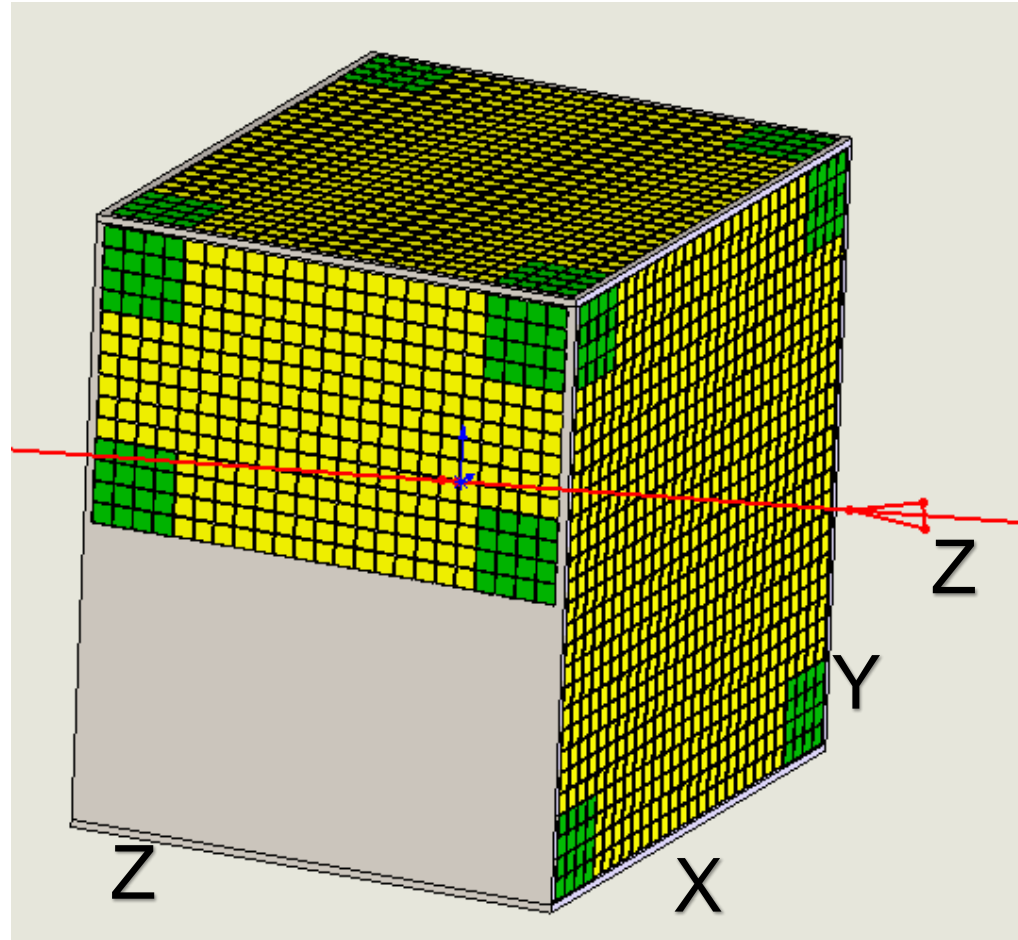
- Starting to develop the 3DST



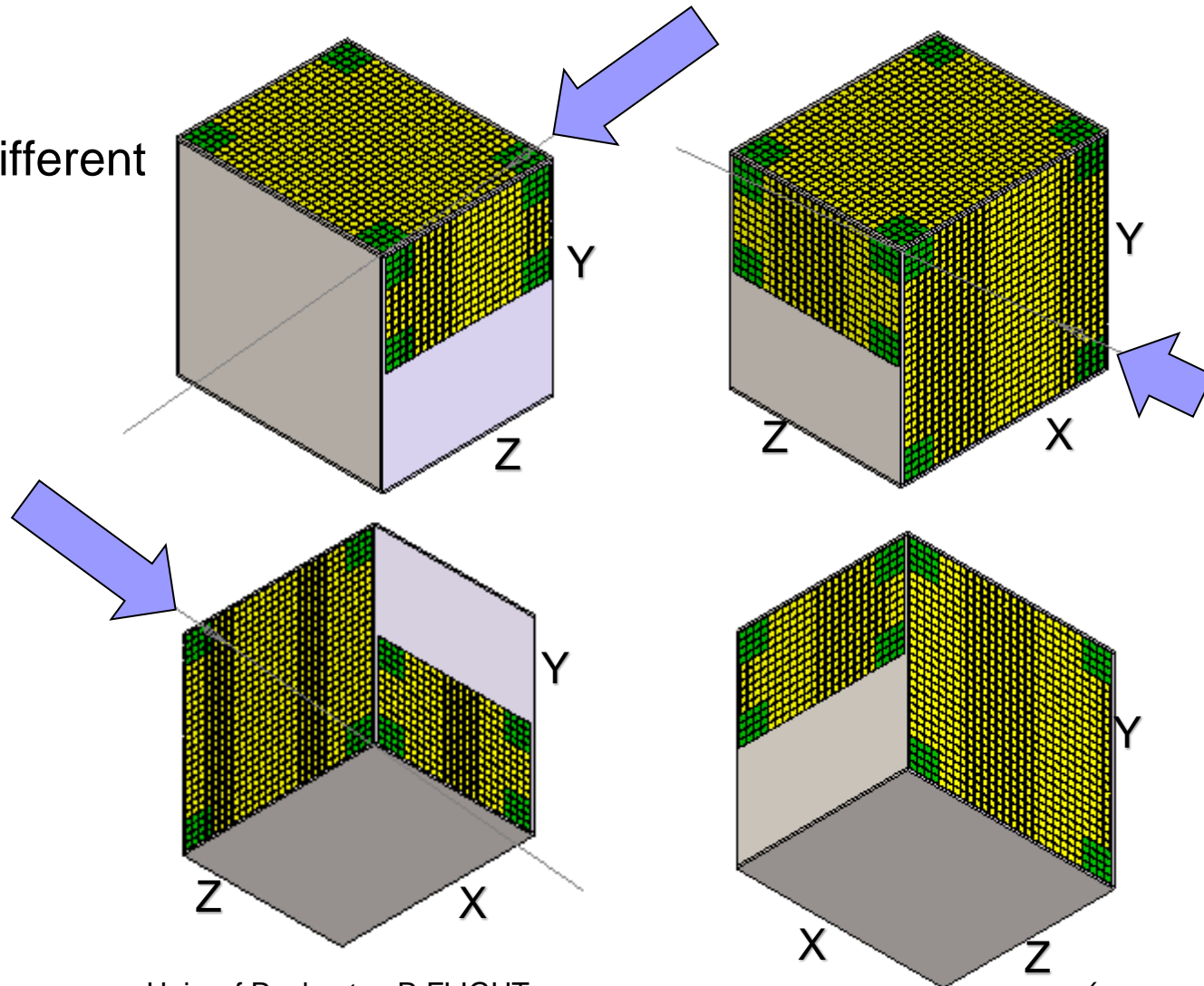
- Initial size was 2.4 x 2.4 x 2m
- Found that the internal volume didn't match the PCB 8x8 cube array
- Cube = 10.25mm all sides



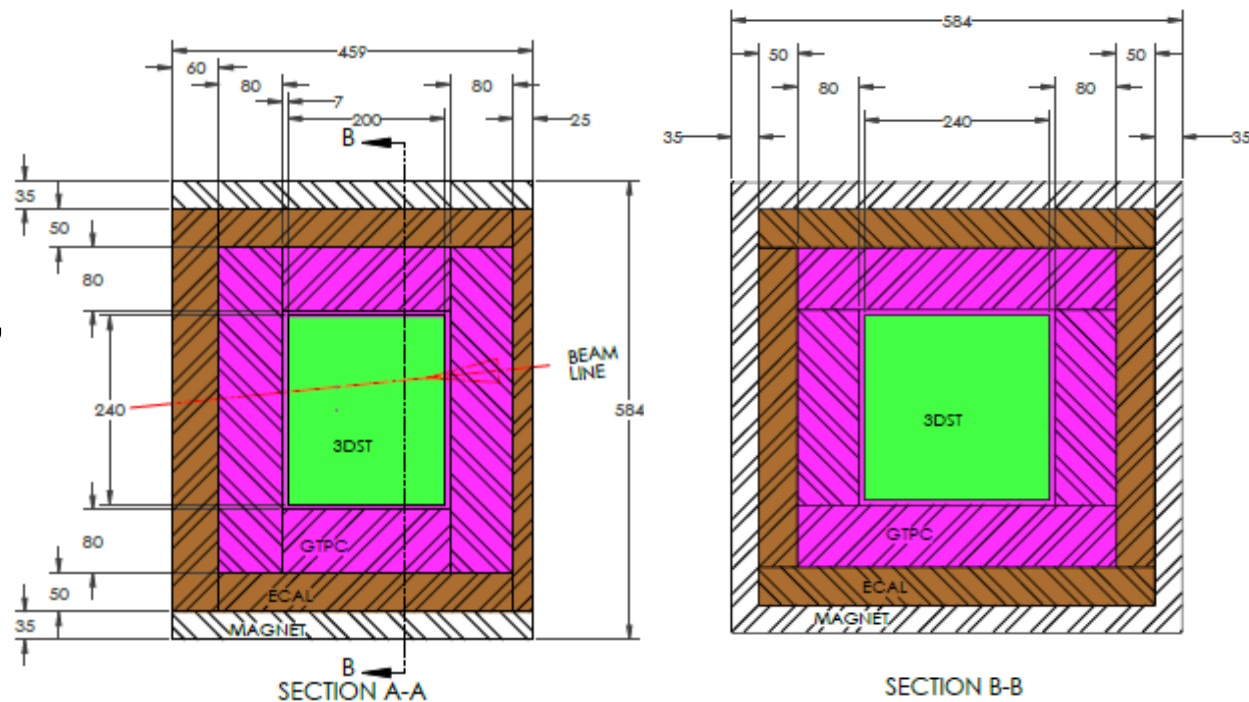
- Adjusted volume slightly smaller to suit PCB size & cube spacing
- Walls assumed to be 34mm thick, per initial 8x8x32 prototype
- PCB (green parts) pattern & locations change under review



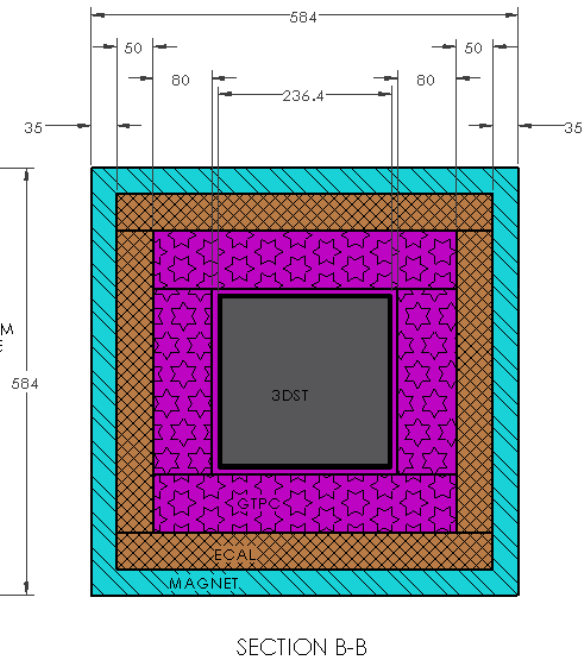
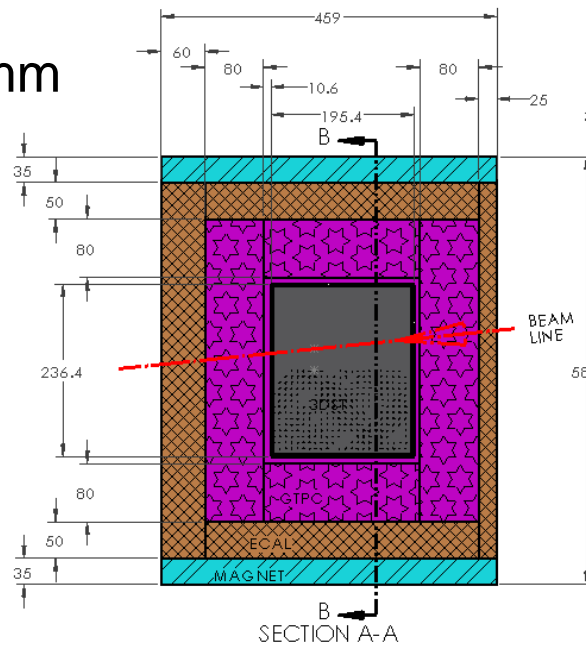
- Views showing different sides



- Sketch shows the budgeted sizes for the various components
- Little to no space budgeted for wires, supports, etc
- Adding detail as it becomes known



- 3DST size slightly reduced
- Reduced by- 36 x 36 x 46mm
- Sketch dims shown are cm
- 7cm wire space grows to 10.6cm



Internal cube quantities

- Original external dims- 2.4 x 2.4 x 2m
- Original internal dims- 2.33 x 2.33 x 1.93m, using 34mm walls
- Reduced internal dims- 2.296 x 2.296 x 1.886m
- Reduced by- 36 x 36 x 46mm
- PCBs- 28 x 28 x 23
- Cubes- 224 x 224 x 184
- 9,232,384 cubes!
- After discussions on 5/13/2019-
 - Increase PCBs- 28 x 28 x 25
 - Increase Cubes- 224 x 224 x 200
 - 10,035,200 cubes!